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ENSURING OF FOOD SECURITY IN RUSSIAN FEDERATION

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ABSTRACT

The study provides information on approaches to the problem of ensuring of Food security in the country. The levels and the models of Food security and the theoretical aspects of national Food security are investigated in this research. It was found that there are five levels of Food security that go from total autonomy in the food supply to the total dependence from the exporters. The models also represent the ideas from two different approaches to the economy: Protectionism and Free Market. The strategic goal of Food security is to provide the population of the country with the safe agricultural and fish products. International specialization and cooperation contributes to the achievement of food supply and demand balance that helps to prevent food crises and ensure Food security at the international level. Stability of domestic production, as well as the availability of the necessary resources is the guarantee for achieving of national Food security. This study provides evidence that the competitiveness of national business in food market should be increased to develop Economy and to ensure Food security. This problem could be solved due to the mobilization of competitive advantages of domestic companies. For Russian food and trade companies main competitive advantages are: natural resources, unoccupied territories, production facilities, cheap labor force and cooperation with other Russian organizations and international business. In conclusion it was mentioned that to enhance the food manufacturers' competitive potential it is necessary to create a fair trading environment that ensures Food security for the population and allows Russian manufacturers of different sizes to grow.

KEY WORDS

Food security, food manufacturers, food suppliers, wholesale companies, trade, retail, competitive advantages, competitiveness, competition, national business, market, resources, institutions.

The problem of ensuring of Food security is being updated in the Russian Federation in connection with the aggravation of the political situation and the introduction of a food embargo on the products of main importers. In economic theory, the concept of «Food security» includes the task of guaranteeing for each citizen the physical and economic accessibility to food in volumes not less than rational consumption norms, as well as solving the problem of the successful functioning of a national business of various sizes. In this regard, it is important to consider increasing the competitiveness of national companies as an instrument for ensuring the country's Food security.

There are various definitions of Food security fixed in official documents. The most accepted definition is provided by FAO experts that define Food security as a state of the economy, in which every person has physical, social and economic access to a sufficient number of safe and nutritious foods that meet his dietary needs (FAO, 2015). This definition of Food security affects four important aspects of human life: the physical availability of food, economic accessibility, health security and the balance of nutrition.

It is considered that the amount of food import should be no more than 20% of the average annual volume of consumption of vital food products in the country, their own safe import volume can be set for different products (Biktimirova, 2002). Otherwise the import will serve not as an addition to domestic production but, on the contrary, will lead to its decline. Thus, national Food security is considered to be achieved by providing to consumers the basic domestic food products that can be produced in the territory of a given country, taking

into account its natural and climatic conditions, at a rate of not less than 80% of annual consumption, taking into account the traditional features, socio-demographic structure of the population and in accordance with physiological norms of nutrition.

Levels of food security. There are five levels of ensuring the Food security in the country (Korbut, 2002).

The first level: of basic foodstuffs, when domestic demand is less than the national production of agricultural goods and there is the possibility of exporting food.

The second level: production of only necessary for domestic consumption of food, usually by limiting overproduction in order to stabilize food prices and the break-even of agricultural producers.

The third level: assumes a situation of optimal food imports, not exceeding 20% of the annual consumption of basic food.

Fourth level: a threshold level of food dependence is allocated, when about 30% of consumed food depends on international supplies. In this situation, there is already a threat to Food security.

Fifth level: the state's food dependence on other countries of the world, when external forces in the territory of the dependent state can initiate a food catastrophe - hunger and social unrest.

In this regard, in order to increase the level of food self-sufficiency of the country, the comprehensive support should be provided for domestic food manufacturers. In order to prevent possible external threats, the countries should create a state reserve fund, monitor world food production, and diversify the structure of agricultural exports.

Achievement of global Food security also requires unified, coordinated and carefully measured actions of Governments, transnational companies and international organizations. At the present stage of the globalization of the world economy, national Food security is of paramount importance in this regard. Developing the State policy in the field of Food security, the Government should consider the combination of factors. Expert assessment of the country's opportunities for food self-sufficiency should be provided on the basis of analyses of all resources, economic, scientific and technical potential of the country and the influence of climatic changes on the food manufacturing.

Models of food security. Modern models of ensuring Food security can be conditionally divided into two types.

The first type is the insignificant state support of domestic food manufacturers and the minimum tariff and non-tariff barriers to imported food.

The second type is the substantial support of agriculture by the State through subsidies, production quotas, tariff measures and other methods of trade regulation. The State control over the functioning of agriculture and the food industry in this case is traced in the whole mechanism of interaction between state, food manufacturers, trade companies and consumers.

The best example of the second type model of Food security is the European Union, which regards agriculture in terms of multifunctionality at the legislative level. The term «multifunctionality of agriculture» reflects the fundamental relationships between agriculture and ecological, political and socio-economic situation in the country, as well as the preservation of the culture and traditions of each nation within the framework of Western European integration. This idea is reflected in the general agricultural policy of the EU and is the «core of the agrarian protectionism» of the European Union and its Food security.

There are three principles of the EU Common Agricultural Policy (Moiseev, 2003).

The principle of Common Market. It implies the unhindered movement of food products, the application of uniform prices for them, the unification of national legislative norms for regulation of domestic food manufacturing and marketing, including sanitary, phytosanitary and veterinary norms, as well as supranational supervision of observance of the principles of free competition.

The principle of Financial Solidarity: it presupposes the financial provision of the common agricultural policy from the single budget of the European Union. Stabilizing

domestic prices for vital agricultural products contributes to ensuring physical and economic access to Food security.

Principle of Export Support: existing in EU «agricultural subsidies» help to support domestic food manufacturers and reduce the cost of manufactured food to the world level. For each exported unit of a product, a European farmer receives compensation from the European Agricultural Guarantee Fund.

Thus, multilateral measures of the EU Common Agricultural Policy contribute to achieving Food security within the Union. The protection of the agricultural and food sectors of the EU, on the one hand, helps protect and develop the domestic food market and achieve the high level of Food security; on the other hand, it can adversely affect the agriculture of third countries, endangering their Food security.

Components of Food security in the Russian Federation. In the food sphere of Russian Federation, the notion of «ensuring of Food security» involves the problems of import share reducing in the food market and guaranteeing of physical and economic accessibility to food products in volumes not less than rational consumption norms for each citizen. The Food security Doctrine of the Russian Federation states that the Food security is one of the main directions for ensuring the national security of the country in the medium term. Food security is one of the most important components of the demographic policy of the Government, a prerequisite for the implementation of the strategic national priority quality of life of Russian citizens by guaranteeing high life standards.

One of the indicators that help to assess the state of Food security in the country is the share of domestic food and fishery manufacturing in the total volume of commodity resources of the domestic market of corresponding products. In accordance with the Food security Doctrine of the Russian Federation, the minimum level of own grain production should be at least 95%, sugar - at least 80%, meat and meat products (in terms of meat) - 85%, milk and dairy products (in terms of milk) - not less than 90%, fish products - not less than 80%, potatoes - not less than 95%, salt of food - not less than 85% (Food Security Doctrine, 2010).

Thus, it is advisable to subsidize the sectors that are strategically important for ensuring the country's Food security: the production and processing of grain, the production and processing of meat and meat products, the production and processing of milk and dairy products, the production and processing of fish products, the production of potatoes, and the production of salt.

The Food security of the Russian Federation can be conditionally divided into the three components: the ability to produce a sufficient amount of food within the country, the protection of food industry from external and internal shocks and the ability of the state to monitor the quality of food received by the population.

Long-term Food security. International practice shows that long-term Food security can be ensured only on the basis of domestic production within the country. The current state of Russian agriculture is a direct result of the liberal policies of the 1990s. At that time, state support for agriculture practically disappeared. This happened due to the cheap food subsidized by the exporting countries in the amount of 20-50% of its cost. To date, the Government of Russia is facing the urgent task of pursuing a policy of import substitution and the development of the food sector in the Russian Federation.

The food sphere of Russia should be protected from unforeseen negative phenomena. The shock events include the following: a sharp rise in prices for agricultural products; a sharp increase in the cost of agricultural production, in particular, due to the increase in prices for fuel, fertilizers and machinery; low yield in the country or in the world; restriction or termination of food imports by exporting countries.

Clear numerical safety criteria should be identified in a number of areas of protection against negative phenomena. For example, according to experts of the FAO, one of the main indicators of Food security of the state is the size of grain reserve remaining before harvesting of the next crop. A reserve corresponding to 20% of its annual consumption is considered safe. The main grain reserve in Russia is about 18-20 million tons or 30-35% of annual consumption (FAO, 2009).

Food availability. The availability of food products consists of the prevalence of trade places and the ability of the population to buy products at existing prices.

Today, the prevalence of retail outlets is a significant factor promoting the availability of food products for Russia as a whole, with the exception of remote small settlements, where food trade is not commercially attractive. At those territories exists the «socially significant» small and medium-sized enterprises.

In a market economy, the price / quality ratio is crucial for most of consumers. Wholesale and food retailers do not differentiate by the origin of the goods; they tend to maximize their profit that is a natural market behavior.

Thus, the availability of domestic food products in comparison with imported food products depends, first of all, on the competitiveness of the national manufacturers.

One of the tools to ensure Food security in the Russian food market is to increase the competitiveness of national manufacturers.

Russian enterprises in the food market along the entire value chain, agricultural and food manufacturers, wholesale and retail enterprises have a certain competitive advantages that can be estimated from the standpoint of the current market, resource and institutional theories. A company can increase its competitiveness by implementing the full range of competitive advantages.

The largest contribution to *Market Theory* of competitive advantages of a company was provided by M. Porter (Porter, 2011). This theory is based on the assumption that a company needs to occupy an advantageous position in the industry in order to ensure its competitiveness in relation to competitors. In accordance with the concept of Market Positioning, the Russian firm should choose that field of activity, where the result of its functioning is not only valuable to consumers, but also helps the company to position itself in the most efficient manner in competitive environment.

Most contribution to the development of Resource Theory of competitive advantages was made by E. Penrose (Penrose, 2009), C. Prahald (Prahald, 1990) and G. Hamel (Hamel, 1990), R. Grant (Grant, 2011). This theory proclaims the existing complex of unique resources and capabilities of the company as the priority direction of development of the company. In the short term, the competitiveness of a firm depends on the price and consumer characteristics of its key products, but in the context of global competition in the long term, the competitiveness is based on the ability of the company to create key competencies, on the basis of which unforeseen products are born, at lower costs and faster than competitors.

According to the Institutional Theory of competitive advantages (Katkalo, 2006), economic behavior and economic choice of an organization are determined not only by resource opportunities, but also have an institutional and social nature. The Institutional approach is based on the notion that competition in the modern world carries an essential element of cooperation, manifested in the activities of companies within the network entities. In today's economy, to create additional competitive advantages, the company must effectively integrate into the environment and network relationships with other firms, the state and civil society actors.

The main Market competitive advantage of Russian business in the food market is the existence of the phenomenon of territorial asymmetry in providing the population with food. Resource competitive advantages are unoccupied production facilities, cheap labor of sufficiently skilled workers and consumer loyalty to Russian brands. Institutional competitive advantages include the cooperation of Russian producers among themselves and within industries, as well as the cooperation of Russian organizations with international business.

Conclusion. The problem of ensuring Food security was overviewed in various economic theories. It was revealed that in order to ensure Food security in the country, it is necessary to increase the competitiveness of the Russian food business. Analysis of the Russian food market showed that Russian companies have a competitive potential and have certain market, resource and institutional competitive advantages. In this regard, it is important to increase the competitiveness of national food manufacturers, as well as create a

fair trading environment that ensures Food security for the population and allows Russian manufacturers of different sizes to develop.

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АНАЛИЗ РОССИЙСКОГО БАНКОВСКОГО КРИЗИСА
ANALYSIS OF THE RUSSIAN BANKING CRISIS

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АННОТАЦИЯ
За свой относительно недолгий период существования банковская система Российской Федерации уже пережила несколько кризисных ситуаций. Предметом данной работы являются причины, закономерности развития банковского кризиса 2014-2015 гг., а также совокупность финансово-экономических отношений и общие причинно-следственные связи, формирующие условия для его развития.

ABSTRACT
For its relatively short period of existence, the banking system of the Russian Federation has already experienced several crisis situations. The subject of this work are the causes, patterns of development of the banking crisis of 2014-2015, as well as the totality of financial and economic relations and common cause-effect relations that form the conditions for its development.

КЛЮЧЕВЫЕ СЛОВА
Банк, банковский кризис, валютный кризис, банковский сектор.

KEY WORDS
Bank, bank crisis, currency crisis, banking sector.

Банковская система России переживает четвертый за последние двадцать лет полномасштабный кризис (1995, 1998, 2008, 2014) [1-5]. Часть современных проблем можно сопоставить с предыдущими кризисами, часть их в чем-то превосходит. В основе проблем в банковском секторе лежали и плохие долги, и предпочтение доходности в ущерб ликвидности. Усугубляли ситуацию потрясения, которые были связаны с падением рубля, стагнацией в реальном секторе, а также с бюджетными проблемами.

Вплоть до декабря 2014 года продолжалось ухудшение внешних условий: осложнение отношений со странами Запада, сужение возможностей привлечения внешнего финансирования, снижение цен на нефть. В условиях ограниченного доступа к международным рынкам капитала компании предъявляли повышенный спрос на иностранную валюту на внутреннем рынке для погашения внешней задолженности [6]. Летом 2014 года США и ЕС были введены санкции в отношении Газпромбанка и Внешэкономбанка. Позже были наложены ограничения на такие банки, как «Банк Москвы», ВТБ, «Россельхозбанк» и «Сбербанк». В качестве главного ограничения выступал запрет на привлечение долгосрочного капитала. Резидентам стран, поддержавших санкции, запрещено приобретать любые долговые обязательства и ценные бумаги российских банков, доля государства в которых превышает 50%.

Кроме того, начавшийся в 2015 году цикл снижения кредитных рейтингов России значительно повышает стоимость зарубежного фондирования для российских компаний и банков, которые не попали под санкции [7]. Таким образом, против России началась настоящая «экономическая война».

В таблице 1 приведено сравнение банковских кризисов 1998, 2008 и 2014 гг. Проанализированы изменения показателей за пять месяцев с начала кризиса. В качестве начальных точек кризисов использованы даты 01.09.1998, 01.09.2008 и 01.09.2014 гг.

Таблица 1 – Сравнение банковских кризисов 1998, 2008 и 2014 гг.

Показатель	1998 г.	2008 г.	2014 г.
Рост курса доллара (%)	233	44	87
Максимум за 1 месяц (%)	103	21	23
Сокращение рублевых вкладов физических лиц (%)	-6,5	-21,8	-3,5
Максимум за 1 месяц (%)	-10	-8,7	-1,2
Просрочка юридических лиц (без Сбербанка, %)	н.д.	2,6	6,5
Просрочка физических лиц (без Сбербанка, %)	н.д.	5,0	7,8
Количество проблемных банков (отзыв лицензии через год после начала кризиса), в т.ч.:	245	79	134
• из топ 100	22	10	8
Доля от всех банков (%)	15	8	14

Источник: [8].

Политика ЦБ по отношению к банкам ужесточалась, начиная с 2013 года. Банки один за другим стали лишаться лицензий, в том числе лицензии отзывались у довольно крупных игроков. Это не могло не вызывать панику у кредиторов, и соответственно массовый отток вкладов. С 2014 года по март 2015-го лицензий лишились 96 банков. Это максимум с 1999 года. Динамика количества кредитных организаций и их филиалов за 2011-2015 гг. представлена на рисунке 1.
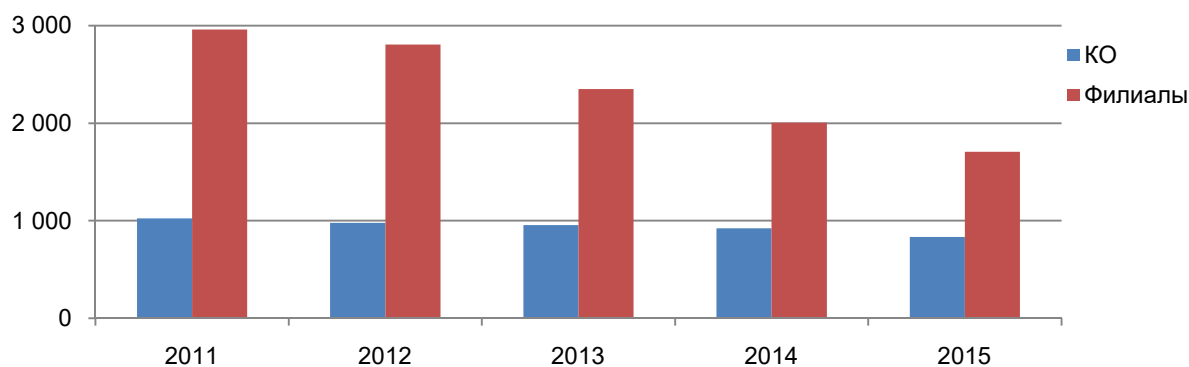
Источник: данные Центрального Банка Российской Федерации.

Рисунок 1 – Количество кредитных организаций и их филиалов за 2011-2015 гг., ед.

Также с конца 2013 года происходит сокращение общего количества банковских офисов. Сама по себе эта ситуация не является признаком банковского кризиса. Следует отметить, что крупные многофилиальные банки в 2014 году продолжали оптимизацию своих региональных подразделений.

Несмотря на то, что курс доллара в период нынешнего кризиса вырос на 87% по сравнению с 44% 2008 года, максимальный скачок за один месяц был примерно одинаковым. В мировой практике обесценение валюты на 20% уже свидетельствует о валютном кризисе.

Обменный курс рубля начал снижаться с января 2014 года, после того как ЦБ объявил о сворачивании «плановых» интервенций в поддержку национальной валюты. С начала июля снижение курса рубля пошло нарастающими темпами вплоть до драматических событий в декабре, когда рубль оказался под давлением спекулятивной атаки.

Период панического снятия депозитов пришелся на 17-19 декабря 2014 года [9]. Увеличение лимита ответственности системы страхования вкладов с 700 тыс. до 1,4 млн. руб. способствовало охлаждению декабрьской паники.

ЦБ РФ было принято решение о повышении ключевой ставки с 10,5 до 17%. Это вынудило банки в короткие сроки увеличить ставки по привлекаемым средствам с целью остановить «бегство» населения и компаний в валюту. Существенное

повышение Банком России ключевой ставки в середине декабря привело к росту стоимости заимствований на всех сегментах рынка, в том числе кредитном.

После повышения ключевой ставки между банками увеличилась конкуренция за вкладчиков – банки повышали ставки по депозитам населения и организаций. Внутри банковского сектора расширился разброс по депозитным ставкам. Происходил также переток вкладов населения в крупные банки. На фоне ужесточающейся конкуренции за вкладчиков существенно повышали ставки как крупные, так и мелкие банки. Происходили массовые досрочные изъятия вкладов с целью их переоформления по новой, более высокой ставке или для перемещения в другой банк. После принятия ЦБ РФ решения о понижении ключевой ставки в конце января 2015 года начало происходить умеренное снижение ставок по депозитам.

Изменилась структура депозитных операций населения. Наблюдалось резкое сокращение депозитов как рублевых, так и валютных на срок более одного года, в то время как вклады на сроки 1-12 месяцев увеличились, т.к. именно на эти вклады банки повысили ставки в середине декабря 2014 года. В отличие от кризиса 2008 года в 2014-м отмечается сокращение не только рублевых, но и валютных вкладов, что свидетельствует о снижении доверия не только к национальной валюте, но и к банковской системе. В декабре 2014 года население сокращало объем средств на валютных депозитах, отдавая предпочтение наличной иностранной валюте.

С декабря 2014 года по январь 2015 г. рублевые вклады сроком до 1 года возросли более чем в 1,6 раза, тогда как долгосрочные депозиты за тот же период сократились на 22%[1]. Динамика вкладов физических лиц в рублях и в валюте представлена на рисунке 3.
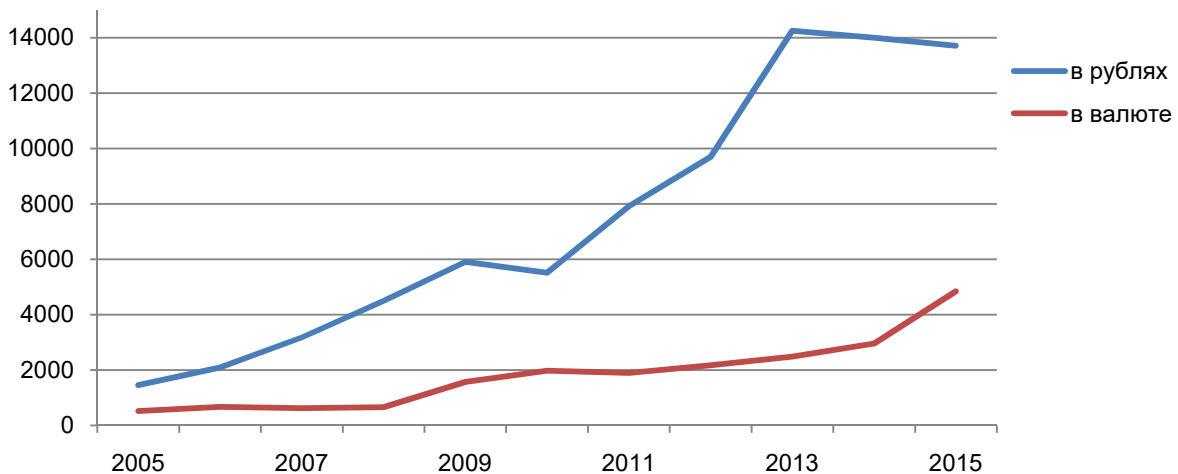
Источник: [23].

Рисунок 2 – Динамика вкладов физически лиц за 2000-2015 гг., млрд. руб.

С целью снижения рисков банки стали больше кредитовать крупные компании, сокращая кредитование малого и среднего бизнеса. В связи с проблемами внешнего фондирования, спрос со стороны крупных российских компаний увеличивался. В связи с этим происходило замещение розничного кредитования корпоративным. Несмотря на заметное удорожание фондирования, рост среднерыночных кредитных ставок в декабре был умеренным, существенно отставая от роста ставок по депозитам, облигациям или отдельным кредитным продуктам некоторых банков.

Отток вкладов населения из банков был менее масштабным, чем в прошлые кризисы. Однако, проблема плохих долгов в период этого кризиса была существенно острее. К апрелю 2015 года в России не обслуживался каждый пятый кредит, каждый

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[1] *Доклад о денежно кредитной политике. Информационно-аналитический сборник. [Электронный ресурс]. – Март 2015. №1. Режим доступа: http://www.cbr.ru/publ/ddcp/2015_01_ddcp.pdf*

десятый был безнадежным. За год число заемщиков, испытывающих серьезные трудности с возвратом кредитов, выросло почти на 1,5 млн., до 5,2 млн. [8, 21].

Просроченная задолженность физических лиц по состоянию на 1 апреля 2015 года составила 758,5 млрд. долл. Динамика просроченной задолженности по кредитам и прочим ссудам представлена в таблице 2.

Таблица 2 – Динамика просроченной задолженности по кредитам и прочим ссудам, млрд. руб.

п/п	01.01.2013 г.	01.01.2014 г.	01.01.2015 г.	01.04.2015 г.
Нефинансовые организации	924,1	933,7	1250,7	1487,6
Физические лица	313,0	440,3	667,5	758,5
Кредитные организации	5,2	11,3	44,3	37,8
Всего	1242,3	1385,3	1962,5	2283,9

Источник: [24].

Несмотря на ужесточение в направлении повышения требований к заемщику и обеспечению по кредиту, в январе 2015 года возросло количество мошеннических заявок на кредиты. Наибольшая активность происходит в сегменте беззалогового кредитования. Под индивидуальными мошенниками подразумеваются граждане, которые оформляют кредиты на себя, предоставляя заведомо недостоверные сведения о своем доходе или работодателе, а также, например, поддельные справки. По данным Объединенного кредитного бюро потери в сегменте беззалогового кредитования от действия мошенников в 2014 году составили более 40 млрд. рублей. В 2013 году эта сумма составила 42 млрд. рублей [25]. Динамика доли заявок с подозрением на мошенничество от общих заявок на кредиты представлена на рис. 3.
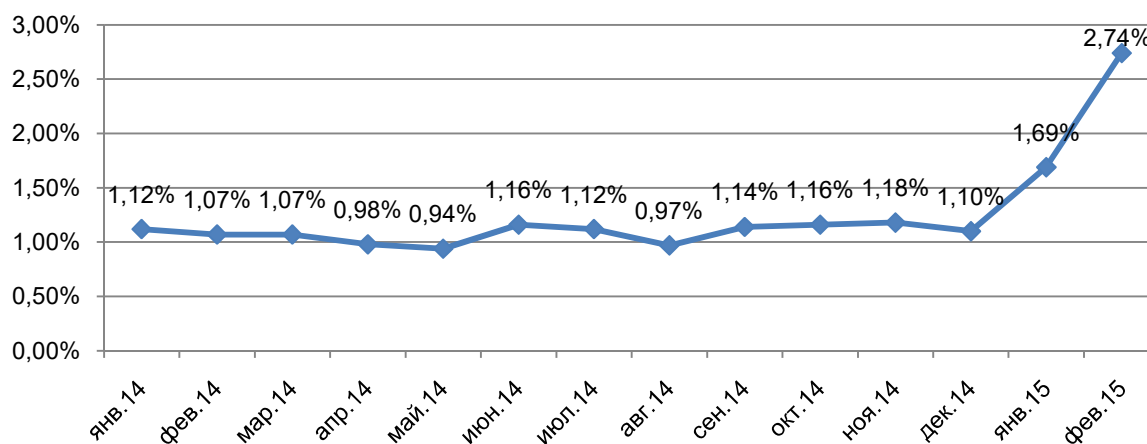
Рисунок 3 – Доля заявок с подозрением на мошенничество от общих заявок на кредиты, %

Замедление роста кредитования, увеличение просроченной задолженности по кредитам и опережающий рост ставок по банковским пассивам ведут к ухудшению финансового положения российского банковского сектора. Рост проблемных долгов - и розничных, и корпоративных - вынудил банки резко увеличить отчисления в резервы: 263 млрд. руб. в декабре 2014-го, 284 млрд. в январе 2015-го [10-11].

В результате всю зиму банковская система генерировала убытки. Финансовые результаты представлены на рисунке 20. Доля кредитных организаций, имевших убыток, резко возросла с 9,5 до 22,8% еще в феврале 2014 года. Своего максимума этот показатель достиг ровно через год и составил 29,3% [24]. Дополнительное давление на расходы банков, помимо необходимости создавать резервы, оказали также выросшие с декабря 2014 года процентные ставки по привлеченным средствам. Стоит отметить, средние ставки по банковским вкладам стали несколько снижаться после снижения регулятором ключевой ставки.

После кризиса 2008 года резко ускорился рост внешнего долга ЦБ РФ и коммерческих банков. По состоянию на 1 апреля 2015 года внешний долг России оценивается в 559,3 млрд. долл. Долг ЦБ и коммерческих банков составляет 30% от общей суммы внешнего долга. Динамика внешнего долга банковского сектора представлена на рисунке. По состоянию на 1 января 2015 года наибольший удельный вес в структуре внешнего долга банков занимают текущие счета и депозиты 93%. В структуре долга ЦБ обязательства распределены следующим образом: 22% составляют наличная национальная валюта и депозиты, остальное – это прочая задолженность. Динамика внешнего долга банковского сектора представлена на рис. 4.
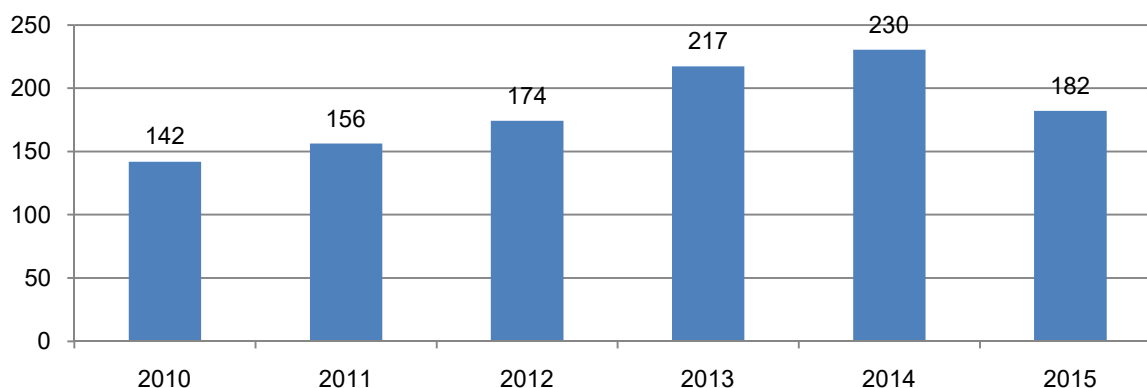
Источник: данные Центрального Банка Российской Федерации.

Рисунок 4 – Динамика внешнего долга банковского сектора за 2010-2015 гг., млрд. долл.

В начале текущего кризиса экономика России получила несколько ударов. Девальвация и рост процентных ставок отразились на рентабельности предприятий и, как следствие, на их инвестиционных планах. Кризис ликвидности в банковском секторе стремительно перекладывается на торговый и производственный сектора. Ухудшаются показатели промышленности, транспорта и финансового сектора.

Сжатие внутреннего рынка в условиях падения инвестиций становится главной проблемой. Большинство промышленных предприятий отмечают ухудшение текущей финансовой ситуации, вызванной, прежде всего, резким ростом затрат на сырье и материалы. Многие предприятия столкнулись с невозможностью взять кредит под оборотные средства из-за повышения ставок [12].

Одним из факторов снижения выпуска машиностроительных производств стало сокращение бюджетных расходов, в том числе расходов на оборону. Следует отметить, что в начале года наблюдался существенный рост этих расходов.

В непростой ситуации оказались те отрасли, для которых характерен значительный временной разрыв между поставкой продукции в розничные сети и получением за нее выручки. В таких отраслях приобретение материалов для производства, как правило, осуществляется с помощью кредитных средств. Прежде всего, это касается легкой промышленности.

Снизился спрос на кредиты по предприятиям малого и среднего бизнеса. Банковское кредитование таких субъектов в 2014 году сократилось на 0,9%, до 5,1 трлн. руб. на начало 2015 года. Годом ранее данный показатель возрос на 14,8%. Качество этого портфеля несколько снизилось. По состоянию на 1 января 2015 года просроченная задолженность находилась на уровне 7,7% кредитного портфеля МСП (в сравнении с 7,1% на 01.01.2014) – это выше, чем по совокупному портфелю корпоративных кредитов [22, 26].

ВВП России сокращается на протяжении всех первых четырех месяцев 2015 года. При этом в апреле его падение заметно ускорилось - еще в марте темпы не превышали 3,3%. По сравнению с мартом 2015 года объем апрельского ВВП

сократился на 0,6%. В целом за январь-апрель 2015 года ВВП России, по подсчетам Внешэкономбанка, сократился на 2,5% [13].

Вследствие ухудшения внешних условий, стали приобретать актуальность долговые риски. Санкции оказывают влияние на уровень, динамику, структуру внешнего долга России. Без преувеличения можно сказать, что развитые страны пытаются усугубить долговые проблемы России. В силу того, что был введен запрет для ряда банков на привлечение долгосрочного капитала, привычная практика рефинансирования внешних долгов была прервана. Фактически санкции помогли остановить выстраивание долговой пирамиды российской экономики [14]. За 2014 год внешний долг сократился на 18% и по состоянию на 1 января 2015 года составил 597 млрд. долл.

В 2015 году России необходимо было выплатить долги на сумму почти 120 млрд. долл., из которых 40,5 млрд. составлял долг банковского сектора. Также необходимо было будет выплатить проценты по долгам на сумму 22,7 млрд. долл., из которых 6,5 млрд. долл. составляли проценты по долгам банковского сектора. Платежи по внешнему долгу представлены в таблице 3. Долг, который содержит условие «до востребования» составлял 6% от общей суммы долга или 33,1 млрд. долл. по состоянию на 1 января 2015 года.

Таблица 3 – Планируемые платежи по внешнему долгу на 2015 г., млрд. долл.

п/п	По состоянию на 01.01.2015	До востребования	Сроки платежей				всего до 1 года	На 2016 год
			I квартал	II квартал	III квартал	IV квартал		
Общая сумма внешнего долга, в т.ч.:	597,3	33,1	36,6	17,0	29,3	36,8	119,8	67
• Центральный банк	10,6	2,4	0	0	0	0	0	0
• Банки	171,5	17,2	14,8	4,1	10,3	11,2	40,4	16,8
Всего проценты, в т.ч.	-	-	6,1	5,6	5,4	5,6	22,7	18
Центральный банк	-	-	0,001	0,001	0,001	0,001	0,004	0,004
Банки	-	-	1,8	1,7	1,6	1,4	6,5	5

Источник: [15].

Еще один риск связан с тем, что часть внешних займов содержит оговорки, которые называются «covenants». Они позволяют кредиторам потребовать погашения долга раньше времени в случае существенного ухудшения финансового и экономического положения должника [14, 16]. Следует отметить, что в 2015 году начался цикл снижения кредитных рейтингов России.

После введения третьего пакета санкций, когда Запад прекратил предоставление долгосрочных кредитов и займов, актуальным стал вопрос о достаточности средств у российских банков и компаний средств для погашения своих внешних обязательств. Безусловно, для этого в качестве основного источника выступают международные резервы России. В таблице 9 представлено соотношение международных резервов, а точнее валютной их части, и внешнего долга РФ с 2007 года.

Таблица 4 – Соотношение международных резервов и внешнего долга РФ за 2007-2015 гг.

Год	Валютные резервы РФ, млрд. долл.	Внешний долг РФ, млрд. долл.	Степень покрытия внешнего долга международными резервами, %
2007	313,2	295,6	94,4
2008	464,3	466,8	100,5
2009	479,8	411,7	85,8
2010	466,3	416,7	89,4
2011	488,5	443,6	90,8
2012	538,9	454,0	84,2
2013	636,4	486,6	76,5
2014	728,9	469,6	64,4
2015	597,3	339,4	56,8

Источник: данные Центрального Банка Российской Федерации.

В данной таблице учитывается общая сумма внешнего долга, а не только банковского сектора. Из расчета исключен запас золота, т.к. он является стратегическим запасом на самый крайний случай. До 2011 года удавалось более-менее поддерживать необходимое соотношение между валютными резервами и внешним долгом. Однако с 2012 года степень покрытия валютными резервами внешнего долга снижается, и на 1 января 2015 года этот показатель составил 56,8%. Важно также то, что, даже по оптимистическим прогнозам некоторых ученых, валюта может закончиться через 2,5 года [17,18].

В качестве снижения воздействия санкций в отношении России интересным является предложения отдельных исследователей [17], во-первых, уменьшить долю доллара в золотовалютных резервах России, во-вторых, изменить географическую структуру их размещения. Доллара США в международных резервах России имеет наибольший удельный вес, хотя после 2009 года постепенно снижается. Изменилась и географическая структура размещения. Так, очевидно, что доли США и Великобритании по величине размещенных резервов постепенно снижались.

Интересным примером является Иран, который отказался от накопления доллара США в качестве резервной валюты, а сосредоточил в них юани, рупии, российские рубли, золото. В последнее время одной из значимых и распространенных валют становится китайский юань. Доля его в глобальном денежном обращении растет, и некоторые страны, не дожидаясь признания его в качестве резервной валюты, включают в свои международные резервы. На начало 2012 года юань находился в международных резервах 12 стран [17].

Следует упомянуть о таком показателе, как международная инвестиционная позиция банковского сектора. Этот показатель отражает соотношение активов нерезидентов в российском и российских активов за рубежом в банковском секторе. Изменение международной инвестиционной позиции банковского сектора в течение 2014 года представлено в таблице 5. На начало 2015 года этот показатель составил 49 552 млн. долл., т.е. активы превышаю обязательства на эту величину.

Таблица 5 – Международная инвестиционная позиция банковского сектора, млн. долл.

п/п	Остаток на 01.01.14	Остаток на 01.04.14	Остаток на 01.07.14	Остаток на 01.10.14	Остаток на 01.01.15
Активы	273 110	293 735	309 432	270 537	275 994
Прямые инвестиции	12 697	12 181	13 260	12 958	12 119
Портфельные инвестиции	36 128	38 749	39 801	39 112	39 569
Производные финансовые инструменты	5 929	7 638	7 251	8 633	17 475
Прочие инвестиции	218 356	235 167	249 120	209 835	206 831
Обязательства	285 024	275 529	271 876	248 769	226 442
Прямые инвестиции	36 150	33 563	34 370	28 894	21 366
Портфельные инвестиции	42 366	34 322	35 231	27 810	19 241
Производные финансовые инструменты	4 354	6 181	5 050	9 283	21 479
Прочие инвестиции	202 154	201 463	197 225	182 783	164 357
Чистая международная инвестиционная позиция	-11 914	18 206	37 556	21 768	49 552

Источник: [27].

Важно отметить, что в формировании инвестиционной позиции РФ банковский сектор играет главную роль, т.к. на него приходится большая доля всех активов нерезидентов в экономике нашей страны, так и доля в зарубежных активах.

Среднее отношение привлеченных у нерезидентов средств к пассивам по банковскому сектору на начало 2015 года составило 10,6%. Всего на начало года кредитов из-за рубежа привлекли 162 кредитные организации. На их долю приходится 90,2% совокупных активов банковского сектора. Половина кредитов, привлеченных из-за рубежа, пришлась на 4 кредитные организации. Три из этих организаций входят в число 20 крупнейших по величине активов российских банков. 50% от общего объема

предоставленных нерезидентам кредитов пришлись на 2 кредитные организации, входящие в число 20 крупнейших по величине активов [26].

Названия этих банков в публикациях Банка России не упоминаются. Однако, вероятнее всего, что это Сбербанк, ВТБ, Альфа-банк и Газпромбанк. Распределение зарубежных активов банковского сектора РФ по странам на 2013 год представлено в таблице 6.

Таблица 6 – Распределение зарубежных активов банковского сектора РФ
по странам на 2013 год

Страна	Зарубежные активы, млрд. долл.	Зарубежные активы, %
Страны дальнего зарубежья, в т.ч.	97,0	92,7
Великобритания	27,6	26,4
США	14,2	13,6
Германия	13,1	12,5
Кипр	10,2	9,8
Голландия	4,1	3,9
Швейцария	3,7	3,5
Франция	3,6	3,4
Италия	3,3	3,2
Прочие страны дальнего зарубежья	17,2	16,4
Страны СНГ	7,6	7,3
Всего	104,6	100

Источник: [17].

Как видно из таблицы, большая часть активов располагается в странах, которые находятся под контролем Вашингтона. В таблице приведена наиболее ликвидная часть зарубежных активов, состоящая из кредитов, депозитов, корсчетов, а также наличной иностранной валюты в кассах кредитных организаций.

В качестве преимущества для банковского сектора РФ можно выделить то, что на банковский сектор приходится половина краткосрочных активов, в то время как в структуре иностранных активов в банковском секторе России большую долю составляют долгосрочные активы, которые быстро вывести нельзя или же этот вывод сопряжен с большими потерями.

Некоторые опасения вызывают все возрастающая доля валюты как в структуре банковских кредитов физическим и юридическим лицам, так и в структуре привлеченных банками средств. Рисунок 5 демонстрирует долю кредитов, выданных банками РФ в валюте и доля депозитов и других привлеченных средств в валюте.
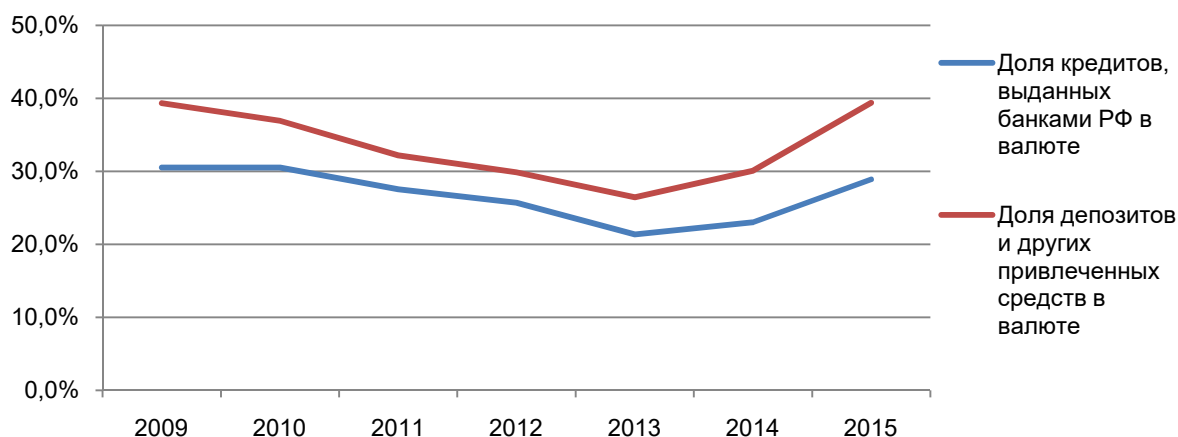
Источник: данные Центрального Банка Российской Федерации.

Рисунок 5 – Доля кредитов, выданных банками РФ в валюте и доля депозитов и других привлеченных средств в валюте, %

После кризиса 2008 года долларизация пошла на убыль. Однако к 2015 году процесс долларизации активизировался как по активным, так и по пассивным операциям банков. Очевидно, что доля валютных средств на депозитах существенно возросла после обвала рубля в период паники. Доля привлеченных средств и выданных кредитов в валюте за один год увеличилась на 30% и 27% соответственно.

Правительством РФ 27 января 2015 года был утвержден антикризисный план первоочередных мероприятий по обеспечению устойчивого развития экономики и социальной стабильности в 2015 году. В нем предусматривалось выделение средств Агентства по страхованию вкладов на докапитализацию системно значимых кредитных организаций в размере 1 трлн. руб. Следует отметить, это наибольшая сумма в рамках предусмотренных планом первоочередных мероприятий. До этого с 2010 года Агентство по страхованию вкладов уже потратило на санацию десяти крупных проблемных банков более 750 млрд. руб., привлекаемых у ЦБ РФ в виде кредитов [19].

На докапитализацию российских банков с использованием средств Фонда национального благосостояния с целью реализации инфраструктурных проектов предусмотрен объем финансирования в размере до 250 млрд. руб. [20]

Примечательно, что в антикризисном плане не было ни одного пункта по противодействию валютным спекуляциям. Если обратиться к федеральному закону «О валютном регулировании и валютном контроле», то в нем практически нет ограничений на осуществление валютных операций между резидентами России и нерезидентами. Вернее, они были отменены с 1 января 2007 года. Эти ограничения предполагали: регулирование Правительством и ЦБ РФ операций движения капитала, предварительная регистрация счета (вклада), открываемого в банке за пределами территории РФ, обязательная продажа части валютной выручки на внутреннем валютном рынке РФ.

Существуют примеры стран, которые благодаря введению валютных ограничений быстрее других выходили из кризиса. Одним из таких примеров является Малайзия, которая во время азиатского финансового кризиса ввела валютные ограничения. Ей удалось не только сохранить свои международные резервы, но и раньше других стран региона восстановить свою экономику.

К последствиям финансово-экономического кризиса 2008 года наиболее устойчивыми оказались такие развивающиеся страны, как Индия и Китай. Причем Китай никогда не отменял валютных резервов и ему удается поддерживать стабильный курс юаня.

Таким образом, отсутствие ограничений на трансграничное движение капитала могут привести к подрыву национальной денежной единицы. А это в свою очередь может разрушить экономику страны. И этот вопрос сегодня является очень актуальным в условиях, когда против России разворачивается настоящая «экономическая война».

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ФАКТОРЫ РАЗВИТИЯ РЫНКА БИОТЕХНОЛОГИЧЕСКОЙ ПРОДУКЦИИ В МИРОВОЙ ЭКОНОМИКЕ
DEVELOPMENT FACTORS OF THE BIOTECHNOLOGICAL PRODUCTS' MARKET IN THE WORLD ECONOMY

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АННОТАЦИЯ
Рост численности населения и нехватка природных ресурсов предопределили переход генной инженерии на новый этап своего развития, который, однако, сопровождается постоянными спорами относительно качества и безопасности такой продукции. С уверенностью можно утверждать, что генетически модифицированная продукция открывает перед человечеством, как новые перспективы, так и вероятные угрозы, ведь ряд научных исследований указывают на небезопасность генетически модифицированной продукции (ГМО) – продукции, которая приводит к различным заболеваниям у людей и всевозможным неблагоприятным эффектам на окружающую среду. Сегодня существует целый перечень причин относительно оговорок к генетически модифицированной продукции: недостаточная информированность потребителей относительно происхождения этих продуктов, неоднозначное их восприятие с позиции безопасности или опасности и прочее. Одновременно с распространением ГМО во многих странах мира наблюдается движение «за экологически чистую продукцию» и функционирования «зон, свободных от ГМО». Каждая страна выбирает свой подход относительно использования или ограничения в своей жизни генетически модифицированной продукции. Целью работы является проанализировать и оценить перспективы реализации инновационных подходов в функционировании мирового рынка биотехнологической продукции. Исследовать феномен генетически модифицированной продукции и осветить основные особенности развития мирового рынка ГМО.

ABSTRACT
The population growth and scarcity of natural resources has determined the transition of genetic engineering to a new stage of its development, which is, however, accompanied by constant disputes regarding the quality and safety of such products. Safe to say that genetically modified products open before mankind a new perspective, and a probable threat, because a number of scientific studies indicate the insecurity of genetically modified products (GMP), which leads to various diseases in humans and various adverse effects on the environment. Today there is a whole list of reasons on reservations to genetically modified products: lack of consumer awareness regarding the origin of these products, their ambiguous perception from a position of safety or danger, and so on. Simultaneously with the spread of GMP in many countries there is a movement «for environmentally friendly products» and operation «zones free of GMP». Each country chooses its own approach regarding the use or limitations in their lives genetically modified products. The aim of study is to analyze and assess the prospects for the implementation of innovative approaches in the functioning of the world market of biotechnological products, to explore the phenomenon of genetically modified products and to highlight the main features of the development of the world market of GMP.

КЛЮЧЕВЫЕ СЛОВА
Биотехнологическая продукция, генетически модифицированная продукция, экономическая эффективность, мировой рынок, риски, маркировка, режим доступа ГМО, рынок; безопасность продукции.

KEY WORDS
Biotechnological products, genetically modified products, economic efficiency, the global market, risks, labeling, access mode of the GMP, market, safety of products.

Проблемы генетически модифицированной продукции освещены в трудах многих отечественных и зарубежных ученых. Среди российских специалистов следует назвать исследования М. А. Голубков [1], Л.П. Жиганова [2], В.В. Гузырь., Н.Н. Горюнова [3], М.Е, Кадомцева [4], Э.Н. Крылатых [5], К.П. Мартынов [6],

Среди иностранных исследователей генетически модифицированной продукции можно выделить работы Д. Санчез [7], А. Йен-Тинг Вонг, А. Ваи-Кот Чен [8], К. Джеймс [9], Ш. Уолкер [10] и др. Однако вопрос определения факторов развития мирового рынка биотехнологической продукции освещены частично, что определяет актуальность темы исследования.

Основными задачами являются: определить понятие сущности генетически модифицированной продукции, исследовать эволюцию мирового рынка биотехнологической продукции, выделить особенности выращивания генетически модифицированной продукции в разных странах мира, проанализировать методы государственного регулирования ГМО в развитых странах и определить основные факторы влияния на механизм функционирования мирового рынка генетически модифицированной продукции.

В Картахенском протоколе по биобезопасности содержится такое определение генетически модифицированных организмов: «живой измененный организм» называет всякий живой организм, располагающий новой конфигурацией генетического материала, произведенный в следствии использования современной биотехнологии (Картахенский протокол по биобезопасности, статья 3) [11, с. 419]. Д. Санчез понимает под ГМО изменение генетического материала растения или другого организма с использованием методов генной инженерии [7, с. 4]. А. Йен-Тинг Вонг и А. Ваи-Кит Чен определяют ГМО как продукцию, полученную из организмов, в которых генетический материал был изменен искусственным образом [8].

Производство, оборот и использование ГМО регламентируют следующие международные нормативно – правовые акты: Конвенция о биологическом разнообразии Рио-де-Жанейро 5 июня 1992 г., Картахенский протокол о биобезопасности к Конвенции о биологическом разнообразии Монреаль (Канада) от 29 января 2000 г., Кодекс Алиментариус (Codex Alimentarius) 1999 г., Конвенция «О доступе к информации, участии общественности в процессе принятия решений и доступе к правосудию по вопросам, касающимся окружающей среды» (Дания) в 1998 году.

Первые генно-инженерные сорта продукции растениеводства появились в производстве в 1992 году. В наше время генетически модифицированные (ГМ) сорта кукурузы, сои, масличного рапса и хлопка активно культивируют во многих странах, а продукция, которая при этом получается, поступает на мировой рынок.

Кроме того, ГМ – сорта папайи, картофеля, риса, тыквы и сахарной свеклы уже попали на рынок или на разных стадиях испытаний. По оценкам экспертов, в глобальном масштабе ГМ – культуры выращиваются примерно 4% от всех обрабатываемых земель в мире [12].

Исторически существовали три типа компаний в сфере биотехнологий: так называемые новые биотехнологические фирмы (например, Plant Genetic System, которая сейчас является частью Bayer Crop Science), агрохимические фирмы (например, Syngenta, Monsanto, Bayer, BASF) и семенные компании (например, Pioneer Hi-Bred, сейчас входит в DuPont) [13].

Б. Баласинович и Ю. Ярошевская в своем исследовании выделяют три поколения ГМ – культур: Первое поколение – растений, модифицированные с целью придания им устойчивости к биотическим и абиотическим факторам. Например, устойчивость к насекомым – вредителям (СК – устойчив к насекомым; англ. IR – insect resistance или Bt – Bacillus thuringiensis – бактерии, гены которой используются) – модификации кукурузы, хлопчатника; к использованию гербицидов (ГС – гербицидо-устойчивый; англ. – herbicide-tolerance crops), то есть продолжение жизнедеятельности после гибели окружающих сорняков – модификации сои, кукурузы, хлопчатника, рапса. Проводится разработка и коммерчески выращиваются модификации, устойчивые к вирусным (например, папайя), грибковых и бактериальным инфекциям. Также есть культуры, устойчивые к абиотическим факторам (морозу, засухе и тому подобное).

Второе поколение – растения, модифицированные с целью улучшения их свойств. Например, семена масличных культур с измененным профилем жирных кислот, высокоамилозная кукуруза, линии растений с повышенным содержанием незаменимых аминокислот, минералов и витаминов. Также известен «золотой» рис, который содержит значительное количество провитамина А.

Третье поколение – организмы, которые модифицированы с целью использования при производстве ферментов, химических соединений для фармакологических препаратов, пластмасс, способных разлагаться, и тому подобное. Исследования находятся на начальном этапе [14].

Под влиянием ученых, общества и международных организаций, страны также поделились взглядами на ГМО. Существует три основные группы: 1) страны, которые открыто выступают за использование и распространение новых достижений генной инженерии и считают необязательным маркировки ГМО; 2) страны, где совсем запрещен ввоз и выращивание генной сельскохозяйственной продукции; 3) страны, входящие в Европейские Сообщества.

К первой группе относятся страны, в которых трансгенными культурами засеяно наибольшую площадь, они выступают за использование и распространение новых достижений генной инженерии и считают необязательным маркировки ГМО. Это такие страны как: США, Канада, Австралия, Мексика, Аргентина и Бразилия.

Вторая группа – страны, где вовсе запрещен ввоз и выращивание сельскохозяйственной генной продукции, это страны Африки, Малайзии, отдельные латиноамериканские страны. К третьей группе относится Европейское Сообщество. Здесь проводят собственные генные разработки, ограничивая ввоз трансгенных растений из других стран, и стараются учитывать отношение потребителей к вопросу ГМО [6].

В рамках международной торговли ГМ – продукцией рассматриваются следующие режимы доступа на рынки государств: «политика нулевой толерантности», «политика минимального присутствия», «политика случайного присутствия» [15].

«Политика нулевой толерантности» указывает, что в импорте продовольственных товаров или кормов не должны включать признаки ГМО, касательно которых не было принятия согласующего разрешения на ввоз.

«Политика минимального присутствия» обозначает минимальные пределы содержания отчетливой линии ГМО в продукции, которая обязана пройти порядок согласования хотя бы в одной стране мира по причине проведения научной оценки биологической безопасности, реализованной в соответствии с положениями «Кодекс Алиментариус».

«Политика случайного присутствия» указывает на присутствие определенной линии ГМО в продукции, которая не прошла соответствующие исследования ни в одной стране мира с требованиями к оценке пищевой безопасности в соответствии с положениями «Кодекс Алиментариус».

Официально понятие «зона, свободная от ГМО» в первый раз появилась 24 сентября 1998 г. в заявлении британского отделения Партии природного закона, которая предложила властям графств Великобритании к созданию зоны, свободной от ГМО. И несмотря на это на сегодняшний день так и нет ясного определения этой

категории. Как правило, под «зоной, свободной от ГМО» подразумевают каждую территориальную единицу, сообщество или организацию, руководители которых во время координации с жителями или членами достигают определенных заключений об отказе от выращивания, и/или распространения, потребления ГМ – семян, культур, продуктов и образовывают порядок наблюдения за осуществлением этого решения [16].

Общая способ оценки риска допустимых вредных эффектов ГМО предполагает такие этапы: обнаружение любых явных генотипных и фенотипных характеристик, сопряженный с наличием трансгенов, которые могут возбудить вредное воздействие ГМО на здоровье человека и окружающую среду; оценка допустимости формирования неблагоприятного результата, исходя из интенсивности, характера и продолжительности воздействия генетически модифицированного организма на человека или на потенциально принимающей среде; оценивания последствий в случае, если такое неблагоприятное воздействие действительно будет происходить; оценивание совокупного риска, которое вызывается ГМО, на основе определения вероятности возникновения и последствий выявленных неблагоприятных эффектов; осуществление рекомендаций относительно определения, есть ли допустимые риски, и если это необходимо, определение стратегий для регулирования таких рисков [11, с. 418-419].

Среди основных рисков для здоровья человека, связанных с использованием генно – инженерных организмов, расценивают следующие: изменение активности отдельных генов живых организмов под влиянием вставки чужеродной ДНК, в результате чего может произойти ухудшение потребительских свойств продуктов питания, получаемых из этих организмов; синтез новых для реципиентного организма белков – продуктов трансгенов, которые могут быть аллергенными или токсичными; горизонтальная передача трансгенов другим организмам, а именно маркерных генов устойчивости к антибиотикам от ГМО микроорганизмам пищеварительного тракта.

По данным 2014 г., доля промышленно развитых стран (прежде всего США) в мировом производстве ГМ – культур составила 72% (11,3 млрд. долл. США), развивающиеся страны – 28% (4,4 млрд. долл. США). При этом, несмотря пока на отставание развивающихся стран по физическим объемам производства генетически модифицированных культур, они демонстрируют значительный потенциал развития в этой сфере. Еще в 2010 году развивающиеся страны значительно сократили разрыв с развитыми странами в сфере производства ГМ – культур [18]. Значительное сокращение разрыва между развитыми странами и развивающимися, в процессе производства сельскохозяйственных ГМ – культур можно объяснить тем, что развитые страны Европы продолжают оставаться в стороне от развития производства такой продукции.

В этих странах объем предложения продовольствия, а также доходы значительно выше, чем в развивающихся странах. Поэтому европейцы продолжают относиться критически к разрешениям производства ГМ – продукции для коммерческого использования. В развивающихся странах, соотношение цена – качество сильно отличается от существующего в развитых странах, и до развития производства ГМ – продукции в коммерческих целях население этих стран относится более спокойно. Говоря о мировом рынке ГМО, необходимо отметить, что сегодня развивающиеся страны, в основном являются реципиентами посевного материала из развитых стран мира (преимущественно из США). Однако в последние годы многие страны, среди которых Бразилия, Индия, Аргентина и Китай, начали развивать собственные биотехнологии [19].

В 2015 г. фермеры Латинской Америки, Азии и Африки коллективно выращивали генетически модифицированную продукцию на площади 97,1 млн га, что составляет 54% от 179,7 млн. га биотехнологических культур в мире (по сравнению с 53% в 2014 г.), тогда как промышленно развитые страны использовали 82,6 млн га, или 46% (сравним с 47% в 2014 г.). Из 28 стран, которые выращивали генетически

модифицированные культуры в 2015 году, 20 стран – это развивающиеся страны, и 8 – промышленно развитые страны [20].

Европейский Союз рассматривает генетически модифицированные организмы как результат специального процесса производства. Поэтому было разработана отдельная социальная система правил обращения с ГМО, которая приобрела силу в начале 90-х годов. До 2004 г. в ЕС действовал неофициальный мораторий на утверждение новых ГМО [14, с. 59].

К важнейшим нормативно – правовым актам ЕС относительно ГМО относятся: Директива 90/219/ЕЭС, дополненная директивой 98/81/ЕС об ограниченном использовании генетически модифицированных микроорганизмов, которая регулирует исследования и производственную деятельность с использованием ГМ – микроорганизмов в закрытой среде; Директива 2001/18/ЕС о преднамеренном выпуске в окружающую среду генетически модифицированных организмов, которая регулирует экспериментальное высвобождение ГМО в окружающую среду и размещение ГМО на рынке; Регламент ЕС 1829/2003 о генетически модифицированных продуктах питания и кормах, регулирует размещения на рынке ГМО продуктов питания и кормов; Регламент ЕС 1946/2003 о трансграничном движении ГМО за исключением умышленного перемещения в рамках Сообщества, которое регулирует перемещение ГМО между ЕС и другими странами; Регламент ЕС 1830/2003 по отслеживанию и маркировке ГМО и отслеживанию продуктов питания и кормов, произведенных из ГМО, регулирующего маркировку и отслеживание ГМО [14, с. 60].

Американский подход к генетически модифицированных организмов базируется на продукте, а не на процессе производства и рассматривает биотехнологию как безопасную по своей природе, а ее продукты как такие, которые не отличаются от немодифицированных аналогов. В результате в США не принято никакого отдельного закона о ГМО, и используется законодательство, которое было принято для обычных продуктов. Так ГМО регулируются Законом о защите растений, Федеральным Законом о пищевых продуктах, медикаментах и косметике, Федеральным Законом о инсектициде, фунгициды и родентициды и Законом о контроле токсичных веществ. В США вопрос о регулировании ГМО относящихся к компетенции Управления по санитарному надзору за качеством пищевых продуктов и медикаментов США (FDA), Департамента сельского хозяйства США (USDA), Агентства по охране окружающей среды США (EPA). Разграничение их полномочий установлено Федеральной системой регулирования биотехнологий, действует с 1986 года [4, с. 70]. В США не существует требований к маркировке ГМО, поскольку продукты с таким содержанием не считаются эквивалентными обычным продуктам. Однако продукты с содержанием ГМО так же подлежат обязательному маркированию, как любые другие продукты, которые приводят к особым рискам для здоровья человека и окружающей среде вследствие, например, содержания аллергена или изменения пищевых свойств [14, с. 76].

Выводы и перспективы исследований. Проблема выращивания и распространения генетически модифицированной продукции является сложным вопросом, на который влияет множество факторов как внутренних (экономическая выгода от быстрого выращивание биотехнологической продукции, рост производительности в сельском хозяйстве, вызовы глобальной продовольственной безопасности), так и внешних (интернационализация хозяйственной жизни, распространение инноваций, стремительное распространение ГМ – технологий, рост торговой взаимозависимости стран). Можно также сделать вывод, что в разных странах отношение к биотехнологической продукции разное. С одной стороны, можно выделить американский подход, за которым прослеживается позитивная поддержка использование генетически модифицированной продукции, с другой – европейский, который ограничивает использование и распространение такой продукции. Все это, на наш взгляд, подразумевает создание отдельной институциональной структуры, регулирующей развитие биотехнологий и биотехнологической отрасли в мировом масштабе и перераспределением в нее тех регулятивных функций, которые на сегодня взяли на себя по отношению к биотехнологиям такие организации, как ОЭСР, ВОЗ,

ФАО, Комиссия Кодекса Алиментариус. Дальнейшее научный поиск целесообразно сосредоточить на рассмотрении проблемы развития и регулирования рынка биотехнологий в отдельных странах, его роли в их национальной экономике, и на уровне международных организаций в том виде, в каком они (проблемы) имеют место на современном этапе.

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THE EMPOWERMENT ACTIVITY FACTORS OF MICRO BUSINESS THROUGH THE REVOLVING FUND UTILIZATION

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ABSTRACT

The micro business empowerment was done by the local government which synergy with local banking was able to drive the local economic increased. This study is a qualitative research approach. The purpose of this study is to know the micro business empowerment factors with the utilization of revolving fund, whereas government as the stakeholders and local banks as the lenders.

KEY WORDS

The role of micro, small and medium enterprises re-attracted the attention of many observers since the post of economic crisis. It can be seen by many of small and medium enterprise keep survive in the economic crisis in Indonesia. Marimbo (2008) stated that the small and medium business keep struggle during the crisis economic surge. On crisis economic, the small and medium enterprise has proven able to accommodate as 99.45 % by the total of labors or 73.24% million labors. The role of small and medium enterprises, particularly since the economic crisis able to be viewed as the safety valve on national economic recovery, either to drive the national economic growth or accommodate the labors. The similar opinion is conveyed by Ali (2008) that the small and medium enterprise are the national economic bastion when the sector is ignored means not keeping up the Indonesia bastion. This opinion also supported by Chakrabarty (2012), Rajamohan & Durairaj (2012) and Mahembe (2011).

Chakrabarty (2012) found the reality that small business played the important role in economic nation with reducing the unemployment and alleviate poverty. Rajamohan & Durairaj (2012) found that small and medium enterprises are the driver of the business world and economic nation backbone. The sector contributes to the achievement of national GDP, product output, and export. The business micro, small, and middle provide the employment to population. The ratio of labor on capital in micro, small and middle business and the growth of entire sector far higher than large industries. So that, become the requirement for the local government and banking to support the sector. Primarily, the banking needs to override the lending pattern that bases on a traditional asset with lending cash flow patterns base as the priority.

The similar opinion was revealed by Mahembe (2011) that business micro, small and medium played the important role in the economic development through the employment creation, increase the production, the export growth and increase the innovation and entrepreneur skill. However, the current business micro, small and middle facing the big challenge that blocking their growth is access to the business capital. So that, according to Jusuf (1996) the local government and banking have to serve the small business since they have the vital role and maintain the big commitment toward the effort to improve the small business sector.

The government policy related to the development of business micro, small, and medium through the conducive development climate, give the opportunity to make efforts, supporting, protection, and business development as wide as possible. Then able to improve the positions, role and business micro, small and middle potential to realizing economic growth, equity and increase the society's income, make an employment and poverty alleviation.

The policy is a direction or guidance where the destination of an organization or company want to achieve, related the goal and plan by an organization, government, company, political parties and others. This matter similar with Lasswell (1970) dan Anderson (1979) which stated that the policy is a goal achievement program, values, and direction practices and a set of action that has the certain goal that has to followed and do by the actors as the problem-solving.

The problems faced by much small business like there is no finance administration system and good management, the proposal preparation problem and study of feasibility to obtain the loan by the banks. Since the small business party rarely has a guarantee as for the requirement to borrow the capital, the problem of preparation of business plan, the lack of skilled labor and the lack of information technology skills. That's limitation encourage the unfair competition among the small business actors. A big company that has a large capital, the professional human resource which tends to dominate in the market. So that, need a support by the government parties to give the convenience of a small business such as the provision of capital assistance in order the small business party able to run their business activity.

One of the utilization programs is utilization the revolving fund to financing the business macro, small and middle which do by the local government. It is like *Kredit Usaha Pemberdayaan Ekonomi Masyarakat* (Business Credit for society Economic Empowerment) which the local policy that shaped of program community empowerment activities for poverty alleviation. The current study aim to knowing the empowerment activity factors of micro business (retailer store) on the utilization of revolving fund by the local government.

THEORETICAL REVIEW

The society empowerment. The background empowerment of society is due to the powerless of society and inability to develop their own self. This society's inability is also based on its inability to generate initiatives or ideas in order to build society independently and the inability to evaluate development outcomes. So that, able be seen that the final goals of the society empowerment are society independence and to improve the ability to the better life. With another word that the society empowerment is needed during still any powerless of the individual or a society group. which means it is not fully unearthed optimally of ability and potential that owned by an individual or a society group.

The empowerment is a strategy on developing which the implementation be conveyed and developed on daily development. The empowerment more likely developed in the emerging country only. According to Kartasasmita (1997), the empowerment is an effort to improve the society layer in prestige and dignity in the inability to break away from the poverty and backwardness. In another word, empowering is to enable and empower the society. So that the society empowerment should do with: creating an atmosphere that allows the growth of society potential; the effort has to be followed with strengthening the society potential; improve the society participation on decision making; empowering has meaning to protecting.

The Scope of Society Empowerment Activities. According to Mardikanto (2013) practically the society empowerment that does by many parties frequently limited on economic empowerment in order to alleviate poverty and reduce poverty. So that, empowerment is done in form of development of productive activity to increase the income. Besides, in the management science, human occupy a unique element of resources at once as the actors or the manager. Included in the human effort is the whole activities among the strengthening effort or develop the individual capacity, institution, and system.

Mardikanto (2013 b) conveyed that the empowerment activity stages divided become several stage, they are:

1. Determination and introduction the work area. Before doing the activity, the determination of working area need to obtain the agreement among the facilitator team, the local government official, (representative) the local society and another stakeholder (business actor, public figure, NGOs actor, academician, and others). This matter not only to

avoid the interest conflict among the stakeholders but also to develop the synergy and obtain the endorsement such as participation by the entire stakeholders for the success of the program and community empowerment activities that will be done.

2. Activity socialization is the effort to communicate the society empowerment activity plan that will do in a certain area. Including on activity socialization, need to describe the related parties that will be asked to participate, the division of role is expected, approach, strategy as the steps that will do.

3. Develop the society awareness is the activities that do to bring over of theirs existence, either as the individual and the part of society, as well as the environment condition related the physics environment, technique, social culture, economic and politics.

4. Society organizing, include the leader election and task group that will be formed. The organizing of society important to do since to implement the changes to solve the problem and to improve the problem that can not be done individually but needs the society organizing. Including on the organizing is the role division and developing the partnership network.

5. The implementation of the activities consist of : a) the training to adds and improving the technique knowledge, managerial skill as well as the changes of attitude and insight, b) the activities development, particularly that related to the income increase and protection, preservation and rehabilitation the natural resources, also has an important meaning in order the society be more confident that the assistance role which was given able to improving their life, at least economically.

6. Advocate policy, since all the society empowerment effort (the increased income, the strengthening of bargaining position and others) Require the policy support in public interest parties. The advocate policy needed to obtain the political support and legitimation from the society elite (government official, business actor, public figure, NGO activist, academician and others).

7. Politicization means continually maintain and increasing the bargaining position through the political practices. This matter is needed to obtain and conserving the legitimation and sustainability of the policies that want to be achieved through the society empowerment.

Micro Business. Small industries empowerment is necessary and strategic to anticipate the economic matters, especially to strengthen the national economic structure. The current national economic crisis has an impact to the social stabilization, economic, the political that affected on the large business that is getting worse, while the small business still able to survive on their business activities (Prawirokusumo, 2001). The government need to increase their role in the small industries empowerment as one of national policy strategic, has an important role in driving the economic growth entirely

The definition of micro business according to Decree of the Finance Minister No. 40 / KMK.06 / 2003 dated January 29, 2003, is the productive effort family owned or individual of Indonesian citizens and Has a maximum sale of Rp 100,000,000.00 (one hundred million rupiahs) per year. Micro Enterprises may apply for credit to the bank at most Rp 50.000.000,00 (fifty million rupiahs). Characteristics of micro-enterprises (KKMB, 2003):

1. The type of business goods/commodities is not permanent, changeable at any time;

2. The business place is un-permanent, moveable at any time;

3. Have not done yet the financial administration even the simple one, and not separating the family financially and business financial, the business human resources (the business actors) have not the enough of spirit entrepreneurship;

4. The education grade which relative low;

5. Generally, there is no banking access, but some of them have an access to non-bank financial institutions;

6. Generally, have no the business licensing or the other legality requirement includes the NPWP. If has been seen by the banking interest, micro business is the potential market to be serviced, but still many of the micro business difficult to obtain the banking credit service since still does not meet the loan conditions which was set by the bank.

Partnership Program (soft loan/ revolving fund). According to Tennyson in Wibisono (2007), the partnership is the agreement between sectors whereas individual, group or organization agree to join together to fulfill an obligation or do the certain activities, together bear the risk and profit and reviewing cooperative relationships periodically.

The relation with the Micro Small Medium Enterprises (MSMEs), according to Mardikanto (2010 a), Partnership and Community Development Program conducted by SOEs has been implemented since the early 1990s through the program *Pembinaan Usaha Kecil dan Koperasi* (Coaching Small Enterprises and Cooperatives or PUKK). Through this program, each SOEs do the partnership activities with the capital assistance pattern such as soft loan / revolving fund, technical coaching, and management as well as product marketing. The current program has been changing become the Partnership and Community Development Program, namely:

a. Partnership Program, in form of soft loan with the interest 6% per year was given to SMEs group, a cooperative which become its partner;

b. Community Development in form of grants for training programs, promotions and others.

METHODS OF RESEARCH

The case study often is related to the quantitative research, both have several similarities among others like research deeply, the problem should be preferential, understanding the life completely, and emphasize the natural situation. The current qualitative research the final result is finding the empowerment activities factors of micro business through utilization of revolving fund through synergy between local government and banking. According to Purwanto (2010) case study is the study to analyze the limited case carefully.

This research was conducted on Small Business such as retailer store in Jambi province, Indonesia. In this study, the subject was taken purposively as called information key. The data collection in this study is used observation technique, interview deeply, documentation, and Focus Group Discussion (FGD). That is the characteristics of qualitative research (Bogdan and Biklen, 1982). Selected observation techniques are ordinary, open observation and passive role. Observation is done by observing the activities of retail traders and mentoring the utilization of revolving fund Business Credit for Community Economic Empowerment program.

RESULTS OF RESEARCH

The empowerment activities factors of retailer through the utilization the revolving fund Business Credit for Community Economic Empowerment program are as follow:

The local government policy is suitable with the vision and mission of local government about Establishment of Coordinating Team for Operation of Business Credit, the policy of local government bank in assisting the distribution report preparation and the realization the credit returning. The policy of establishment the credit executive team that consist of Regional Economic Section, Department of Cooperatives, Industry and Local Government Bank and supported by the availability of operational fund through the Regional Expenditure Budget (APBD).

Condition exclude the retailer store is like the residence description, the condition of trade description and economic condition description region, which gave the positive description to Development of retail trading business through the use of revolving fund of a Local Government program. Besides that, the condition of retailer store generally sell the daily needs product that consumed by the society with the characteristics of the business owned status as the owner as well as the manager. The status of capital owned by the own capital and credit. The number of labors between one to two person even serve the consumer directly. The structure of business capitalization between 3 to 9 million IDR. Source of merchandise in the market and large stores or distributors. The profit by traders

income a day and the skill still simple that is obtained by generation to generation and spontaneously. Moreover, the resistor factor on the retailer empowerment activities through the utilization of revolving fund by local government program by the retailer side is the human resources limitation, the control less of inventory, inability to anticipate the market opportunities and there is no place to the retailer. While by the program implementation is the small amount of credit, the strict of administration requirement, there is no formal training by the executive team, the facilitator qualification is not certified and occur the temporary postponement in the utilization of revolving fund on that's program. Then the supporting factors are the local government policy support like the utilization of revolving fund of local government program the supporting of the executive team, the capitalization support, and operational activities support. Also, there are a time and place of implementation of the activities which adjusted by Regional Expenditure Budget (APBD) support of Local government and there is in a whole of the sub-district on it. Transportation infrastructure support such as operational transportation and road access as well as a description growth of regional economic condition which is getting better.

The social responsibility of the local government and local bank on the utilization of the revolving fund is to meet the continuous element and sustainable through the programs that have been planned for its implementation. Systematically structured and evaluation-able. The empowerment elements of society can be seen by the participation and initiative of the seller on the utilizing of the revolving fund in second time. The elements of two directions hearing the aspiration of the retailer by the executive team.

Then the understanding of partnership which has fulfilled through the equality or balance principles such as the awakening of mutual respect. Mutual respect and trust accordance with the functions and their roles respectively. The finance information management through the report distribution transparently and realization of the credit refund monthly and mutual benefit is the utilization of credit repayment interest.

CONCLUSION

The empowerment of micro business had been done accordance with the vision and mission of local government. The synergy between local government, local banking side as well as the small business able to increase the economic growth going to be better. The utilization of revolving fund realizing an economy capable of providing decent employment and livelihoods and providing a solid foundation for sustainable development. This matter means the economic development was directed on the empowerment of natural resources and human resources effectively and efficiency then obtain the output such as a product that able to increase the society welfare.

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THE EFFECT OF OUTLIERS ON THE PERFORMANCE OF AKAIKE INFORMATION CRITERION (AIC) AND BAYESIAN INFORMATION CRITERION (BIC) IN SELECTION OF AN ASYMMETRIC PRICE RELATIONSHIP

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ABSTRACT

Asymmetric price transmission modelling aims to select one model that best captures the asymmetric data generating process from a set of competing models using model selection methods. However, such an interest in model selection outpace an awareness that outliers in data can have a disproportionate impact on model ranking. In order to explore the issue, the effect of outliers on the performance of commonly used Akaike Information Criteria (AIC) and Bayesian Information Criteria (BIC) in selection of asymmetric price relationship are evaluated under conditions of different sample size. Monte Carlo experimentation indicated that the ability of the model selection methods to identify the true asymmetric price relationship decreases with an increase in outliers in moderate and large samples. With 5% outlier-contamination in large samples, both AIC and BIC fail to identify the true asymmetric price relationship. BIC outperforms AIC in selecting the asymmetric data generating process in large samples with outliers. However, in small samples, the effect of outliers on the performance of AIC and BIC in selection of the correct asymmetric model remains unclear.

KEY WORDS

Model selection, Akaike's Information Criteria (AIC), Bayesian Information Criteria (BIC), asymmetry, Monte Carlo, outliers.

Asymmetric price transmission modelling aims to select one model that best captures the asymmetric data generating process (DGP) from a set of competing models. This entails choosing the model that provides the best fit to the data on the basis of information criteria. The justification for this approach is that the model providing the best fit is the one that closely approximates the underlying asymmetric data generating process. However, such an interest in model selection outpace an awareness that outliers in data can have a disproportionate impact on model ranking. In the presence of outliers, a model may provide the best fit among a set of competing models without necessarily closely approximating the data generating process.

Outliers are observations that are rare and for some reasons, different from majority of the observations (see Barnett & Lewis, 1994 for a detail discussion). The effect of outliers on the ranking of competing models has been mentioned several times in the statistics literature (e.g., Hoeting, Raftery, & Madigan, 1996; McCann, 2006; Ronchetti, 1997; Ronchetti, Field, & Blanchard, 1997). Previous research on Akaike Information Criteria (AIC) and Bayesian Information Criteria (BIC) has found them sensitive to outliers in regression analysis (e.g., Atkinson & Riani, 2008; Chik, 2002; Laud & Ibrahim, 1995; Le, Raftery, & Martin, 1996). Atkinson and Riani (2008) notes that the sensitivity of model selection indices, such as AIC, to outliers is an often overlooked issue.

Little is known about the relative performance of different information criteria in asymmetric price transmission modelling when the data contains outliers. Empirically, less effort has been made in examining the influence of outliers on model selection within the asymmetric price transmission modelling context. Notably, the ability of the commonly used model selection methods (AIC and BIC) to select the true asymmetric price transmission model in the presence of outliers has not yet been extensively investigated and is not well understood. An important question which remains unanswered is how well will AIC and BIC

perform when outliers are present in the data used for price transmission analysis. In the presence of outliers, will AIC and BIC point to the correct asymmetric price transmission model?

In order to address this issue, this paper empirically evaluate and compare the performance of the two commonly used model selection criteria, AIC and BIC in choosing between alternative methods of testing for asymmetry in the presence of outliers. The paper contributes towards understanding the effect of outliers on the model selection performance of AIC and BIC in asymmetric price transmission modelling framework. The true data generating process is known in all experiments and the Monte Carlo simulations are essential in deriving the model recovery rates of the true model.

METHODOLOGY OF RESEARCH

The process of selecting a statistical model from a set of candidate models is called model selection. Information criteria provides the basis of choosing between competing models. The basic concept of information criteria is to select statistical models that simplify description of the data and model. In effect, information criteria emphasizes minimising the amount of information required to express the data and model.

In addressing the problem of choosing among competing models, information criteria allows one to select the model that gives the most accurate description of the data. It addresses the trade-off between descriptive accuracy and minimizing the number of parameters.

Akaike Information Criteria (AIC). A widely used information criteria, Akaike Information Criteria (AIC) was introduced by Akaike (1973; 1974) via Kullback Lieber divengence. AIC is an estimate of the relative expected Kullback Lieber distance of a given model from the true model. AIC is derived as an asymptotically unbiased estimator of the expected Kullback-Liebler discrepancy between the true and a fitted model. It is defined as:

$$AIC = -2\log(L) + 2p \qquad (1),$$

Where: the first term $-\log(L)$ is the negative maximum log-likelihood of the data given the model parameter estimates and the second term p, is the number of parameters in the model. AIC aims to find the best approximating model to the data generating process. Models with smallest AIC values are deemed as best.

Bayesian Information Criteria (BIC). Another widely used information criteria, the Bayesian Information Criteria (BIC) was proposed by Schwarz (1978) as an asymptotic approximation to a transformation of the Bayesian posterior probability of a candidate model. The computation of the BIC is based on the empirical log-likelihood of the candidate model and does not require the specification of priors. BIC is defined as:

$$BIC = -2\log(L) + p\log(n) \qquad (2),$$

Where: n is the sample size, p is number of parameters in the model and $-\log(L)$ is the negative maximum log-likelihood of the data given the model. BIC is consistent and tends to select the true model with a probability of one as sample size increases. Under this selection criteria, models with minimum BIC are preferred.

Asymmetric Price Transmission Models. Several econometric models have been developed to estimate asymmetric price transmission. They include the Houck (1977) model (HKM), Standard Error Correction Model (SECM) and the Complex Error Correction Model (CECM). For the purpose of brevity, the standard asymmetric error correction model, the complex asymmetric error correction model and the Houck's model are denoted by SECM, CECM and HKM respectively. The Houck's model is specified as follows:

$$\Delta y_t = \beta_1^+ \Delta x_t^+ + \beta_1^- \Delta x_t^- + \varepsilon_t \quad \varepsilon_t \sim N(0, \sigma_\varepsilon^2) \qquad (3)$$

The Houck's Model (HKM) relates changes in the response price (Δy_t) to the positive and negative changes in the other price ($\Delta x_t^+, \Delta x_t^-$). Dynamic variants of this model can be estimated to distinguish between short and long run asymmetries.

The Standard Error Correction Model (SECM) is specified as follows:

$$\Delta y_t = \beta_1 \Delta x_t + \beta_2^+ (y - x)_{t-1}^+ + \beta_2^- (y - x)_{t-1}^- + \varepsilon_t \quad \varepsilon_t \sim N(0, \delta^2) \qquad (4)$$

The Standard Error Correction Model relates changes in response price (Δy_t) to changes in the other price (Δx_t) as well as changes in the Error Correction Term (ECT) which is decomposed into positive and negative components $((y - x)_{t-1}^+, (y - x)_{t-1}^-)$. Eqn. (4) was proposed in Granger and Lee (1989).

Engle and Granger (1987) notes that if y and x are cointegrated, then an error correction representation exist. Cointegration is first established by estimating the long run relationship between price y_t and x_t. The lagged residuals from the Eqn. (5) denotes the Error Correction Term and is included in the standard error correction model.

$$y_t = \beta_o + \beta_1 x_t + \varepsilon_t \qquad (5)$$

The contemporaneous response term (Δx_t) is segmented in Von Cramon-Taubadel and Loy (1996). This leads to the following specification in which contemporaneous and short–run response to departures from the cointegrating relation are asymmetric if $\beta_1^+ \neq \beta_1^-$ and $\beta_2^+ \neq \beta_2^-$ respectively:

$$\Delta y_t = \beta_1^+ \Delta x_t^+ + \beta_1^- \Delta x_t^- + \beta_2^+ (y - x)_{t-1}^+ + \beta_2^- (y - x)_{t-1}^- + \varepsilon_t \qquad (6)$$

$$\varepsilon_t \sim N(0, \delta^2)$$

In this case, a joint F-test can be used to determine symmetry or asymmetry of the price transmission process. Notably, asymmetries specified affects the direct impact of price increases and decreases as well as adjustments to the equilibrium level. Where Δx_t^+ and Δx_t^- are the positive and negative changes in x_t and the remaining variables are defined as in the standard error correction model. The asymmetric ECM with complex dynamics nests the Houck's model in first difference.

RESULTS AND DISCUSSION

In order to illustrate the ability of the model selection methods to recover the true model when the data contains outliers, a series of Monte Carlo simulation experiments are conducted and the results are reported below. The simulation is based on the Standard Error Correction Model (SECM) data generating process specified as follows:

$$\Delta y_t = 0.7 x_t - 0.25(y_t - x_t)_{t-1}^+ - 0.75(y_t - x_t)_{t-1}^- + \varepsilon_t \qquad (7),$$

y_t and x_t are generated as I (1) non-stationary variables that are cointegrated. The error correction terms $((y_t - x_t)_{t-1}^+, (y_t - x_t)_{t-1}^-)$ represent the positive and negative deviations from the long run equilibrium relationship between y_t and x_t. For data without outliers, the

errors are generated from a normal distribution with a mean 0 and a variance of 1 ($\varepsilon \sim N(0,1)$). In order to create outliers in the data, various percentages of outliers (0, 2, 3, 4 and 5 percent) are introduced into the data without outliers. For example, two percent of the number of observations of the errors generated for the normal data with values generated from a normal distribution with a mean of 0 and a variance of 1, were replaced with two percent of the number of observations from the normal distribution with a mean of 20 and variance of 1 ($\varepsilon \sim N(20,1)$) for a chosen sample size. This is repeated for 3, 4 and 5 percent of outliers given the various sample sizes 50, 150 and 500 respectively. The data generating process is simulated 1000 times with different percentages of outliers and across different sample sizes. For each simulation, the ability of the model selection methods to recover the true data generating process is evaluated. The percentage of samples in which each competing model provides a better model fit than the other competing models is referred to as the model recovery rates. The recovery rates are derived using 1000 Monte Carlo simulations. In effect, the amount of samples in which each model fits better than the other competing models is measured out of the 1000 samples and expressed as a percentage. Thus, the values obtained from each model selection criteria are calculated as the arithmetic mean based on 1000 samples.

Generally, the overall power of the model selection methods (AIC and BIC) to select the true data generating process decreased with increase in the percentage of outliers. Noticeably, outliers have a substantial impact on selection power in moderate and large samples. In effect, the ability of AIC and BIC to select the true asymmetric data generating process decreased with increase in the percentage of outliers in moderate and large samples.

Table 1 – Relative performance of the model selection methods (Small Sample)

% of Outliers	Experimental Criterion		Model fitted			
		Methods	CECM (%)	HKM (%)	SECM (DGP) (%)	
0	n=50	σ = 1	AIC	16.2	5.1	78.7
			BIC	5.2	13	81.8
2	n=50	σ = 1	AIC	16.2	5.1	78.7
			BIC	5.2	13	81.8
3	n=50	σ = 1	AIC	18.5	3.3	78.2
			BIC	6.8	9.5	83.7
4	n=50	σ = 1	AIC	17.2	4.1	78.7
			BIC	6.5	10.9	82.6
5	N=50	σ = 1	AIC	18.5	3.3	78.2
			BIC	6.8	9.5	83.7

Recovery rates based on 1000 replications.

Comparison of the different criteria are illustrated in Tables 1, 2, and 3. Model recovery rates are presented for each criteria under various sample size conditions with varying percentage of outliers. In small samples, the performance trends of the model selection criteria remains unclear. Notably in small samples, outliers have an unclear effect on the ability of the model selection methods to recover the correct model. This is because in small samples, the expected number of outliers is n times the percentage of outliers. This leads to a few outliers since n is small. The outlier effect becomes unclear in small samples and more pronounced in large samples. For outliers' percentages of 0, 2, 3, 4 and 5, the ability of the model selection methods to choose the true asymmetric data generating process is seriously distorted in small samples. For example, without outliers in the data (n=50), AIC and BIC recovered 78.7% and 81.8% respectively of the true asymmetric data generating process. However, with introduction of 5% outliers into the data (n=50), AIC and BIC recovered 78.2% and 83.7% respectively. In small sample size of 50, the model recovery rates derived when the data contains outliers does not show any substantial difference from those recovery rates derived when there was no outlier in the data.

Table 2 – Relative performance of the model selection methods (Moderate Sample)

% of Outliers	Experimental Criterion		Model fitted			
		Methods	CECM (%)	HKM (%)	SECM (DGP) (%)	
0	n=150	σ = 1	AIC	15.2	0.1	84.7
			BIC	2.5	0.1	97.4
2	n=150	σ = 1	AIC	15.6	0.0	84.4
			BIC	3.2	0.0	96.8
3	n=150	σ = 1	AIC	14.4	6.3	79.3
			BIC	3.1	20.4	76.5
4	n=150	σ = 1	AIC	14.5	18.8	66.7
			BIC	2.3	47	50.7
5	n=150	σ = 1	AIC	14.2	38.2	47.6
			BIC	0.7	71.6	27.7

Recovery rates based on 1000 replications.

In moderate sample size of 150, a clear pattern is seen in the performance of the model selection methods to recover the true asymmetric data generating process as the percentage of outliers' increases. For example, as the percentage of outliers increase from 0 to 5%, there is a substantial decline in the ability of the model selection methods to select the true asymmetric data generating process, as the recovery rates for AIC and BIC decrease from 84.7% and 97.4% to 47.6% and 27.7% respectively. Noticeably, the performance of AIC and BIC in the selection of asymmetric price relationship is affected by outliers. Similarly, previous studies (Laud & Ibrahim, 1995) found that AIC and BIC are not robust to outliers or influential data points. Ronchetti, Field and Blanchard (1997) also observed that outliers have an undue influence on model chosen.

Table 3 – Relative performance of the model selection methods (Large Sample)

% of Outliers	Experimental Criterion		Model fitted			
		Methods	CECM (%)	HKM (%)	SECM (DGP) (%)	
0	n=500	σ = 1	AIC	15.4	0.0	84.6
			BIC	1.6	0.0	98.4
2	n=500	σ = 1	AIC	25.7	0.1	74.2
			BIC	3.8	2.4	93.8
3	n=500	σ = 1	AIC	40.1	3.2	56.7
			BIC	5.6	24.3	70.1
4	n=500	σ = 1	AIC	46.8	9.8	43.4
			BIC	4.0	46.1	49.9
5	n=500	σ = 1	AIC	49.5	16.1	34.4
			BIC	4.1	57.2	38.7

Recovery rates based on 1000 replications.

In large samples of 500, outliers have a more pronounced effect on asymmetric price transmission model selection performance. This is because the effect of outliers become more pronounced in large samples. Subsequently, as sample size increases, the number of outliers in the sample increases. This is because in large samples, the expected number of outliers is n times the percentage of outliers. This increases the number of outliers since n is large. For example, the recovery rates of AIC and BIC decreases from 84.6% and 98.4% to 34.4% and 38.7% respectively when outlier percentages in the data increases from 0 to 5%. With 5% outlier contamination, both AIC and BIC performs poorly and fail to identify the true asymmetric model in large samples. Similarly, McCann (2006) noted that standard model selection methods such as AIC and BIC performs poorly when the data contains outliers.

Under the influence of 5% outlier contamination in large samples, AIC selected the complex asymmetric model against the true data generating process. Similarly, BIC selected the simpler asymmetric model against the true data generating process. BIC outperforms AIC in selecting the suitable asymmetric price relationship in large samples with outliers. Similarly, in a model selection analysis using posterior probabilities, Le, Raftery and Martin (1996) note that BIC outperforms AIC for data with outliers.

CONCLUSION

The study examined the ability of AIC and BIC to clearly identify the true asymmetric data generating process in the presence of outliers in the data. Generally, the Monte Carlo simulation results indicate that the ability of AIC and BIC to clearly identify the correct model among competing models decreases with increases in outliers in the data.

Under unstable conditions such as small sample size, the effect of outliers on the performance of AIC and BIC in selection of the correct asymmetric model remains unclear. However, in moderate and large samples, there is a persistent decline in the performance of AIC and BIC to recover the true asymmetric data generating process. As the percentage of outliers increase to 5% outlier contamination, both AIC and BIC fail to identify the true asymmetric model in large samples.

The comparison provided contributes to knowledge and understanding of the effects of outliers on the relative performance of AIC and BIC in an asymmetric price transmission modelling framework. The study contributes to the literature on asymmetric price transmission modelling by making researchers aware of the failure of AIC and BIC to select the correct asymmetric price transmission model when outlier percentages in data (large samples) are high. Investigation into the performance of robust modifications of AIC and BIC in selection of asymmetric price transmission models in the presence of outliers represents a fruitful avenue for future research.

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ГЕНЕЗИС ТЕОРЕТИЧЕСКИХ ПОДХОДОВ В УПРАВЛЕНИИ ПЕРСОНАЛОМ ОРГАНИЗАЦИИ
GENESIS OF THEORETICAL APPROACHES IN HUMAN RESOURCE MANAGEMENT OF THE ORGANIZATION

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АННОТАЦИЯ
В статье представлены эволюционное развитие и генезис теоретических подходов в управлении персоналом организации. В условиях становления современного вектора экономического развития, руководителям организаций любой сферы уже невозможно осуществлять свою управленческую деятельность без четко сформированного базиса навыков и умений, используя основные положения теории управления персоналом. В условиях современного экономического развития руководителям организаций необходимо уделить внимание современным подходам к управлению персоналом. В статье проанализированы основные этапы становления данной категории и обозначены существующие проблемы. Для того чтобы соответствовать вызовам современного экономического развития, необходимо управление персоналом рассматривать как определенную специфическую систему научного знания, которая нацелена на определение значимости этого процесса для эффективного развития организации и для определения экономической и социальной направленности на основе комбинаторного подхода.

ABSTRACT
Evolutionary development and genesis of theoretical approaches in human resource management of the organization are presented in article. In the conditions of formation of a modern vector of economic development, heads of the organizations of any sphere can already not carry out the administrative activity without accurately created basis of skills and abilities, using basic provisions of the theory of human resource management. In the conditions of modern economic development heads of the organizations need to pay attention to modern approaches to human resource management. In article the main stages of development of this category are analysed and the existing problems are designated. To correspond to calls of modern economic development, it is necessary to consider human resource management as a certain specific system of scientific knowledge which is aimed at definition of the importance of this process for effective development of the organization and for definition of an economic and social orientation on the basis of combinatory approach.

КЛЮЧЕВЫЕ СЛОВА
Управление персоналом, генезис, развитие, системный подход, комбинаторный подход, научное управление, процессный подход.

KEY WORDS
Human resource management, genesis, development, system approach, combinatory approach, scientific management, process approach.

Такое научное направление, как «управление персоналом» начало образовываться на стыке XIX и XX вв. Поэтапное историческое развитие и

формирование идеи усиления значимости человеческого труда и управления, на наш взгляд, взаимосвязано с определенными моделями экономического роста. В данном случае, в условиях нынешней турбулентности экономического развития актуализируется вопрос происхождения и систематизации уже имеющихся особенностей развития данной категории с учетом формирования устойчивой системы управления на различных ее уровнях.

И начать нужно с эволюции самого понятия «управление персоналом» и особенностей его становления. Первоисточниками развития данной науки являются промышленные революционные преобразования XIX века, которые значительно видоизменили сам характер организаций. Это было связано с тем, что на смену маленьким мастерским пришли мануфактуры и фабрики, которые в своих рабочих процессах координировали и сосредотачивали работу довольно значительных групп людей [3]. Трансформации затронули и сам процесс труда, так как на смену ручному труду пришел механический труд рабочего. Становление экономических отношений и возрастание уровня неудовлетворенности условиями труда среди работников способствовали тому, что руководители предприятий начали нанимать на работу специалистов, которые занимаются исключительно рабочими отношениями внутри коллектива и координацией процессов управления.

Важнейшими трансформациям в теории управления персоналом в 20-30-е годы XX века является образование и продвижение «научной организации труда», формирование и развитие таких образований как профсоюзы, вторжение государственных органов и государства в трудовые взаимоотношения. Такие ученые как Ф. Тейлор и А. Файоль в теории «научного управления», доказывали, что имеются наилучшие и всеобщие для всех организаций способы управления и организации труда, а их применение на практике в свою очередь способствует увеличению производительности труда. Изучая труды указанных выше ученых, мы четко видим, что труд определенного работника должен быть разборчиво спрогнозирован и распределен, при этом у сотрудника организации имеются письменные правила-инструкции с определенным описанием той работы, которую он должен реализовать в течение дня, а также в инструкциях должны быть указаны надлежащие способы труда.

На основе этих особенностей формируется технократическое управление персоналом. Данный вид управления позволяет руководству концентрироваться на узконаправленном виде работы, на процессе набора и обучения работников способам и методам труда, регламентации всех областей деятельности, а также на нормировании всех процессов [12].. Школой научного управления была аргументирована необходимость управления трудом в целях повышения производительности, при этом были определены главные принципы и способы научной организации труда и поставлена задача эффективной мотивации труда.

В тридцатые годы XX века, после начала перевода развитых стран к наиболее интенсивным способам хозяйствования, начали вскрываться проблемы подходов классической школы. Формальная бюрократическая структура прекратила в определенной мере соответствовать запросам современного времени, обозначавшим этап «интенсификации производственных потенциалов» [13]. На наш взгляд, достаточно противоречиво и дискуссионным выглядит вопрос о том, что классическая школа стала тормозящим элементом в перспективном развитии производственных мощностей. Но при этом в ходе своего исследования отмечаем, что в связи со структурными сдвигами во внешней среде организации появилась определенная потребность в формировании и применении на практике новейших форм управления. И в каком же направлении необходимо было дальше развивать такую теоретическую категорию как «управление персоналом»?

Проанализировав имеющиеся исследования, мы видим, что труды и разработки ученых приняли ярко выраженную социально-психологическую направленность. Таким образом, в работах Э. Мэйо, Ф. Ротлисбергера, М. Фоллет были сформированы основы школы человеческих отношений. Несомненным преимуществом, в данном случае является единый концептуальный подход взаимодействия между рабочими и

их непосредственными руководителями.

Хотелось бы подчеркнуть, что в раках непрерывной эволюции результаты Э. Мэйо, Ф. Ротлисбергера и М. Фоллет о равновесии между технической и социальными сторонами предприятия дали возможность установить и четко определить неопровержимые трудности в рамках рассмотрения человеческого фактора. За значительную действующую силу, которая содействовала бойкотированию, либо осуществлению административных распоряжений, были признаны неформальные взаимоотношения, которыми, по мнению Э. Мэйо, нужно научиться распоряжаться и системно управлять, взяв за основу сам процесс взаимодействия между рабочими и руководством.

Д. Мак-Грегор в книге «Человеческая сторона предприятия» (1960 г.) подверг критике существенные теоретические положения «научного управления». Он считал, что положения, заложенные в основу этой теории и касающиеся определенных процедур и правил, разделения труда и детализации процессов реализации, принимаемых управленческих решений, сконцентрированных непосредственно в полномочиях самого руководства, негативно действуют на творчество, формирование и самостоятельность работников, затрудняют создание благоприятных взаимоотношений между ними и их руководителями, что в итоге негативно сказывается на производительности предприятия. На наш взгляд, именно работы Д. Мак-Грегора и его последователей оказали большое воздействие на эволюционное становление практики управления и на формирование портрета руководителя и управленцев различного уровня. Неслучайно в 60-70-е годы XX века в программы подготовки в американских школах с бизнес уклоном были добавлены определенные дисциплины, которые связанны с управлением человеческими ресурсами, такие как теория управления персоналом, психология управления персоналом, организационное поведение и т.д. Все это способствовало появлению специалистов, которые четко осознавали всю важность и практическую значимость управления персоналом.

Что кардинально изменило трудовое сообщество и саму систему управления персоналом? На наш взгляд, это гуманистический подход, которые подразумевал увеличение роли социального статуса работника в самой организации. Отделы кадров, которые до 70-х годов в Америке и 80-х годов в Западной Европе изучали вопросы учета работников, преобразовались в отделы по управлению и координации человеческими ресурсами. На наш взгляд, в данном случае необходимо отметить, что отделы по управлению человеческими ресурсами начали заниматься такими вопросами, как планирование и формирование карьеры, насыщение трудовых потенциалов, притягивание рабочих единиц к участию в различных процессах [18]. В таблице 1 нами систематизированы и представлены этапы формирования теории управления персоналом.

Таблица 1 – Этапы формирования теории управления персоналом

Этапы	Направления развития
Классическое направление	
Этап научного управления	Научное объединение действий труда, человек как один из факторов производственного развития, принципы структуризации трудовых операций
Административный этап	Человек – основной ресурс организации, современные вопросы прогнозирования, координации и контроля трудовой деятельности.
Этап бюрократической организации	Человек как инструмент получения управленческих эффектов, методы решения поставленных задач - ответственность работников, отчетливые должностные обязанности, бюрократические основы.
Гуманистическое направление	
Этап развития человеческих отношений	Направления социального развития работника в организации, управление как процесс взаимовлияния людей и изучения межличностных взаимоотношений.
Бихевиористский этап	Вопросы морально-психологической мотивации сотрудников.

Источник: Составлено авторами.

Следовательно, можно смело констатировать тот факт, что управление персоналом стало одной из значительных функций организации, схожей по значимости с управлением экономическим и финансовым развитием. Данные структурные подразделения начали заниматься вопросами кадрового развития при формировании стабильно и перспективно развивающейся кадровой политики. На наш взгляд, необходимо отдельно констатировать один из важнейших сегментов – это создание принципиального механизма ее формирования и реализации. Алгоритм реализации кадровой политики организации должен соответствовать четко сформулированным следующим положениям: рациональность, демократичность, соединение в один базис интересов индивида, коллектива и общества в целом [8]. И следуя данному алгоритму с учетом исторических предпосылок рассмотренных выше, четко прослеживается и сам генезис научной категории «управление персоналом» с точки зрения применения различных подходов.

Если рассматривать, как эволюционно менялась категория «управление персоналом», то можно в рамках исследования структурировать само понятие и выделить ключевые позиции ее формирования. Итак, С.В. Шекшня интерпретирует процесс управления персоналом как снабжение организации нужным количеством работников, которые выполняют необходимые и установленные производственные функции. В его научных исследованиях результативность управления персоналом, может быть обусловлена степенью достижения целей организации. В указанной терминологии акцент делается на совокупность нужного количества работников для реализации требуемых производственных функций. Очевидным положительным моментом указанного определения является упор на само понятие эффективности управления. При этом, на наш взгляд, снабжение организации нужным количеством со-трудников можно рассматривать как некий элемент самого управленческого процесса. Дискуссионным по нашему мнению остается вопрос об отсутствии в определении социальных мер влияния на сам персонал и рассмотрение эффективности только с точки зрения достижения целей организации. По нашему мнению ни в коем случае нельзя не рассматривать и не учитывать социальные вопросы эффективности управ-ления в организации.

Управление персоналом рассматривается и анализируется в определенной научной литературе как процесс влияния организации на ее сотрудников с помощью специализированных способов, нацеленных на достижение целей организации [20]. Чего не хватает в данной трактовке? На наш взгляд, в указанном определении отсутствует индивидуализация способов влияния на сотрудников организации. Однако это незначительное упущение позволяет нам полагать и в своих дальнейших исследованиях подразумевать организационные, экономические, социальные и другие методы влияния на персонал. И также в терминологии прослеживается нацеленность процесса управления персоналом на достижение конкретных целей организации. Мы видим в процессе эволюции теории управления персоналом формирование процессного подхода [10].

Таким образом, процессный подход рассматривает управление персоналом как определенную совокупность процессов. Проведенный выше анализ показал, что каких именно процессов – это дискуссионный вопрос. На наш взгляд, это конечно и процесс мотивации, и стимулирования работников, процесс обеспечения организации новыми рабочими кадрами, процесс влияния организации на работников для достижения целевых установок в организации. Явным недостатком процессного подхода является анализ эффективности управления персоналом только с применением экономического подхода, при этом неизученными остаются вопросы социальной результативности процессов управления [4].

Значительная часть работ касается анализа определения «управление персона-лом» на основе деятельностного подхода. Так, например, в работах А. Лобанова, Дж. Ивашкевича управление персоналом рассматривается, как осуществляемая в организациях деятельность, содействующая наиболее эффективному применению работников для достижения организационных и личных целевых установок. В данном

случае эффективность управления персоналом предопределяется уровнем и сроками реализации сформулированных задач. В данной трактовке тоже присутствует небольшой на наш взгляд минус, а именно рассмотрение процесса управления персоналом как применение работников для достижения целевых ориентиров развития. В данном контексте, указанные процессы не являются управлением, а будут рассматриваться как некое воздействие и искажение самого процесса управления. Но это тоже как некий дискуссионный вопрос в рамках развития самой теории управления персоналом. И мы полностью согласны с тем, что в той части вопроса, где говорится о применении рабочей силы для достижения организационных задач, терминология вполне актуальна в условиях формирования перспективного вектора экономического и производственного развития.

Итак, можно справедливо утверждать, что управленческая деятельность в организации нацелена на достижение как краткосрочных, так и долгосрочных целей. Бесспорным положительным моментом такого подхода является характеристика уровня эффективности управления персоналом. На наш взгляд, для определения эффективности управления персоналом мало только подтверждения уровня и сроков реализуемых задач.

Существенное значение в определении эффективности имеет не только экономическая составляющая, но и социальная компонента. И что в данном случае необходимо усилить в теоретическом базисе? Естественно, это рассматривать саму организацию как открытую систему, так как любая организация ответственна перед обществом за ту деятельность, которую она осуществляет. Указанный аспект позволяет рассматривать эффективность деятельности организации, зависящей не только от материальных и трудовых ресурсов организации, но также от отношения общества к деятельности в целом [21].

А.И. Кравченко в своих исследованиях рассматривает управление персоналом как структурированную и четкую деятельность руководителей организации и специалистов подразделений по управлению персоналом, которая включает формирование теории и стратегии кадрового развития. В свою очередь ее он рассматривал как определенное создание системы управления персоналом, прогнозирование кадровой работы, формирование кадрового потенциала. Данная трактовка более системна, по сравнению с предыдущими, формирует сущность деятельности по управлению персоналом.

Небольшим пробелом является недостаток четких акцентов на результативности направленности процесса управления. На наш взгляд, трактовка является общей в рамках теории управления персоналом.

Недостаточность ориентиров на социальную составляющую управления на-блюдается и в следующей трактовке Т.Ю. Базаровой, согласно которой управление персоналом необходимо рассматривать как деятельность, основными элементами которой являются формирование уровня потребности в сотрудниках, адаптационные механизмы, проектирование и осуществление политики вознаграждений и социальных услуг, управление затратной составляющей на персонал и руководство сотрудниками [5].

Несмотря на ограниченность социальной компоненты только социальными услугами, данная трактовка на наш взгляд, является системной с точки зрения выявления всех элементов деятельности по управлению персоналом, начиная с установления уровня необходимости в кадровых ресурсах и завершая вопросами кадровой стратегии.

Следовательно, целесообразно утверждать, что согласно деятельностному подходу управление персоналом выступает как определенный вид упорядоченной деятельности по формированию потребности в сотрудниках, их привлечению, вырабатыванию, удержанию и т.д. При этом управленческая деятельность нацелена также на проектирование и стимулирование политики материального и социального мотивирования работников, формирование кадрового потенциала организации [16]. Определенным недостатком представленного подхода является отсутствие четкой

ориентации на социальной составляющей, которая формируется в результате эффективной управленческой деятельности.

Нельзя не рассматривать системный подход в рамках формирования теоретического базиса «управление персоналом». В.П. Галенко определяет управление персоналом как совокупность экономических, организационных и социально-психологических, методологических инструментов, нацеленных на реализацию эффективных трудовых потенциалов и стимулирование уровня конкурентоспособности организации. Указанная терминология позволяет сформировать более полное видение об управлении персоналом. При этом в нем уже представлен социальный элемент самих процессов управления. Преимуществом данной трактовки является рассмотрение эффективности именно трудовой деятельности, которая является неким итогом и результатом указанных выше способов влияния на сотрудников.

Заслуживает рассмотрения определение, которое сформулировал Е.В. Маслов, который определяет управление персоналом как систему взаимодействующих организационных, экономических и социальных мероприятий, нацеленных на формирование и распределение вектора рабочей силы организации, а также на формирование условий для более рационального применения трудовых качеств работников для реализации эффективного функционирования организации.

И вернемся к эффективности: что в данном случае она представляет? Итак, эффективность управления персоналом формируется за счет системной реализацией сформулированных целей при уменьшении затрат на сотрудников. Естественно преимущество такой дефиниции неоспоримо: она содержательная во всех аспектах, обладает социальными регуляторами управления.

В этом отношении с Е.В. Масловым согласен и другой ученый Ю.Г. Одегов, который рассматривал управление персоналом как совокупность взаимосвязанных организационных, экономических и социальных мероприятий, нацеленных на формирование условий нормального функционирования трудовой компоненты.

Эффективность же управления персоналом согласно проведенных научных исследований предопределяется наиболее системной реализацией сформулированных целей при уменьшении затратной составляющей на содержание сотрудников [19]. Одним и на наш взгляд, незначительным недостатком сформулированного подхода является определение эффективности только с применением экономического подхода. Применяя этот подход, под эффективностью понимается получение максимальной прибыли при минимальных затратах. При этом эффективность с социальной точки зрения заключается, в удовлетворении по-требностей сотрудников и потребителей [7]. Таким образом, социальный вопрос эффективности в указанных выше трактовках не был полностью раскрыт.

Также в рамках рассмотрения генезиса управления организацией можно выделить еще и социально-психологический подход в управлении персоналом, в предметном ряду которого анализируются вопросы создания рациональных социальных и психологических условий работы, как всего трудового коллектива, так и определенных сотрудников [14].

На сегодняшний момент увеличивается роль социальных и психологических способов управления, отражая возрастание культурного, образовательного и квалификационного уровня персонала, формирование демократических истоков управления [6].

Таким образом, управление персоналом представляет собой разнонаправленную теоретическую науку об организационных, экономических, административных, технологических, правовых, групповых и личностных факторных воздействиях, способах и методологии влияния на персонал организации для эффективного достижения целевых установок.

Любопытным является научный подход Е. Вендрова и Н. Гришиной к термину «управление персоналом». Они считают, что управление персоналом - это наука, в качестве предметной области которой будут закономерности и направляющие силы,

которые формируют поведение людей в условиях коллективной трудовой деятельности. Целями этой науки является определение тенденций и факторов поведения работников и их использование для достижения организационных задач.

При этом нельзя не сказать, что управление персоналом - это также практическая научная область, так как все научные парадигмы в этой области использовались и в практической деятельности организации в зависимости от определенных ситуационных задач. Хотелось бы также отметить, что научная парадигма в области управления персоналом не остановилась на месте и продолжает развиваться.

Таким образом, выделять управление персоналом только как науку, пусть даже и прикладную, не совсем корректно. Так же нельзя обойти стороной одну отличительную особенность социально-психологического подхода от рассмотренных выше: речь идет о личностных и групповых факторах, которые оказывают воздействие в процессах управления [17].

При этом важно, что каждый коллектив формирует собой группу, который характеризуется своими нормативами, ценностями, целями и задачами. В данном случае нужно помнить о психологической совместимости в группе и обратить внимание на межличностный фактор взаимодействия в группе и коллективе в целом [11]. Необходимо четко уяснить, что совместимость необходимо рассматривать как процесс, итог и условие гармоничной деятельности в процессе трудовой деятельности.

Если в группе встречается несочетаемость участников, то это, негативно оказывает влияние на социально-психологический климат и влечет за собой нереализуемость поставленных целей и задач [4].

Нами представлена авторская концепция комбинаторного подхода к управлению персоналом на рисунке 1.

Источник: Составлено авторами.

Рисунок 1 – Авторская концепция комбинаторного подхода к управлению персоналом.

Представленный выше комбинаторный подход необходим, в управлении персоналом, так как он представляет собой системообразующую единицу, которая включает в себя организационные, экономические и социальные меры влияния на создание качественных и количественных свойств трудовых ресурсов организации с целью увеличения уровня экономической и социальной значимости развития указанной категории.

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THE IMPLEMENTATION OF REGIONAL SPATIAL PLAN POLICY OF REGENCY: A STUDY ON REGIONAL REGULATION #2 OF YEAR 2011 REGARDING 2010-2030 REGIONAL SPATIAL PLAN IN PARIGI MOUTONG REGENCY

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ABSTRACT

The implementation of regional spatial plan policy bases on Regional Regulation No.2 of 2011 regarding regional spatial plan in Parigi Moutong regency – the principle of law legality of the regional spatial plan in the urban area of Parigi. The spatial plan policy is implemented because there is a space decrease in both structure and pattern that leads to space narrowing in the urban area. The research used a descriptive-qualitative method and the data were collected by means of observation, interview, and documentation. The research result toward Regional Regulation No.2 of 2011 on the regional spatial plan of Parigi Moutong regency was viewed from the perspective of Grindle model. This model was influenced by the content of the policy of Regional Regulation No. 2 of 2011 regarding the regional spatial plan of Parigi Moutong regency which was concerned with a fact saying that there has not been any implementation of regional spatial plan policy in the capital of Parigi Moutong regency related to the role and function of the society toward the content of the policy itself. Due to the condition, the society tended to become less active in carrying out the policy. As the consequence, it affected the implementation of the regional regulation that made the facility of *Ruang Terbuka Hijau (RTH)* / Green Open Space, environment cleanliness and greening plants become less well-maintained and managed.

Key words

Policy implementation, regional spatial plan, regional regulation.

Government policy is a decision taken to consider the conditions occurring in society environment, either it has been implemented or not by the government. Prior to implementing a government policy, the condition of a region should be observed. Therefore, it is highly important to carry out the government policy based on the applicable law. The decision is conducted because it has a high-principled law to perform the policy that has been planned previously agree with the expectation and aims that a region wants to achieve. Linear with this, there are some observed problems or conditions of regional spatial plan that occur in the capital of Parigi Moutong regency, covering: (1) the urban space that has not been well-arranged due to space narrowing, (2) the uncontrolled land use, (3) the condition of Green Open Space that is poorly managed, and (4) the scattered waste/trash that makes the environment less clean and tidy.

Those existing kinds of problems need the regional spatial plan policy to minimize the impacts arising and to arrange the space under the procedures that have been determined within it. To overcome the problems, it is extremely significant that the related parties (the government, society and private sectors) can get involved and carry out the policy together. Conversely, the policy may also get ignored due to lack of society participation or less active people that lead the policy to negative sides. As the consequence, this condition is more likely to affect the policy itself that is going to be implemented. Hence, the involvement of the related parties is highly required in performing the policy so that the implementation can be well proceed in line with the stated aims and eventually give positive impacts on the environment and society in the urban area. The policy is committed in order to minimize the environment change.

According to Webster (in Wahab, 2012:135), the policy implementation can be considered as a process to carry out the decisions made into the policy, commonly in the form of law, government regulation, judicial decisions, executive orders, or presidential decree.

Additionally, Wahab (2012, in Berliahadi (2015:9-10) added that regional spatial plan is a public policy designed by local government which is expected to be implemented and become a reference or guideline for local development. Linear with this, some experts stated that the process of public policy implementation is not only concerned with the behaviour of administrative bodies that are responsible for executing the program and establishing the obedience/compliance of the target groups – including the networks of political, economic, and social forces, both directly or indirectly, which are able to give either positive or negative impact to all the involved parties. Thus, to achieve a good performance in the implementation, all of the involved parties should unite the aims they want to achieve under the commitment to support the activity implementation.

Urban Green Open Space is a part of open space in urban area fulfilled with plants and crops used to promote the ecological, social, cultural, and aesthetic benefits (according to the Regulation of Minister of Domestic Affairs of the Republic of Indonesia *(Permendagri)* No. 1 of 2007). Furthermore, Jago and Usman (2005:5) revealed that Green Open Space is provided as an ecosystem balancing for either the hydrology, climatology, biodiversity, ecological system or society welfare *(quality of life, human well being)*.

The regional spatial plan (RTRW) of Parigi Moutong regency is regulated under Regional Regulation No.2 of 2011, Law No.23 of 2014 on Local Government, and Law No.26 of 2007 on Spatial Planning. The spatial planning of Parigi Moutong regency is greatly substantial to be done in parallel with the implementation of spatial planning in Indonesia. Spatial planning can be very beneficial for society by considering the significant aspect in conducting the implementation of spatial planning, namely *space utilization control*.

The research aims to describe and analyze the policy implementation of Regional Regulation No.2 of 2011 of Parigi Moutong regency on the regional spatial Plan of Parigi Moutong regency. Moreover, in this research, the driving and inhibiting factors of the regional spatial plan toward Regional Regulation No.2 of 2011 of Parigi Moutong regency are also outlined and analyzed.

METHODS OF RESEARCH

This research was conducted by using a descriptive-qualitative method. The focus of this research was describing and analyzing the policy implementation of Regional Regulation No. 2 of 2011 on regional spatial plan (RTRW) of regency based on the perspective of Merilee S.Grindel. Grindel stated that (a) the content of policy includes: interests of target groups, type of benefits, extent of change envisioned, site of decision making, program implementers, and resource used; (b) the context of policy implementation covers: power, interests and strategies of actors involved, institution and regime characteristics, compliance level, as well as society responsiveness; (c) the result of policy consists of the impacts resulted from the policy of regional spatial plan of regency. Additionally, this research was concerned on the driving and inhibiting factors of the regional spatial plan toward Regional Regulation No.2 of 2011 on regional spatial plan (RTRW) of regency.

The research was done in the capital of Parigi Moutong regency, but the research site was focused on the Spatial Planning Division of Parigi Moutong regency. The data of this research consisted of primary and secondary data and the data sources were in the form of: a) informant; b) event/place; c) document. The data were collected by using some techniques, including observation, interview, and documentation (Sugiono, 2015:62). The research instrument was the researcher himself who directly plunged into the field for data collecting which was mostly relied on human instruments. The data of this research were then analyzed using an interactive model of analysis, consisting of: (1) data condensation, (2) data display, and (3) conclusion drawing/verification (Miles, Huberman, and Saldana, 2014:12).

RESULTS AND DISCUSSION

The implementation of regional spatial plan (RTRW) policy of Parigi Moutong regency under Regional Regulation No.2 of 2011 on regional spatial plan uses the policy implementation model of Grindle perspective (1980:11). According to Grindle, the success of policy implementation can be influenced by two variables, namely the content of policy and the context of policy, in addition to the result of policy. Both variables have its own indicators. And each indicator can influence the success of policy implementation.

The Content of Regional Spatial Plan Policy. Viewed from each indicator, the content of regional spatial plan policy of Parigi Moutong regency is outlined as follows:

1. The interests of target groups in the regional spatial plan policy. The groups, which were included in the target of the policy implementation of regional regulation regarding the regional spatial plan of Parigi Moutong regency, consisted of society and private groups. These groups acted as the recipient of the policy. Considering that the existing problems are inseparable from the spatial plan or the desire to arrange structure/pattern of a space to be better, it is highly required that all the target groups can contribute and participate together in implementing the policy of Regional Regulation No.2 of 2011 so that the space looks cleaner and tidier. According to Hasan (2015:114), there are three groups of stakeholders playing roles in the implementation of the spatial-detailed plan, including: (1) Government that covers central and local government, (2) Society, and (3) Private parties.

2. The type of benefits. In accordance with the result of observation in the field, the type of benefits accepted by the *target groups* along with the spatial plan policy indicated that there was still a lot of waste/trash scattered that made the urban space look less clean and less well-managed. Additionally, the greening/afforestation seemed to be infertile and its advantage in relation to the implementation of the spatial plan, including the Urban Green Open Space, was not much felt by the society. According to Grindle (1980), type of benefits has an effort to show and describe that, in a policy, there should be some types of benefits indicating positive impacts resulted by the implementation of the policy that is going to be performed.

3. The extent of change envisioned through the spatial plan policy. The change made by the government on the spatial plan was viewed from the aspects of both road and Green Open Space (*Ruang Terbuka Hijau / RTH)* constructions, which still experienced obstacle in the term of cleanness. The facility in RTH was also less well-maintained.

4. The site of decision-making on the regional spatial plan policy. The decision-making was based on the problems emerging in the region, namely the less good spatial planning and the decreased urban greening which influenced the environment. The problems were caused by the less controlled-development. According to Grindle (1980), site of decision-making of a policy has an important role in its implementation.

5. The implementers of the regional spatial plan policy. The Spatial Planning Agency of Parigi Moutong regency was the one that directly handled and controlled the implementation of the policy toward the spatial plan program in the urban area. According to Udoji (1981, in Wahab, 2012), policy implementation is a very important thing, which is even more important than policy-making. A policy will be no more than good vision or plan that is well-preserved within archive if it is not implemented.

6. The resources used in the implementation of regional spatial plan policy. The resources used in the implementation of the regional spatial plan policy of Parigi Moutong regency were in the form of human resource, finance, and time. These kinds of resources are very needed for policy implementation since it gives impacts on the policy that will be performed. The resources tend to make the program well-proceed (either in the planning or implementation stage) and can bring the desired results into reality. According to Van Mater and Van Horn (in Nawawi, 2009:139), it is stated that, in an implementation of policy, a support of either human, material, or method resource is very needed.

The Context of Regional Spatial Plan Policy. The context of the implementation of regional spatial plan policy of Parigi Moutong regency (viewed from each indicator) is described as follows:

1. The power, interest, and strategy of actors involved. In this indicator, the power, interest, and strategy of the policy were fully the right of the implementers given the responsibility to carry out the activities of arranging the less well-managed and less clean spaces in the urban area. The implementers of regional spatial plan policy of Parigi Moutong regency here referred to Public Works Office. According to Abdul Wahab (2011, p.167), the context of policy contains the capabilities, interests, and strategies of involved actors, along with the characteristics of the regime on which they interact each other. In this case, interests also play an important role in the policy implementation. Those intended interests are that the implementers of spatial planning sector can execute programs as the main task and function in its sector. The actors' strategies are highly crucial in the policy implementation. The strategies are done by the actor-acted implementer in order to make the spatial plan proceed well.

2. The characteristics of institution and regime. The institution referred to Public Works Office taking act as the full implementers of the activity program of the policy that would be conducted, namely regional spatial plan of Parigi Moutong regency. In another side, the regime referred to the Regent (*Bupati*) of Parigi Moutong that was elected directly by the society as the power holder of the region, accompanied with the Vice-Regent as the second power holder or the representative of the Regent.

3. Compliance level and society responsiveness. The compliance level and society responsiveness in the capital of Parigi Moutong regency regarding the existing problems were more likely to be less or low. The less well-managed space planning in the regency was caused by the less active society. This condition occurred since there was a lack of socialization the government should do in relation to the regional spatial plan, primarily in the urban area.

The Result of Regional Spatial Plan Policy. The results of the regional spatial plan policy of Parigi Moutong regency were in the form of resulted impact, change, or society acceptance. In the term of impacts, the policy had led to the decreased space in the urban area that also caused the regency less good-looking. In another side, the change and society acceptance toward the spatial plan policy tended to be good enough. Contrastly, there were still many obstacles in the term of change, such as the facility of Green Open Space (RTH) which was not well-maintained. As for the society acceptance sector, there still needed much more improvement in the term of the use and utilization.

The Driving and Inhibiting Factors of Regional Spatial Plan. In this research, it is found that there were some driving and inhibiting factors of the regional spatial plan of Parigi Moutong regency toward Regional Regulation No.2 of 2011 regarding the regional spatial plan (RTRW) of Parigi Moutong regency. The driving factors of the implementation of regional spatial plan policy in the capital of Parigi Moutong regency included: (1) the existence of regional regulation policy No.2 of 2011 on the regional spatial plan (RTRW) of Parigi Moutong regency, (2) the allocation of new land for spatial planning in the urban area, (3) the cooperation among related institutions/parties that had roles in the implementation of the spatial planning in the urban area.

Meanwhile, the inhibiting factors of the implementation of regional spatial plan policy of the regency consisted of 1) The lack of socialization done by the government to the society regarding the spatial plan policy, 2) the lack of society participation regarding the spatial planning in urban area, 3) the less good facility of Green Open Space (RTH), 4) the less maintained greening plants for the environmental preservation in the urban area.

CONCLUSION

Based on the result and discussion of this research, it is concluded that the implementation of regional spatial plan policy of Parigi Moutong regency tends to be less well-proceed. There are still many obstacles influencing the indicators of the content of the policy carried out by the implementers concerning on the regional spatial plan of the capital of Parigi Moutong regency. In this case, the society participation greatly influences the policy for doing the spatial plan implementation in the field.

Furthermore, the role and function of society based on the content of the policy have not been yet obviously implemented. This has led the society to be less active in reflecting the policy of regional regulation into their daily practices and playing their roles in accordance with the content of the regional spatial plan policy.

Through this research, it is also discovered that sensitivity toward the content and environment of policy is highly required in the policy implementation – clarifying what is included in the policy as well as implementing it in accordance with the aim of the regional spatial plan policy (RTRW).

The context of the implementation of spatial plan policy is used to find out and comprehend the spatial plan on the environment of policy in the capital of Parigi Moutong regency in which there are some indicators. The first is the power, interests, and strategies of involved actors. The power of policy implementers is on the hand of Public Works Office which is considered as a good implementer of the spatial plan that is also involved as the ruler. This is because Public Works Office can unite the power. The interests of involved actors include the heads of sections, society, and private sectors that have roles in performing the spatial plan policy together. And the strategies of the involved actors (in this term, Public Works Office also acts as the actor) for carrying out the physical development plan in various sectors consist of having coordination with the involved parties, making approach and socialization, as well as doing space improvement by controlling the use of space. The second is the institution carrying out the regional regulation of spatial plan. In this term, the institution is Spatial Planning Division of Public Works Office which is as the implementer that has a pretty good characteristic and democracy for proceeding a rule on the spatial plan in line with the characteristic owned by the institution. The third is the compliance level and the more responsiveness of the implementers, which in this term are society, for carrying out the spatial plan in the urban area. This indicator can give positive impacts for the implementation of policy. The higher the compliance and responsiveness levels of the implementers are, the more positive chance the urban environment will achieve.

In the term of the result of regional spatial plan policy, it is expected that the implementation of the spatial plan policy can be beneficial for the society which is not only in the sector of construction but also in the term of social improvement. In the social improvement, the policy is required to be developed so that the result and benefit can be sustainably felt by the society, either in the now or in the future. Based on the results of observation and interview done by the researcher, it can be concluded that the results of the policy that has been carried out by the implementers of the spatial plan activity proceed pretty well in the development sector. Furthermore, the change and society acceptance of the results of policy also give positive impacts in the term of development/construction. However, the society has not yet felt its benefits, either in the term of the facility of Green Open Space or the urban cleanliness itself.

As for the driving factors of the implementation of spatial plan policy, the existence of regional regulation has provided a stronger legality to carry out the policy in which Public Works Office acts as the implementator of the policy itself. The allocation of new land facilitates the process of spatial planning in the capital of Parigi Moutong regency. The society can utilize the allocation by building up a place for public space. Additionally, the cooperation of the related institutions regarding the spatial plan in the urban area is greatly important for the process of policy implementation toward the activity program. A cooperation with Regional Planning Agency of Parigi Moutong regency – an agency handling the stages of plan process – is made by Public Works Office for the spatial planning of the capital of Parigi Moutong regency.

In another side, the inhibiting factors of the implementation of spatial plan policy include the lack of socialization done by the government in relation to the regional regulation on the regional spatial plan. This factor can lead the spatial plan policy to trigger negative impacts toward the spatial planning in the urban area. In addition to the lack of socialization, the other inhibiting factor emerging is the lack of society participation on the spatial planning. This factor also highly influences the implementation process of spatial plan policy. Furthermore, the less good facility of Green Open Space (RTH) also affects the public comfort toward the

facilities of spatial planning in the urban area. In this term, there are still many problems which result in the less well-maintained facility in RTH. Two of the problems include the cleanliness not being noticed and the less groomed greening plants for the environmental preservation in the urban area. The less groomed plants are caused by the negligence of people who deliberately destroy it yet are not responsible for their disservice. Besides, the people's farm animals also cause the plants damaged and die.

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PERFORMANCE ASSESSMENT OF REGIONAL WORKING UNIT IN THE MUNICIPALITY OF BULUNGAN, NORTH KALIMANTAN, INDONESIA

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ABSTRACT
Performance assessment for each regional working unit is pivotal in order to increase quality and accountability of an organization. Regional government should carry out development programs of which orientation is the public interest. Therefore, public welfare should become the objective of regional development and consideration prior to establishment of government regulations about government affairs and authority. Even though it is not the only factor to determine quality of government performance, structure of an organization is an inseparable part of the foundation for developing government performance. A good structure of organization will certainly facilitate implementation of organizational activities. The objective of the study was to describe how far the government staffs implemented the main tasks and functions they were responsible for based on the performance assessment of each Regional Working Unit.

The concept of performance is usually interpreted as the execution of fulfillment of duty. To determine the level of performance, performance assessment that refers to a process of recording and evaluating implementation of work within organization is a requirement. Performance assessment is an instrument for management (head of region and Regional Working Unit) to improve quality of decision-making and also accountability in the implementation of program and activities of an organization. Therefore, performance assessment is very important to do. Not only is performance of government officers related to implementation of a program or an agenda, but it also emphasizes on the result of the program/ agenda. Bernardin and Russell (1993) stated that performance was the result of function of task or activity carried out over a period of time. However, meeting the required result may become an issue the human resource (government officers) is unable to execute the task or activities well. In addition, the mindset and cultureset that the success of government performance is measured only by the government ability to spend the budget instead of how effective the budget is spent contribute to government's failure in executing the development plan.

Restructuring regional working unit answers the consequences/ changes the regional autonomy brings; the vision of the regional autonomy is creativity and willingness to realize good governance, the one capable of providing optimal service to the public. At the same time, the public has become more critical in addressing the phenomenon taking place in the region where they live due to increasing knowledge and insight they have. Public service is government sector the public pays close attention; they criticized complex hierarchical chain within the regional government working unit organization of local government which prevents faster, better and cheaper public service. Regional government should be able to execute effective, efficient, and economical governance. Public welfare should become the objective of regional development and consideration prior to establishment of government regulations about government affairs and authority. Even though it is not the only factor to determine quality of government performance, structure of an organization is an inseparable part of the foundation for developing government performance.

Assessment of which result becomes reference for improvement is vital in order to increase performance of the regional government. The assessment is an evaluation to

assess condition and implementation of good governance. The objective is to create learning process that develops regional working unit further and alternative form to evaluate accountability of the regional working unit. Some of the dimensions in evaluation of organizational design and structure are the dimensions of complexity, formalization and centralization. Complexity is represented by hierarchical authority and responsibility, formalization refers to regulation represented by a set of formal, default rules and centralization is decision-making process, whether one is made by the central government or not. Instead of solution, performance assessment is a really useful tool. Theoretically and practically, the performance assessment can be useful to (1) help solving problem and its causes, (2) suggest most likely solution to the problem, (3) raise questions about principles and strategies, (4) encourage reflection on which following steps to make and how to get there, (5) provide information and ideas, (6) encourage follow-up on the information and ideas; (7) increase possibility for the positive change.

Evaluation as assessment process of which result may function as feedback that improves structure of an institution. Thus, follow-up is needed having completed the evaluation. Evaluation should involve all internal stakeholders (the structural, functional, and organizational staffs).

Therefore, it is critical to evaluate the regional government and regional working unit in order to develop one with the ability to run principles of good governance, and find out to what extent to the government employees carry out the main tasks and functions («TUPOKSI») as stated normatively. For that reason, the government of Bulungan Municipality, North Kalimantan should conduct performance assessment on their Regional Working Unit in order to provide service excellence and successfully realize public welfare.

LITERATURE REVIEW

Regional Government. Regional government basically has two roles, namely as the institution that provides service provider institution and as a political institution; integration between the two is needed to carry out both roles. In providing public services, the regional government ought to know and understand public interest, and pay attention to public aspirations. Regional government administration in general can be interpreted as the implementation of government role as institution that provides service and as a political institution. The executives and legislatives are the integration of the two roles the regional government has.

Administration of government administration has to be based on the basic principles, patterns of attitudes and patterns of democratic administration,as well as be objective and professional in creating justice and legal certainty. Culligan (as cited in Wasistiono, 2003) reiterated that the dramatic change strategy from the current administrative processes can actually be separated from its past roots. There is a relatively fixed basis in each of these changes, including division of functions. In every activity, there is planning, organizing, implementation and supervising functions.

Regional Government Conception in Regional Autonomy Framework. Regional autonomy refers to autonomous rights, authority and responsibility of a region to manage and maintain their own government affairs and needs of the locals …» Autonomous region, which later is called region, is a legal entity which has territorial boundaries authorized to administer and and manage government affairs and the interests of the local community, according to its own initiative based on community aspirations in the state system. The policy on decentralization essentially has the main objectives, political and administrative objectives. Political objectives aim at giving room for the public for participating in government program, accountability, transparency and democracy. On the other side, the regional democratization aspect positions the regional government as medium of political education for the community at the local level. It is expected that regions will aggregately have significant contribution to development of national political education, and realization of civil society. On the other hand, the administrative objectives position the regional government as a service unit close to the community that are expected to function optimally in providing public services

effectively, efficiently and economically to improve welfare of the local communities.

Evaluation Concept. Kumanto (2001) stated that «evaluation referred to assessment towards data gathered to various assessment methods.» Yunanda (2009) mentioned that «evaluation was well-planned activities to measure condition of an object using certain instrument and the result was contrasted to a set of standard before conclusion was drawn.» Using the definitions as reference, in general, it is assumed that evaluation is assessment activities through scientific measurement procedures with expectation that the result becomes instrument of consideration in objective and rational decision making to avoid repetition of errors that happened previously.

Furthermore, evaluation can be divided into two, namely:

1. Performance Evaluation. Payman J. Simanjuntak (2005) stated that «performance evaluation was assessing an individual, group, working unit in an organization or company using standardized performance or objective once established».

2. Policy and Program Evaluation. Policy evaluation is an activity that involves estimation or assessment of policies that includes substance, implementation and impact. Evaluation is considered as functional activity. That is not only is policy evaluation conducted at the final stages, but it also is conducted in the whole process of the policy» Dunn (1995) explained that «policy evaluation was a process to assess the results or performance of policies that had been establised».

In general, it can be assumed that evaluation is an important instrument in management or management of an organization due to its ability to guarantee sustainable development of the capacity, consistency and progressof performance or development of an organization.

Performance Assessment. Performance assesment is an important step in the human resource development cycle, both in public and the private sector. It is process of measuring the degree of completion of tasks performed by employees over a period of time. Result of the performance assesment serves as the basis of decision-making regarding payroll, promotion, dismissal, transfer and other employment decisions. Similarly, according to Suprihanto (1987), assessment of job performance / apprasial of perfomance was a system used to assess and know whether an employee had completed his or her responsibility as a whole or process that occurred within the organization in assessing and identifying performance of the employee.

A valid performance assesment is based on the following basic principles, namely:

- Fairness, performance assesment should reflect fairness for all employees involved in the process. Employees with good performance should get high scores and vice-versa;
- Transparency, performamnce assesment should be transparent in terms that all employees involved in the process can access their scores, reasons they get the scores and so on. Transparency will eliminate misuse of information;
- Independence, performance assesment conducted in certain year should not depend upon that conducted in the previous years;
- Empowerement, performance assessment should encourage and motivate employees in which well-motivated employees will facilitate and raise motivation of ill-motivated employees;
- No discrimination, performance assessment should not categorize employees based on their ethnic groups, nationalities, religion, home country, etc;
- Competitiveness, performance assessment should encourage employees to get involved in fair competition to increase their performance.

Assesment method has been developed to get objective, valid result. The system is mentoned as follow:

- Ranking, it is the simplest performance assesment system in which assessor compares performance between an employee and another to determine which one has better performance. The system has several drawbacks because conducting thorough assesement (experience, condition and knowledge) has always been a challenge;

- Comparison between an employee to another in which evaluation towards an employee is divided into factors using the comparison between an employee to another. The factors refer to leadership, innitiative and job motivation. When scores of an employee is higher than those of another one, he or she has good performance.
- Grading, performance assessment is categorized into excellent, very good, good, fair, poor and very poor. The category may use distribution evaluation or level of categories so that the most preferable assessment is the most relative one among the employees;
- Graphic scale is the most frequently used traditional method in which an employeeis evaluated based on the factors that are considered the most important ones in the implementation of job description, for example quantity and quality of work and attitudes. These factors are divided into specific categories for example very good, fair, and poor and some descriptions for each factor and each category are provided. Selecting the factors used in the assessment is very difficult and requires the development of management in a careful manner;
- Checklist, instead of evaluation, assessors write down reports. Human Resource Department makes reports towards performance or behavior of an employee. Performance evaluation refers to an activity to decide to what extent the employee carries out his or her responsibility effectively.

METHODS OF RESEARCH

Based on the Program/Job Reference developed by employer and taking time and resources involved, the researcher developed a chart related to program/ job composition. Figure 1 described implementation of program/ job composition.

Figure 1 – Implementation of Program/ Job Composition

Preparation. Preparation was the first stage of the study. The purpose was to match perceptions about the implementation of the study as well as make sure all preparations had been made. The steps in the preparation stage were as follow:

- Mobilization of Experts;
- Theoretical Framework;
- Identifying Type of Data and Explaining Job Description of the Experts;
- Developing proposal: describing the background, purpose and target of the study, selecting approach and methods, developing performance management, making timetable (which agenda to conduct at what time);
- Preliminary Report, technical description of the proposal which involved the final paper assignment and method of analysis used.

Implementation. Implementation was the core of the study. The steps in the implementation stage were as follow:

- Data collection process (questionnaire was distributed to all Regional Working Units in Bulungan);
- Conducting theoretical analysis related to the focus of the study;
- Conducting studies and analysis twoards the current condition in Bulungan;
- Conducting analysis towards the Regional Working Units in Bulungan.

Report. Reporting was the follow-up of the implementation. It involves analysis (using the final analysis as reference to draw conclusion), drawing conclusions and giving suggestions or recommendations based on the findings of the study. The steps in the reporting stage were:

- Compiling analysis results from the experts;

- Conducting thorough discussions between the experts;
- Describing the findings and discussions as a part of the final paper;
- Conducting Focus Group Discussion with various interest groups.

Completion and Finalization. Completion and finalization was the last stage of the study. It involves the following stage:

- Making revision based on the result of the Focus Group Discussion;
- Finalizing and submitting the final paper.

There are 48 Regional Working Units in the municipality. The questionnaires were distributed to all of them but 10 Regional Working Units did not fill them out (See appendix). From 38 Regional Working Units that completed the questionnaires, there were 34 Regional Working Units of which questionnaires were analyzed. The Regional Working Units consisted of 14 (fourteen) regional departments; 13 (thirteen) regional technical agencies, 4 (four) districts, 2 (two) sub-districts and one (one) inspectorate. On the other hands, 4 working units of which questionnaires could not be involved in the data analysis consisted of 1 (one) regional department, 1 (one) regional technical agency, 1 (one) district and 1 (one) government staff corps secretariat.

RESULTS AND DISCUSSION

There were 5 (five) Regional Working Units of which performance was categorized as very good, 15 (fifteen) Regional Working Units of which performance was categorized good, 9 (nine) Regional Working Units of which performance was categorized as fair and 5 (five) Regional Working Units of which performance was categorized as poor.

Based on the analysis, there were several sub-items the regional working units could not fulfill. One of the sub-items was the main tasks and functions. In general, the Regional Working Units found it challenging to meet the requirements for Pact of Integrity, one of the sub-aspects of the main tasks and functions.

In terms of human resources, the regional working units, in general, had yet been to fulfill the Development of Employee and Adherence towards the Law and Regulation that referred to employee taking a leave for continuing his or her study for more than 6 months will no longer receive position/ higher-level duties allowance or any other types of allowance starting from the seventh month until he or she graduated and got back to work.

The third aspect was financial. There were several sub-aspects the Regional Working Units could not fulfill. The first sub-aspect was Implementation and Administration of Financial Statement by the Regional Working Unit. It involved accuracy of imposition towards transaction on local tax revenue, local retribution, compensation on regional loss and others in the current year and those taking place in the previous years. The second sub-item was no salary had yet been taken for three months or more. When it did, things had been taken care of. The sub-item was one of the sub-aspects in Employee Expenses Document. The third sub-item was travelling abroad for work; it was one of the sub-aspects of Goods and Service Expenditure Documents. The sub-item had been executed well.

Conclusion. In general, the regional working units had yet performed satisfactorily in Procurement Procedure of Goods/Services, more particularly in the sub-item stating that no officer concurrently assigned as committee/officer responsible for procurement of goods and service or one responsible for inspecting them. It meant in general the regional working units could either determine and/or prove evidence that the sub-item existed in the real working condition.

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APPENDIX

Score of Implementation of the Main Tasks and Function (N1) + **score of human resource development (government officers)** (N2) + **score of financial management (N3)** + **score of asset management (inventory)** (N4); the interval of the score is between 0 and 100

Figure 1 – Performance Assessment of the Regional Working Unit

Table 1 – Performance Assessment Criteria

No	Performance Assessment Criteria	Score
1.	Very Good	90 – 100
2.	Good	75 – 89
3.	Fair	51 – 74
4.	Fair	≤ 50

Table 2 – Regional Working Unit in Bulungan Municipality

№	Regional Working Unit
1	Department of Education
2	Department of Public Health
3	Dr. Soemarmo Sosroatmodjo Public Hospital
4	Department of Public Work
5	Regional Planning and Development Agency
6	Department of Transportation
7	Environmental Agency
8	Department of Sanitation, Gardening, Funeral Service and Firework
9	Department of Population and Civil Registration
10	Agency of Woman Empowerment, Child Protection and Family Planning
11	Department of Social Affairs
12	Department of Labor and Transmigration
13	Office of Unitary Nations and Community Protection
14	Office of Civil Service and Community Protection
15	Department of Mining and Energy
16	Department of Culture, Tourism, Youth and Sports

	Continue of Table 2
17	Department of Fisheries and Marine Affairs
18	Department of Industry, Trading, Cooperatives and SMEs
19	Agriculture and Food Security Agency
20	Office of Education and Training
21	Regional Disaster Relief Agency
22	Regional Financial Management and Asset Agency
23	Regional Civil Service Agency
24	Inspectorate
25	Investment and License Agency
26	Local Community and Village Empowerment Agency
27	Office of Library and Archives
28	Department of Agriculture
29	Department of Forestry
30	Local Revenue Offices
31	Tanjung Selor District
32	Tanjung Palas District
33	Tanjung Palas Barat District
34	Tanjung Palas Timur District
35	Tanjung Palas Tengah District
36	Tanjung Palas Utara District
37	Peso District
38	Peso Hilir District
39	Sekatak District
40	Bunyu District
41	Tanjung Selor Ulu Sub-district
42	Tanjung Selor Hilir Sub-district
43	Tanjung Selor Timur Sub-district
44	Tanjung Palas Hilir Sub-district
45	Tanjung Palas Hulu Sub-district
46	Tanjung Palas Tengah Sub-district
47	Karang Anyar Sub-district
48	Government Officer Corps Secretariat

Table 3 – Regional Working Units that Did not Fill Out the Questionnaire

№	Regional Working Units that Did not Fill Out the Questionnaire
1	Tanjung Palas District
2	Tanjung Palas Barat District
3	Tanjung Palas Timur District
4	Tanjung Palas Utara District
5	Sekatak District
6	Bunyu District
7	Tanjung Selor Ulu Sub-district
8	Tanjung Selor Timur Sub-district
9	Tanjung Palas Hilir Sub-district
10	Tanjung Palas Tengah Sub-district

Table 4 – Performance Assesment Tabulation

№	Regional Working Unit	Result	Description
1	REGIONAL CIVIL SERVICE AGENCY	Tabulated	Incomplete Supporting Documents
2	ENVIRONMENTAL AGENCY	Tabulated	Complete Supporting Document
3	LOCAL COMMUNITY AND VILLAGE EMPOWEREMENT AGENCY	Tabulated	Incomplete Supporting Documents
4	WOMAN EMPOWEREMENT, CHILD PROTECTION AND FAMILY PLANNING AGENCY	Tabulated	Sufficient Number of Supporting Documents
5	INVESTMENT AND LICENSE AGENCY	Tabulated	Complete Supporting Document
6	REGIONAL DISASTER RELIEF AGENCY	Tabulated	Incomplete Supporting Documents

7	REGIONAL FINANCIAL MANAGEMENT AND ASSET AGENCY	Tabulated	Sufficient Number of Supporting Documents
8	AGRICULTURE AND FOOD SECURITY AGENCY	Tabulated	Sufficient Number of Supporting Documents
9	REGIONAL PLANNING AND DEVELOPMENT AGENCY	Tabulated	Sufficient Number of Supporting Documents
10	DR. SOEMARMO SOSROATMODJO PUBLIC HOSPITAL	Tabulated	Sufficient Number of Supporting Documents
11	DEPARTMENT OF HYGIENE, GARDENING, FUNERAL AFFAIR AND FIREWORK	Tabulated	Sufficient Number of Supporting Documents
12	DEPARTMENT OF CULTURE, TOURISM, YOUTH AND SPORTS	Tabulated	Sufficient Number of Supporting Documents
13	DEPARTMENT OF FORESTRY	Cannot be Tabulated	No Supporting Document
14	DEPARTMENT OF POPULATION AND CIVIL REGISTRATION	Tabulated	Incomplete Supporting Document
15	DEPARTMENT OF PUBLIC HEALTH	Tabulated	Incomplete Supporting Document
16	DEPARTMENT OF PUBLIC WORKS	Tabulated	Incomplete Supporting Document
17	LOCAL REVENUE OFFICES	Tabulated	Sufficient Number of Supporting Documents
18	DEPARTMENT OF EDUCATION	Tabulated	Complete Supporting Document
19	DEPARTMENT OF TRANSPORTATION	Tabulated	Sufficient Number of Supporting Documents
20	DEPARTMENT OF FISHERIES AND MARINE AFFAIRS	Tabulated	Sufficient Number of Supporting Documents
21	DEPARTMENT OF INDUSTRY, TRADING, COOPERATIVES AND SMES	Tabulated	Incomplete Supporting Documents
22	DEPARTMENT OF MINING AND ENERGY	Tabulated	Sufficient Number of Supporting Documents
23	DEPARTMENT OF AGRICULTURE	Tabulated	Sufficient Number of Supporting Documents
24	DEPARTMENT OF SOCIAL AFFAIRS	Tabulated	Complete Supporting Document
25	DEPARTMENT OF LABOR AND TRANSMIGRATION	Tabulated	Incomplete Supporting Document
26	THE INSPECTORATE	Tabulated	Incomplete Supporting Document
27	OFFICE OF UNITARY NATIONS AND PROTECTION OF THE COMMUNITY	Cannot be Tabulated	No Supporting Document
28	OFFICE OF EDUCATION AND TRAINING	Tabulated	Complete Supporting Document
29	OFFICE OF LIBRARY AND ARCHIVES	Tabulated	Incomplete Supporting Documents
30	OFFICE OF CIVIL SERVICE AND COMMUNITY PROTECTION	Tabulated	Sufficient Number of Supporting Documents
31	PESO DISTRICT	Tabulated	Sufficient Number of Supporting Documents
32	PESO HILIR DISTRICT	Tabulated	Sufficient Number of Supporting Documents
33	TANJUNG PALAS TENGAH DISTRICT	Tabulated	Incomplete Supporting Documents
34	TANJUNG SELOR DISTRICT	Tabulated	Incomplete Supporting Documents
35	KARANG ANYAR DISTRICT	Tabulated	Incomplete Supporting Documents
36	TANJUNG PALAS HULU DISTRICT	Tabulated	Incomplete Supporting Documents
37	TANJUNG SELOR HILIR DISTRICT	Cannot be Tabulated	No Supporting Document
38	GOVERNMENT OFFICER CORPS SECRETARIAT (NON-WORKING UNIT)	Cannot be Tabulated	Not a working unit (based on the 2007 Government Regulation number 41)

РИСКИ РЕАЛИЗАЦИИ СТРАТЕГИИ ТЕРРИТОРИАЛЬНОГО РАЗВИТИЯ МУНИЦИПАЛЬНОГО ОБРАЗОВАНИЯ С АГРАРНОЙ НАПРАВЛЕННОСТЬЮ
RISKS OF THE TERRITORIAL DEVELOPMENT STRATEGY OF THE AGRARIAN ORIENTED MUNICIPALITY

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АННОТАЦИЯ
В статье раскрывается проблематика определения и минимизации рисков реализации стратегии территориального развития муниципального образования с аграрной направленностью. Фактологический анализ выполнен на примере Каменского района Воронежской области, район отличает разнонаправленная динамика показателей социально-экономического развития, кризисные явления на его территории не приобрели необратимый характер и, при должном взаимодействии населения, общественных организаций, бизнеса и власти, могут быть купированы в среднесрочном периоде. Авторы проводят эскомпт факторов риска, способных повлиять на процесс реализации стратегии и на эффективность запланированных мероприятий. В сочетании с существующими демографическими тенденциями, выражающимися снижением общего предложения на рынке трудовых ресурсов, эти риски крайне существенны и на субрегиональном, и на государственном уровне. Авторы акцентируют внимание на том, что помимо улучшения инвестиционного климата и увеличения размеров прямых иностранных инвестиций важны и меры по созданию преференций тем инвестициям, которые связаны с высокотехнологичными производствами, повышением уровня занятости и квалификации рабочей силы, долгосрочными капиталовложениями в реальный сектор экономики, внедрением новейших зарубежных технологий, не представленных в России. В статье подчеркивается, что факторный анализ рисков, несмотря на свою распространенность и наглядность, представляет собой весьма сложную задачу, поскольку выделение факторов риска не является его результатом и конечной целью, хотя и представляет из себя информационную основу риск-анализа. На основе описания совокупности факторов риска реализации стратегии необходимо провести интерпретацию

возможного влияния выявленных факторов на результаты и прогнозирование комплекса последствий влияния того или иного фактора.

ABSTRACT

This article demonstrates the problems of identification and minimization of the risks of implementation of a territorial development strategy for municipal entity of agricultural specialization. Fact analysis was performed based on the example of Kamenka district of Voronezh region. This district is marked with a variety of trends in social and economic development, the crisis signs in this territory have not yet taken irreversible character and can be neutralized in the mid-term prospective in case of proper interaction between the community, public organization, business, and authorities. The authors fulfilled an assessment of the risk factors affecting the process of the strategy implementation and the efficiency of the planned measures. In association with the existing demographic tendencies manifesting themselves in the decrease of total labor market supply, these risks are of great importance for both sub-regional and national levels. The authors place greater focus on the fact that, besides the improvement of the investment climate and the increase of the direct foreign investment amounts, the measures for creating preferences are important for those investments associated with high-tech industries, increase of the employment rate and the workforce qualification, long-term investments into the industrial sector of the economy, introduction of the state-of-the-art foreign technologies, not yet represented in Russia. The article points out that the risk factor analysis, despite its popularity and obviousness, presents a considerable problem, as the risk factor identification is not the result and the final target, though it forms the information basis of the risk analysis. Based on the description of the complex of the factors of the risk of the strategy implementation, it is necessary to interpret the possible influence of the detected factors on the results and forecasting of the subsequences of the impact of one or another factor.

Реализация стратегии территориального развития муниципального образования с аграрной направленностью специализации является сложной комплексной задачей, определяемой множеством целей и задач, внешних факторов, а также специфических характеристик региона.

Можно выделить ряд факторов риска, способных повлиять на процесс реализации стратегии и на эффективность запланированных мероприятий. При этом следует учитывать, что современные тенденции геополитических и экономических изменений могут нести в себе как негативные последствия для реализации стратегии, так и новые возможности, позволяющие повысить эффективность предпринимаемых мер.

Каменский муниципальный район находится в центре Воронежской области. Он достаточно близок к ее административному центру городу Воронежу и экономически развитым районам – Лискинскому и Россошанскому. Район состоит из 11 сельских поселений, его административным центром является поселок городского типа Каменка, Численность населения невелика: около 18, 5 тысяч человек, причем треть из них-пенсионеры. Демографическая ситуация в районе стабильно тяжелая, последние шесть лет численность населения уменьшается.

Бюджетообразующим предприятием района является ПАО «Евдаковский масложировой завод», на его долю приходится более двух третей промышленного производства в районе. Динамично растет объем инвестиций в сельское хозяйство

района, здесь работают 4 крупных инвестора: ООО «Заречное», ООО ЦЧ АПК «Каменское», ООО «ЭкоНиваАгро», ООО «Авангард АГРО-Воронеж».

Нормативно-правовые акты, регламентирующие порядок и организацию процесса разработки стратегии социально-экономического развития Кантемировского муниципального района делятся на три группы:

- правовые, нормативные акты федерального значения,
- правовые, нормативные акты регионального значения,
- локальные нормативно-правовые акты.

Район отличает разнонаправленная динамика показателей социально-экономического развития. Проведенный анализ эффективности деятельности органов местного самоуправления по федеральным показателям выявил, что по отдельным позициям, таким как «обеспечение регулярного сообщения с административным центром», «доля детей, состоящих на учете для определения в муниципальные дошкольные образовательные учреждения» и некоторых других достигнуты серьезные успехи.

Высокие рейтинговые позиции по региональным показателям эффективности развития Каменского муниципального образования зафиксированы в таких сферах, как рост объемов производства основных видов продукции животноводства и растениеводства, а так же некоторых других.

Вместе с тем, наличие проблем в экономике района лоцирует наличие таких трендов как снижение обеспеченности бюджета муниципального образования налоговыми и неналоговыми доходами в расчете на 10000 рублей доходов местного бюджета (без учета безвозмездных поступлений, имеющих целевой характер) и снижение доли налоговых поступлений от субъектов малого и среднего предпринимательства в общем объеме налоговых поступлений в бюджет муниципального образования.

Наличие негативных явлений в экономике подтверждают и данные федеральных показателей: снижается число субъектов малого и среднего предпринимательства в расчете на 10000 человек населения.

Есть определенные проблемы в области демографического капитала района, что также может быть взаимосвязано с ухудшением экономической ситуации.

Между тем, ресурсный потенциал для перспективного развития Каменского муниципального района значителен. Наличие, как объектов современного промышленного производства, так и объектов эффективного сельского хозяйства на территории района дает возможность комплицитно реализовать сильные стороны муниципального образования.

Среди них:

- высокое качество демографического капитала территории. Трудоспособное население экономически активно, заинтересовано в развитии района, есть достаточный резерв рабочей силы,
- наличие предпосылок для существенного увеличения производства продукции в растениеводстве (в 2-3 раза). Аграрный потенциал района далеко не исчерпан и при умелом хозяйствовании способен демонстрировать уверенный рост,
- развитая транспортная инфраструктура. Каменский район выгодно расположен, его транспортно-логистическая локация позволяет реализовывать проекты не только в масштабе района, но и на субрегиональном уровне.

Но, одновременно с наличием позитивных предпосылок для эффективного развития района, существуют объективные кризисные аспекты, динамика которых за последние пять лет, к сожалению, негативна.

Это, прежде всего, неблагоприятная демографическая ситуация (численность населения за последние 5 лет сократилась на 8 %), низкий уровень доходов населения и высокий уровень безработицы, высокая степень износа водопроводных и канализационных сетей.

Малые предприятия, находящиеся на территории района не могут стать драйверами экономического прогресса, так как малорентабельны и сами нуждаются в государственной поддержке.

Тем не менее, вышеописанные конкурентные преимущества Каменского муниципального района, положенные в основу разработки его стратегической парадигмы роста, позволяют сформулировать генеральную цель развития района как обеспечение стабильного повышения качества жизни населения посредством устойчивого функционирования экономики и повышения эффективности муниципального управления.

Достижение поставленной цели возможно через реализацию приоритетных проектов, связанных с крупнейшими хозяйствующими субъектами:

- расширение и техническое перевооружение ПАО «Евдаковский масложировой комбинат», сумма привлеченных инвестиций за 2016 год составила более 11 млн. руб. Этот проект стратегически важен для района, так как комбинат является бюджетообразующим предприятием;

- строительство молочного комплекса на 2200 голов. Этот проект реализуется инвестором ООО «ЭкоНиваАгро». Привлечено около 119 млн. рублей инвестиций, приобретено почти 3,5 тысячи голов крупного рогатого скота;

- проект по развитию мясного скотоводства, реализуемый инвестором ООО «Заречное». В 2016 году освоено средств в сумме около 115 млн. рублей. Было приобретено почти 5 тыс. голов крупного рогатого скота;

- реконструкция с увеличением постановочных мест за счет нового строительства свиноводческого комплекса с замкнутым производственным циклом на 2600 основных свиноматок в с.Тимирязево Каменского района. Первая поставка племенных животных планируется в 2017 году из племенного репродуктора «Эрмитаж Слобода» – единственного племенного репродуктора «Эрмитаж Генетикс» в России, находящегося в Вологодской области.

Внимание инвесторов к району постулирует перспективность мер экономической и социальной поддержки Каменского муниципального района. Можно с уверенностью утверждать, что кризисные явления на его территории не приобрели необратимый характер и, при должном взаимодействии населения, общественных организаций, бизнеса и власти, могут быть купированы в среднесрочном периоде.

Каждый из факторов риска реализации стратегии территориального развития Каменского муниципального образования может повлечь за собой ущерб определенных размеров с некоторой вероятностью. Учет возможных факторов риска, а также определение средневзвешенной оценки для всех проектов и мероприятий, предусмотренных стратегией, представляется весьма трудновыполнимой задачей.

Объект риска (целевые показатели стратегии развития территориального развития Каменского муниципального образования) подвергается воздействию целого ряда факторов, к основным из которых можно отнести следующие:

1. Геополитические факторы.

Нарастание геополитической неопределенности в последние годы негативно влияет на инвестиционную привлекательность и темпы развития российской экономики. Сохранение санкционного режима в отношении России является важным источником сдерживания инвестиционного потенциала.

В числе прочих следствий санкций и контрсанкций — освобождение рыночных ниш для российских производителей и снижение курса рубля. Снижение доступности дешевых зарубежных кредитных ресурсов является важным фактором, определяющим риск обеспечения финансирования программы. В то же время сложно оценить насколько этот ущерб превышает возможные выгоды, связанные с обеспечением стабильного внутреннего спроса на импортозамещающую продукцию и снижением уровня конкуренции для российских экономических субъектов.

Однозначно можно сказать, что данный фактор гораздо более значимо сказывается на субъектах малого и среднего бизнеса, для которого не имеет существенного значения доступ на зарубежные рынки кредитования. Положительные

эффекты возникающих рыночных преференций для российских предприятий на внутреннем рынке, очевидно, не ограничатся периодом санкционного режима, и будут в течение многих лет обеспечивать им дополнительную прибыль. Именно малый и средний бизнес является основой для развития экономики государства, обеспечивает устойчивость экономического роста, снижает негативный эффект цикличности экономического развития, способствует диверсификации экономики региона и государства в целом.

В отношении данной и подобных неоднозначных геополитических тенденций, целесообразным является смягчение возможных негативных последствий, а также использование сложившегося положения с максимальной выгодой для социально-экономического развития региона. Например, для восполнения дефицита в кредитных ресурсах на федеральном уровне уже осуществляется финансирование приоритетных проектов по сниженной кредитной ставке.

В то же время государственные органы власти могут способствовать не только увеличению доли российский производителей на внутреннем рынке, но и способствовать расширению преимуществ для российских экспортеров на внешних рынках. Предпринимаемые сегодня меры по упрощению таможенных правил для малого и среднего бизнеса будут значительно способствовать экспортному потенциалу российских производителей.

Особенно актуальны данные изменения таможенной политики в совокупности с естественными преимуществами данной ситуации для экспортеров, связанными с выгодным для них курсом рубля. Необходимо обеспечить поддержку данной инициативы Федеральной таможенной службы на уровне Воронежской области.

2. Макроэкономические факторы.

Вследствие нестабильного экономического положения и сокращения ВВП в последние годы происходит снижение притока инвестиционного капитала. Иностранные инвестиции являются одним из важных источников развития экономики. Однако, несмотря на ряд преимуществ, связанных с увеличением объема реальных капиталовложений, ускорением темпов экономического развития и улучшением состояния платежного баланса страны, иностранные инвестиции влекут за собой репатриацию прибыли, меньшую контролируемость деятельности предприятий, а при отсутствии дополнительных обязательств инвесторов, могут приводить к ухудшению структуры производства и экономики, неблагоприятно влиять на занятость и т.д.

Помимо улучшения инвестиционного климата и увеличения размеров прямых иностранных инвестиций важны и меры по созданию преференций тем инвестициям, которые связаны с высокотехнологичными производствами, повышением уровня занятости и квалификации рабочей силы, долгосрочными капиталовложениями в реальный сектор экономики, внедрением новейших зарубежных технологий, не представленных в России. Таким образом будет обеспечено не только увеличение количества, но и повышение качества инвестиций.

Еще одной тенденцией последних лет является рост социальной нагрузки и сокращение расходов федерального бюджета, что ведет к изменению его структуры и сокращению доли инвестиционных расходов. В условиях существующих проблем с наполняемостью бюджетов всех уровней одним из основных рисков реализации стратегии развития территориального развития муниципального образования с аграрной направленностью является риск недофинансирования. Он ставит под угрозу не только реализацию заложенных в программу проектов, но и достижение целевых показателей стратегии.

Однако согласно российским и зарубежным прогнозам, негативные тенденции уже в 2018-2019 гг. должны смениться позитивными изменениями, касающимися уровня цен на энергоносители, увеличения промышленного производства, что повлечет за собой рост бюджетных доходов.

Важной проблемой также является снижение платежеспособности населения. Низкая платежеспособность россиян определяет соответствующие уровни потребления и объемы внутреннего рынка. Данный фактор внес существенный вклад в

падение отечественного ВВП, однако, вероятность дальнейшего снижения реальных доходов и платежеспособности населения в период реализации стратегии представляется довольной низкой согласно российским и зарубежным прогнозам.

3. Социальные факторы

Общероссийской тенденцией является ожидаемое снижение общего числа рождений в последующие годы (2020-2030гг.). Кроме того, увеличение продолжительности жизни россиян обуславливает процесс старения населения. Все это в полной мере относится и к демографической ситуации в Воронежской области. Очевидно, что указанные демографические процессы определят дальнейший рост социальной нагрузки на бюджет региона.

Сокращение доли трудоспособного населения в среднесрочном периоде будет способствовать стабилизации или даже снижению уровня безработицы. Однако такие изменения сложно считать позитивными, поскольку качественные характеристики трудовых ресурсов приобретают большее значение и определяют более высокий уровень социального риска.

Упомянутые демографические тенденции определяют важность грамотной региональной политики по вопросам всесторонней поддержки рождаемости, повышения качества образования и здравоохранения, а также трудовой миграции.

4. Инновационные факторы

Важнейшим фактором экономического развития в современном мире является инновационная деятельность. Ускорение развития технологий ведет к увеличению конкуренции и способствует росту неопределенности на всех уровнях экономической деятельности.

Увеличивающаяся роль инноваций влечет за собой рост рисков, связанных с планированием и эффективностью инновационных проектов, обеспечением достаточного финансирования, а также возрастающими требованиями к квалификации трудоспособного населения. В сочетании с существующими демографическими тенденциями, выражающимися снижением общего предложения на рынке трудовых ресурсов, эти риски крайне существенны и на региональном, и на государственном уровне. Поскольку последствия данного вида риска могут быть чрезвычайно существенными, разработка, реализация и финансирование программ по увеличению трудового потенциала региона должны иметь наибольший приоритет.

Необходимо оказывать максимальную поддержку передовым инновационным разработкам и проектам, способствующим повышению конкурентоспособности региона. Рост конкуренции российских регионов за человеческие ресурсы заставляет уделять особое внимание созданию условий для сохранения и привлечения высококвалифицированных специалистов, обеспечения конкурентоспособности регионального рынка труда.

Сохранение санкционного режима, кроме прочего, ограничивает доступ российских компаний к некоторым зарубежным технологиям, не имеющим аналога в России. Это является дополнительным стимулом к поддержке импортозамещения в целях снижения зависимости от зарубежных технологий и снижения инновационных рисков.

Факторный анализ рисков несмотря на свою распространенность и наглядность представляет собой весьма сложную задачу, поскольку выделение факторов риска не является его результатом и конечной целью, хотя и представляет из себя информационную основу риск-анализа. На основе описания совокупности факторов риска реализации стратегии необходимо провести интерпретацию возможного влияния выявленных факторов на результаты и прогнозирование комплекса последствий влияния того или иного фактора.

В отличие от некоторых видов чистых рисков (производственных, экологических и т. д.), большинство рисков экономической деятельности влекут за собой целый ряд неоднозначных последствий. Задача субъекта управления в данном случае состоит не в избежании или минимизации рисков, как обычно принято считать, а в максимально точном описании возможных последствий реализации риска и разработке адекватной

программы реагирования на возникшие в результате изменений ограничения и появившиеся возможности.

В процессе реализации стратегий развития муниципальных образований с аграрной направленностью Воронежской области до 2035 г. необходимо обеспечить регулярный мониторинг и контроль степени выполнения намеченной программы действий и достижения запланированных целевых показателей.

При необходимости на основании данных от участников реализации стратегии, программа действий должна быть пересмотрена путем внесения изменений.

При этом необходимо обеспечить максимальную открытость результатов мониторинга о промежуточных итогах реализации стратегии для населения и экспертного сообщества, что будет способствовать расширению возможностей непосредственного общественного контроля и участия граждан в процессе реализации стратегии.

Решение задач в рамках названных направлений позволит снизить риски территориального развития муниципального образования с аграрной направленностью.

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DECENTRALIZATION OF RURAL DEVELOPMENT PLANNING AUTHORITY: A CASE STUDY IN PULAU BUAYA AND LENDOLA VILLAGE IN ALOR

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ABSTRACT

The 2006 Regulation of the Minister of the Domestic Affairs number 30 about Procedures for Assignment of District/ Municipal Government Affairs confirms that decentralization refers to handover of government affairs. However, the 2016 Regulation of the Minister of the Domestic Affairs number 44 refers to decentralization as a condition in which the central government gives some part of their power to regional government. Both terms have different meaning; handover means the central government, provincial government, city/municipal government are responsible for all government affairs including development, community development and empowerment of village communities and therefore, it is necessary to regulate the handover. On the other hand, the transfer of authority means that the government affairs including development, community development and empowerment of village communities take place in rural areas (village) but the central government, provincial government, city/municipal government are responsible for maintaining and regulating the authority and therefore, it is necessary to regulate the transfer.

KEY WORDS

Authority, decentralization, development, planning.

Development studies provide various different theories for practitioners to choose from. Gardner and Lewis (1996) divided development theory into three streams, the modernist, dependency and post-modernist. Long (1992) explained that modernization described development as a forward movement toward more complex and technologically integrated technological forms of modern society.

During the New Order, the basis for the national development was the Broad Guidelines of the National Policy (Garis-Garis Besar Haluan Negara). It was the declaration of the public will the The People's Consultative Assembly of the Republic of Indonesia (Majelis Permusyawaratan Rakyat) designed and authorized every five years. GBHN leaned towards the modernization theory that development planning was supposed to be centralized.

Having implemented the Five-Year Development Plan (Rencana Pembangunan Lima Tahun/ Repelita), it was revealed that there were wide gap in development taking place all over the country. Conyers (1994 p.162) recommended 'decentralized planning.' Regional planning will become more effective when the implementation of the planning is decentralized. Starting from 1999, the Political Reform took place in Indonesia, a new phase in the development planning model began; the current model was called bottom-up planning with the Development Planning Deliberation mechanism. The Development Planning Deliberation (Musrenbang) was the medium to channel public interest. The Regional Budget (APBD) would fund the public interest. However, it was revealed that most of the public interest had yet been accommodated. Most villages asked the municipality government to fund their program/ project/ activities representing the local's aspiration. Government of the village does not have sufficient authority and fund to accelerate the development in their area. Decentralization in Indonesia has encouraged new centralization in the municipality.

When decentralization becomes one of the important requirements for rural development acceleration, village (rural area) autonomy is essential. Several regulations related to the handover of the government affairs to the village government have been established, such as the 2006 Regulation of the Minister of the Domestic Affairs number 30 about Procedures for Assignment of District/ Municipal Government Affairs. The Minister of Rural Area, Development of Isolated Area and Transmigration has also established the 2015

Ministerial Regulation number 1 about the Guidelines of Authority based on Origin and Village-scale Local Authority as well as the 2016 Regulation of the Minister of the Domestic Affairs number 44 about village authority.

However, the Regent of Alor has yet analyzed and established any regulation related to the identification and inventory of authorities based on the rights of local origin and the local authority. As the effect, the one that holds the authority is the government of the municipality instead of the government of the rural area/ village. The government of the municipality has yet paid adequate attention to the rural areas. There is a gap between assistance the government provided for the rural areas located closer to the city center and one given to isolated areas (an isolated island).

Pulau Buaya and Lendola are two villages that have yet identified which activities they can maintain and which ones they can maintain but have yet been established. As a matter of fact, the identification will result in the draft of authorities based on the right of origin and village-scale local authority. The government of the rural area/ village may submit the draft to the government of the municipality so that the latter government can evaluate which type of authority they can transfer to the village government using the Regent and village regulations.

Another issue taking place annually is the village submitted the RKPDes and rural area budget to the Community Empowerment and Village Governance Board (BPMPD) to be enlisted. During the process of assistance, officials at BPMPD categorize which activities they can fund and which ones they cannot. However, the BPMPD admits they have no basis to do so. The only basis BPMD used during the process of assistance is "like and dislike" causing another problems for the government of the municipality and the village when financial audit takes place.

LITERATURE REVIEW

Authority. Authority is the official power that a person has because of his/ her position in an organization (Webber, 1947 in Gibson, Ivancevich, Donnelly, 1995 pp.481). Furthermore, Webber mentioned that authority, no matter what, was a part of power and power involves force and coercion. Laswell and Kaplan (1991) also argued that authority was formal power; they considered that the government had authority so that they had rights to order and established rules (Hendratno, 2009 pp. 81).

The governmental authority can only be obtained from both attribution and delegation. An organ may acquire new authority by attribution, while delegation of authority may occur if there is a certain transfer or transfer of authority from an authorized organ to another (Hendratno, 2009 pp.82). Based on the formal regulation, the authority of the village is the right and power of village administration in the context of village autonomy, which means the right to organize and manage the interests of the community according to local conditions and social culture. Therefore, the authority will strengthen the position and existence of subject who holds the authority to become a legal and autonomous one in decision-making (Eko and Rozaki, 2005 p.56).

Decentralization. Muslimin (1960) mentioned decentralization was delegation of authority on institutions and groups within the community in certain areas to deal with their own issues (Hendratno, 2009 pp.64). According to Pide (1999), decentralization was essentially transfer of power or authority in a particular field vertically from higher institutions or institutions or officials to institutions or institutions or functionaries below them so that those entrusted or overridden by certain authority are entitled to act on their behalf to take care of particular issues (Hendratno, 2009 p.65).

Conyers (1986) described the systematic distribution of functions in the context of decentralization. The distribution of functions was divided into several aspects; A) affairs, B) authority, C) levels, D) institution, and E) method. The expert further elaborated these aspects into sections, namely 1) nearly all types of affairs, 2) certain affairs and 3) only one affair for the first aspect, 1) policy-making authority, 2) financial authority, and 3) personnel authority for the second aspect, 1) provincial/ central, 2) municipality/ city, and 3) rural area/village for the third aspect, (1) specialized functional institution, and 2) multi-functional

institution for the fifth aspect and at last, 1) regulation-based, and 2) administrative delegation for the method (Muluk, 2005 pp.21).

Furthermore, Rondinelli and Nellis (1986) postulated that conditions affecting the implementation of decentralization programs, namely (1) a number of staffs and central bureaucracy supported decentralization and organizations responsible for the decentralization; (2) the extent to which dominant behavior, attitudes and culture supported or were conducive to decision-making decentralization; (3) the extent to which policies and programs were designed and implemented appropriately to improve the decision-making and management decen-tralization; (4) the extent to which financial, human and physical resources were available to organizations responsible for accountability (Huda, 2014 pp.49). The central government may use administrative decentralization to exercise control over its territorial units in order to increase greater political participation in decision-making (Rondinelli, 1990 in Muluk, 2005 pp.13).

Development Planning. Development was basically a manifestation of the service tasks implemented by the government in order to meet the needs of the general public (Riyadi & Supriady, 2003). Community-oriented development means that development outcomes to be achieved will be beneficial and useful to the local community and risks or costs generated by the development planning would be borne by the local community as well. In other words, an analysis towards both benefit and cost of development should be conducted prior to implementation of the development plan (Riyadi & Supriady, 2003).

Development planning provided a crucial issue in decentralization and local autonomy (regional and village) (Eko and Rozaki, 2005 pp.77-79). Planning, according to Abe (Eko and Rozaki, 2005 pp.78) was a response (reaction) to the future. As an effort to increase the accountability and transparency of village government administrations and improve service to the community, the village was also expected to better undertake its financial management and asset. The objective of government administration and financial management was to use limited financial resources the village had effectively and efficiently (Maschab, 2013: pp.146).

METHODS OF RESEARCH

The study used qualitative approach and the method was case-study. The settings of the study were two villages called Lendola and Pulau Buaya. Lendola was located closer to the area where the municipality government was located while Pulau Buaya was located far away from the area. Pulau Buaya was located on a separate island.

The focus of the study was decentralization of rural development planning, which was divided into (a) program and activities stated in the RPJMDes and RKPDes of the villages using the right of origin-based authority, (b) program and activities stated in the RPJMDes and RKPDes of the villages based village-scale local authority, (c) program and activities stated in the RPJMDes and RKPDes of the villages based on the authority given by the central, provincial or municipal government, (d) program and activities stated in the RPJMDes and RKPDes of the villages based on the authority given by the central, provincial or municipal government. Another focus of the study was attention the provincial government gave towards government administration, development, community development and empowerement in Pulau Buaya and Lendola. Yin (1996)'s analysis was the data analysis used in the study. It referred to holistic analysis, namely overall case analysis or intertwined analysis, an analysis for specific, one-of-a-kind or extreme phenomenon.

RESULTS AND DISCUSSION

Taking into account the categorization of village development plans into four types of village authority, one should emphasized, based on the literature review, what the real authority is, how to obtain and use the authority. The legitimacy of authority is connected with various applicable laws and regulations. Authority is understood as an authoritative power that has the force of force to do something (Weber, 1947 in Gibson, Ivancevich, Donnelly, 1995 pp.481). If authority is understood as a formal power then any authority possessed by an official or an institution must have a legal or regulatory basis. The lawful legislation is

intended whether according to the prevailing customs, or the laws and regulations which have been established by the competent authority.

The Minister of Domestic Affairs had issued the 2016 Regulation of the Minister of the Domestic Affairs number 44 and the 2014 Government Regulation number 43 as the implementation of the 2016 Decree number 6 about rural area. The 2016 Regulation of the Minister of the Domestic Affairs number 44 established four authorities of the village and their explanation.

Making comparison between the village authority stated in the 2016 Regulation of the Minister of the Domestic Affairs number 44 and programs/ activities stated in RPJMDes, RKPDes Pulau Buaya and Lendola, the findings of the study stated that the villages conducted several programs/ activities that did not meet the 2016 Regulation of the Minister of the Domestic Affairs number 44. It meant the two villages did not have any authority to conduct the programs/ activities. To be able to conduct program/ activities, the villages should identify and list four types of authority and the governor should establish regulation discussing the village authority as stated in the 2016 Regulation of the Minister of the Domestic Affairs number 44.

Furthermore, Pulau Buaya and Lendola villages had yet been able to develop accurate draft of village authority. They had yet used the 2016 Regulation of the Minister of the Domestic Affairs number 44 as the reference to develop the draft. As the result, the village put one program/ activity into two or four different types of authority. The villages proposed some programs to the municipal government solely asking for funding or assistance. These phenomena showed how much the government of the villages should learn to be able to understand the concept of village authority. They still relied heavily upon the higher government level.

Decentralization of plan had been conducted. The village government had used their authority to develop RPJMDes and RKPDes so that they represented what the villages needed. However, most of the programs/ activities the villages conducted were not stated in the rural area budget since it only enlisted the activities funded by the village budget. The majority of the programs/ activities stated in RPJMDes and RKPDes were funded by the regional budget. Every program/ activities funded by the regional budget was enlisted in RKPD of the municipality. These caused an overlapping.

Decentralization of planning was established in the 2016 Decree number 6 and the 2016 Regulation of the Minister of the Domestic Affairs number 44. The problem was how much commitment the municipal government had in accelerating village authority identification and inventory based on the rights of origin, village-scale local authority and other types of authority the central, provincial and municipal government assigned to the village. Therefore, Rondinelli and Nellis (1986) as cited in Huda (2014 pp.49) explained that several issues affecting the implementation of decentralization programs were (1) the central government staffs and central bureaucracy (as well as provincial and municipal government officials and bureaucrats) supported decentralization and organizations in which the responsibility was given; (2) to what extent dominant behavior, attitude and culture supported or were conducive towards decision-making decentralization; (3) how much policies and programs were designed and developed accurately to improve the decision-making decentralization and management; (4) types of financial and human resource as well as infrastructure were available for the organization in which the responsibility was given.

The government of Pulau Buaya and Lendola villages assumed that they had and were implementing the village authority de-facto but that had yet been implemented de-yure because there had yet been any Regent/Mayor Regulation consisting of lists of village authority (the 2016 Regulation of the Minister of the Domestic Affairs number 44a Article 21 to 23). In other words, there had yet been a basis for all of the activities identified and analyzed based on the types of authority the village government had because based on the scope/definition, authority was power formally owned by a person/institution to achieve certain goal.

The assumption that started the comparative analysis between Pulau Buaya and Lendola villages was there was a discrepancy between the attention given to area located close to the center of the government and that given to one located far away from the center of the government. The attention referred to one given by the municipal government to the village government. Parameter of the attention the municipal government gave was how

responsiveness the municipal government was towards suggestion given by the village government. The responsiveness referred to how fast and how much time the municipal government needed to give response towards the suggestions and the number of proposed programs/ projects the municipal government responded.

The village government admitted that there was a gap the municipal government gave to Pulau Buaya and Lendola government within the last five years. Distance was not the cause; instead, the cause of the discrepancy was how much representative the villages in the Regional House of Representative. The more representative a village had in the institution, the more attention the village got; when a village had no representative in the Regional House of Representative, it barely got any attention. In other words, the cause of such discrepancy was political instead of the significance of the program being proposed.

CONCLUSION

Nearly all of the programs stated in the RPJMDes of Lendola village use dual authority, both authority based on the rights of origin, village-scale local authority, as well as authority the central, provincial and municipal government assigned to the village government as well as other authorities the central, provincial and municipal government assigned. There has yet been either regent or governor regulation that establishes a number of concurrent and general affairs the municipal and provincial government assignedor any other types of authority the village government was responsible for.

There is discrepancy between the attention/service given to the villages of which location is far away from city center and those of which location is closer to the city center. Political factor becomes the cause of the discrepancy. Pulau Buaya gets more attention compared to Lendoya because several individuals from Pulau Buaya become the members of the Regional Hosue of Representatives of Alor; none of the people from Lendola becomes one.

SUGGESTIONS

The researcher encourages the government of Alor to identify and list all programs they have immediately based on the rights of origin, village-scale local authority, authority the central, provincial and municipal government assigned to the village government and authority the central, provincial and municipal government assigned to the village government through the Regent of Alor. Clear and consistent assignment of authority is directly associated to all village government staffs so that it becomes reference in developing the planning document (RPJMDesa). The identification and inventory should involve the village government and universities so that all programs/ affairs may be categorized into different types of authority and analyzed objectively and rationally. Involving independent institutions prevent some disagreement between the municipal and village government.

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РЕАЛИЗАЦИЯ КОНЦЕПЦИИ АУТСОРСИНГА В РЕГИОНАЛЬНОМ АГРОПРОМЫШЛЕННОМ КОМПЛЕКСЕ
IMPLEMENTATION OF THE OUTSOURCING CONCEPT IN THE REGIONAL AGRO-INDUSTRIAL COMPLEX

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АННОТАЦИЯ
Проблемы современных организаций аграрного сектора экономики обусловлены, с одной стороны, неэффективным использованием рыночной инфраструктуры, а с другой - отсутствием развитой системы по обслуживанию сельхозтоваро-производителей. В результате финансового кризиса аграрный сектор оказался в числе немногих отраслей, получивших новые стимулы для своего развития. Снижение курса национальной валюты и сокращение импорта продуктов, привело к росту производства сельскохозяйственной продукции и повышению эластичности спроса на неё. Таким образом, наметившаяся в посткризисный период тенденция импортозамещения, сформировала совершенно новый аграрный рынок, требующий обеспечения устойчивого развития сельхозформирований через пересмотр принципов организации агробизнеса. Одним из наиболее эффективных инструментов в таких условиях может стать аутсорсинг, обеспечивающий поддержку сельхозорганизаций на основе разработки эффективных «внешних» стратегий. При этом наибольшее внимание привлекает исследование регионального направления реализации аутсорсинговых процессов, что должно найти отражение в вопросе совершенствования управления одной их важнейших отраслей российской экономики – АПК.

ABSTRACT
The problems of modern organizations of the agrarian sector of the economy are due, on the one hand, to the inefficient use of market infrastructure, and on the other hand, to the lack of a developed system for servicing agricultural producers. As a result of the financial crisis, the agrarian sector has been among the few industries that have received new incentives for their development. The depreciation of the national currency and the reduction in imports of products has led to an increase in the production of agricultural products and an increase in the elasticity of demand for it. Thus, the tendency of import substitution, which was outlined in the post-crisis period, has formed a completely new agrarian market, which requires the sustainable development of agricultural enterprises through a review of the principles of the organization of agribusiness. One of the most effective tools under such conditions may be outsourcing, which provides support to agricultural organizations based on the development of effective "external" strategies. At the same time, the study of the regional direction of implementing outsourcing processes attracts the greatest attention, which should be reflected in the issue of improving the management of one of the most important branches of the Russian economy - the agro-industrial complex.

КЛЮЧЕВЫЕ СЛОВА
Аутсорсинг, аграрный аутсорсинг, аутсорсинговые отношения, концепция аутсорсинга, эффективность, региональный агропромышленный комплекс.

KEY WORDS
Outsourcing, agrarian outsourcing, outsourcing relations, outsourcing concept, efficiency, regional agro-industrial complex.

Обострение конкуренции на рынке вынуждает организации искать новые формы совершенствования системы управления, сокращения избыточных внутрифирменных работ, роста производительности труда работников путем улучшения их профессиональной подготовки и повышения ответственности [7]. Чтобы выжить в условиях современной конкуренции, организация должна постоянно приспосабливаться к окружению, отслеживать изменения во внешней среде, изменяться, прежде всего, в направлении, в котором наилучшим образом можно реализовать свои возможности, фокусироваться на тех бизнес-процессах, которые выполняет квалифицированно. Изменение в формах и методах управления организацией преследует цель полного переосмысления бизнес-процессов для повышения уровня конкурентоспособности.

Одним из способов повышения конкурентоспособности в современной экономике широко рассматривается относительно новая форма организации бизнеса - аутсорсинг.

В России в силу в целом короткой истории рыночного хозяйства аутсорсинг пока еще не получил такого мощного развития, как в остальном мире, но, тем не менее, тенденции увеличения спроса на аутсорсинг схожи с мировыми. Постепенно приходит понимание, что аутсорсинг является эффективным способом снижения издержек, доступа к новейшим технологиям и возможности сконцентрироваться на ведении своей основной деятельности, начинает создаваться среда для его усиленного внедрения, а объективные процессы, происходящие в экономике, усиливают данную тенденцию.

Аутсорсинг может возникнуть во всех формах, видах и подвидах разделения труда: от технического, когда производственные процессы передаются аутсорсинговым компаниям, до международного, когда аутсорсинговые компании действуют на международных рынках. Различные формы и сферы аутсорсинга в полной мере раскрывают все возможности для применения данной модели хозяйствования на современном этапе развития в российской агроэкономике [2].

Анализ отечественной и зарубежной литературы по проблемам использования аутсорсинга, показал, что опубликованные работы касаются в большей степени описания результатов исследования отдельных аспектов функционирования сельхозорганизаций, использующих аутсорсинг в своей деятельности, в частности авторы анализируют виды и факторы развития аутсорсинга, организационные формы управления ресурсами сельхозорганизаций с его использованием, развитие логистических структур через внедрение аутсорсинга, часть работ посвящены исследованию вопросов дуализма делегирования аутсорсинговых полномочий.

Но до сих пор не найден консенсус по определению понятия аутсорсинг для сельскохозяйственных организаций. На наш взгляд, для этого необходимо подойти к данной экономической категории с позиции комплексного исследования дефиниций его составляющих (рис. 1).

Анализируя приведенные термины аутсорсинга, можно выделить свойственные практически всем дефинициям характеристики, а именно: перевод (передача) внутреннего подразделении (функций, активов, капитала) в организацию поставщика услуг (сторонней фирме, компании), являющегося лидером рынка (специализирующегося на этой функции) на определенный период по оговоренной цене.

На основании вышеизложенного возникает объективная необходимость интерпретации дефиниции «аутсорсинг» применительно к агропромышленному комплексу и введения специализированной категории «аграрный аутсорсинг» - это форма хозяйствования в агропромышленном комплексе, связанная с развитием экономических отношений, базирующаяся на длительном сотрудничестве и высоком уровне доверия между участниками, включающая перераспределение ресурсов за счет сосредоточения на главном виде деятельности и передаче вспомогательных, второстепенных функций внешним специалистам (исполнителям), с делегированием контроля и ответственности через контрактную форму отношений, с целью повышения конкурентоспособности и эффективности деятельности предприятий АПК [5].
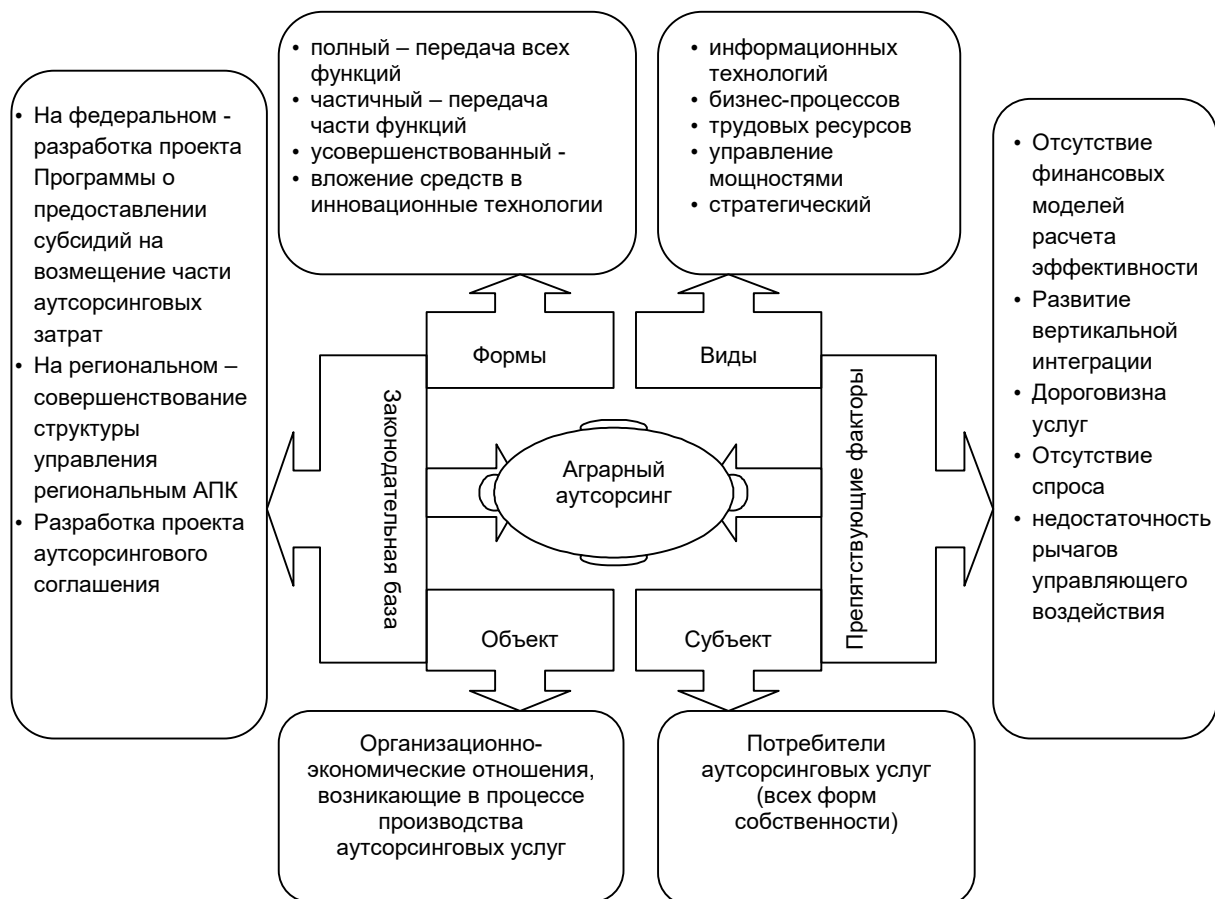
Рисунок 1 – Основные дефиниции в понятии «аграрный аутсорсинг»

Учитывая, что агропромышленный комплекс, как кластер, есть совокупность секторов на высоком уровне агрегации, исследование аутсорсинговых процессов в данной отрасли будет способствовать повышению эффективности и созданию конкурентоспособного агарного производства, в том числе на региональном уровне.

Несмотря на наличие некоторого опыта использования аутсорсиноговой модели в нашей стране, общий уровень его практического применения отечественными сельхоз-товаропроизводителями до настоящего времени невысок. Одной из причин недооценки ими возможностей аутсорсинга являются неудачные попытки его внедрения как отдельно взятого направления развития субъекта предпринимательства. Кроме того, на наш взгляд, к причинам сдерживающим реализацию аутсорсинговых процессов в российском АПК, также можно отнести: отсутствие информации (крупные агрокомпании практически не имеют информации о потенциальных возможностях малых фирм, а малые формы хозяйствования в АПК не могут самостоятельно выйти на уровень руководства крупных компаний), отсутствие развитой рыночной инфраструктуры, что повышает трансакционные издержки малых и средних предприятий АПК и сдерживает их развитие.

В тоже время преимущества, которые приносит аутсорсинг при тщательном поиске партнеров и заключении эффективных контрактов, позволяют предположить его рост в российской агроэкономике уже в ближайшей перспективе. К тому же одной из основных задач менеджмента является нахождение способов оптимизации и функционирования организации посредством создания соответствующих мотивирующих условий персонала [12].

Таким образом, в настоящее время, наметились следующие предпосылки к активному внедрению новой стратегии ведения бизнеса - аграрному аутсорсингу [5]:
• развитие конкуренции в агробизнесе (при дефиците и отсутствии конкуренции аутсорсинг невозможен и нецелесообразен, в свою очередь наличие конкуренции

положительно влияет на развитие данной модели и создает предпосылки для свободного принятия экономически оправданного решения в его пользу);

• уверенная динамика, развитая конъюнктура рынка АПК стимулируют использование и развитие аутсорсинга (в условиях неустойчивости рынка и недостаточного спроса неизбежны трудности с принятием решений и согласованием положений аутсорсинговых контрактов);

• к процессам делегирования будут стремиться организации, находящиеся на стадии развития, т.е. в фазе роста и зрелости жизненного цикла (в других фазах желательна стратегия применения вертикальной интеграции или контракты купли-продажи, так как при ведении деловых операций в небольших объемах применение аграрного аутсорсинга может себя не оправдать);

• формирование агропромышленных отраслевых кластеров (аграрный аутсорсинг имеет большие перспективы в развивающихся кластерах);

• налаживание взаимосвязей между крупным и малым агробизнесом (обуславливает создание благоприятного бизнес-климата и формирование устойчивых взаимоотношений);

• интеграция и кооперация с высокой степенью развитости (способствует кластеризации экономики и является базой для развития аграрного аутсорсинга).

Концепция реализации аутсорсинговых отношений в АПК региона, основанная на анализе современного состояния агропромышленного комплекса, представлена на рис. 2.

Следует подчеркнуть, что эффективная реализация данной концепции напрямую зависит от соответствия структуре управления региональным АПК [6].

Реализация концепции аутсорсинга в региональном АПК предполагает: развитие инфраструктуры АПК, в частности, создание аутсорсингового регионального центра, способствующего усилению экономических связей и налаживанию тесного сотрудничества крупного и мелкого аграрного бизнеса; рационализация структуры управления региональным АПК с целью создания оптимальных условий для реализации аутсорсинговой концепции; совершенствование нормативно-правовой документации, а также разработка программ по управлению аутсорсинговыми процессами в регионе; создание благоприятного бизнес – климата и как следствие повышение экономической эффективности деятельности хозяйствующих субъектов АПК Орловской области.

Рисунок 2 – Концепция реализации аутсорсинговых отношений в АПК региона

Реализация концепции аутсорсинга позволит создать благоприятный бизнес-климат экономически эффективной деятельности субъектов системы АПК Орловской области, и будет способствовать повышению конкурентоспособности и достижению стратегических целей развития региона.

Поскольку современная аграрная экономика отличается высоким уровнем развития специализации производства, то между производителем и рынком возникает множество специализированных фирм по сбору, переработке, сортировке, упаковке, хранению, транспортировке и торговле продовольствием.

Основными методами агропромышленной интеграции в регионе выступают производственная контрактация и интеграция собственности. При производственной контрактации фирма-интегратор заключает долгосрочные контракты с производителями или первичными дилерами, закупающими сельскохозяйственную продукцию непосредственно у товаропроизводителя [3]. Интеграция собственности предусматривает передачу в собственность фирмы-интегратора части активов интегрируемых агентов. К достоинствам контрактных форм интеграции относим сохранение юридической самостоятельности и учет экономических интересов партнеров.

Одним из направлений повышения устойчивого роста АПК является развитие интеграционных процессов [8]. Сегодня это в основном формирования агрохолдингового типа. По оценкам, до 10% посевных площадей сконцентрировано именно в них.

Среди причин неэффективного функционирования интегрированных компаний отмечают не только относительно объективные причины (неблагоприятная рыночная конъюнктура, высокие налоги), но и субъективные (последствия ошибочных управленческих решений), основной среди которых является необоснованный состав интегрированных структур. Это ведет к тому, что объединившиеся компании не могут использовать преимущества интеграции, в то время как ее негативные последствия усиливаются.

В условиях возрастающей конкуренции, проблемы повышения эффективности крупных агропромышленных формирований приобретают все большую актуальность, все отчетливее встает вопрос о необходимости повышения эффективности всех бизнес - направлений. Так, в крупных холдинговых объединениях важная задача состоит в регулярной ревизии организационно-управленческой структуры, поиске такой степени централизации управления, которая позволила бы полностью реализовать положительный эффект масштаба, а при необходимости – своевременно отделить «непрофильные» активы.

Аутсорсинговая модель организации бизнеса позволяет сосредоточить ресурсы, поднять уровень специализации, а не заниматься организацией вспомогательных и обслуживающих производств, бизнес-процессов или отдельных функций. При разработке концепции создания аутсорсингового центра в Орловской области учтены потребности предприятий-заказчиков в определенных типах целевого взаимодействия, определяющих мотивацию к использованию аграрного аутсорсинга.

К основным причинам, способствующим применению аграрного аутсорсинга в Орловской области, отнесены следующие:

• повышение качества производимой продукции, предоставляемых услуг, выполняемых работ, при этом уровень затрат стабилизируется или уменьшается;

• положительная динамика появления более совершенных технических комплексов и технологических разработок;

• в распоряжении руководителей организаций аграрного сектора имеется широкий выбор методов управления, призванных повысить конкурентоспособность организации;

• помощь руководителям в принятии решений;

• наличие периодически выполняемых работ: ремонтные работы сельскохозяйственной техники и животноводческих комплексов, техническое обслуживание зданий;

• наличие операций, требующих специального оборудования;

• в напряженные периоды сельскохозяйственных работ на условиях аграрного аутсорсинга можно привлечь дополнительную технику, персонал и др..

На рынке в современных условиях имеют возможность эффективно действовать многофункциональные интегрированные системы, обеспечивающие материальные, научно-технические, сервисные и информационные предпосылки формирования кластера регионального АПК [4].

Существуют объективные пределы концентрации сельскохозяйственного производства. Наиболее эффективны не горизонтальные объединения, когда под контролем и в собственности управляющей компании концентрируются десятки тысяч гектаров земли, а вертикальные структуры, работающие по контрактам с сельхозпроизводителями, в связи с чем, особенно актуальна поддержка вертикальной сельскохозяйственной кооперации, в таких кооперативах синтезируются слагаемые эффективности факторов, как мелкого, так и крупного производства.

Разумной альтернативой крупным холдингам Орловской области может быть функционирование небольших агрофирм, лучше всего кооперативного, а не акционерного типа. Основной актив и конкурентное преимущество малого бизнеса - это узкая специализация на определенном виде деятельности, мобильность, высокая степень адаптации к меняющимся условиям [2].

Следовательно, только с учетом обозначенных условий, возможно эффективное использование ресурсного потенциала [13]. Перспективность развития, в том числе регионального АПК, состоит в дальнейшем тесном сотрудничестве крупного и мелкого аграрного сектора, а также в развитии отраслевых кластеров (рис. 3) [8].
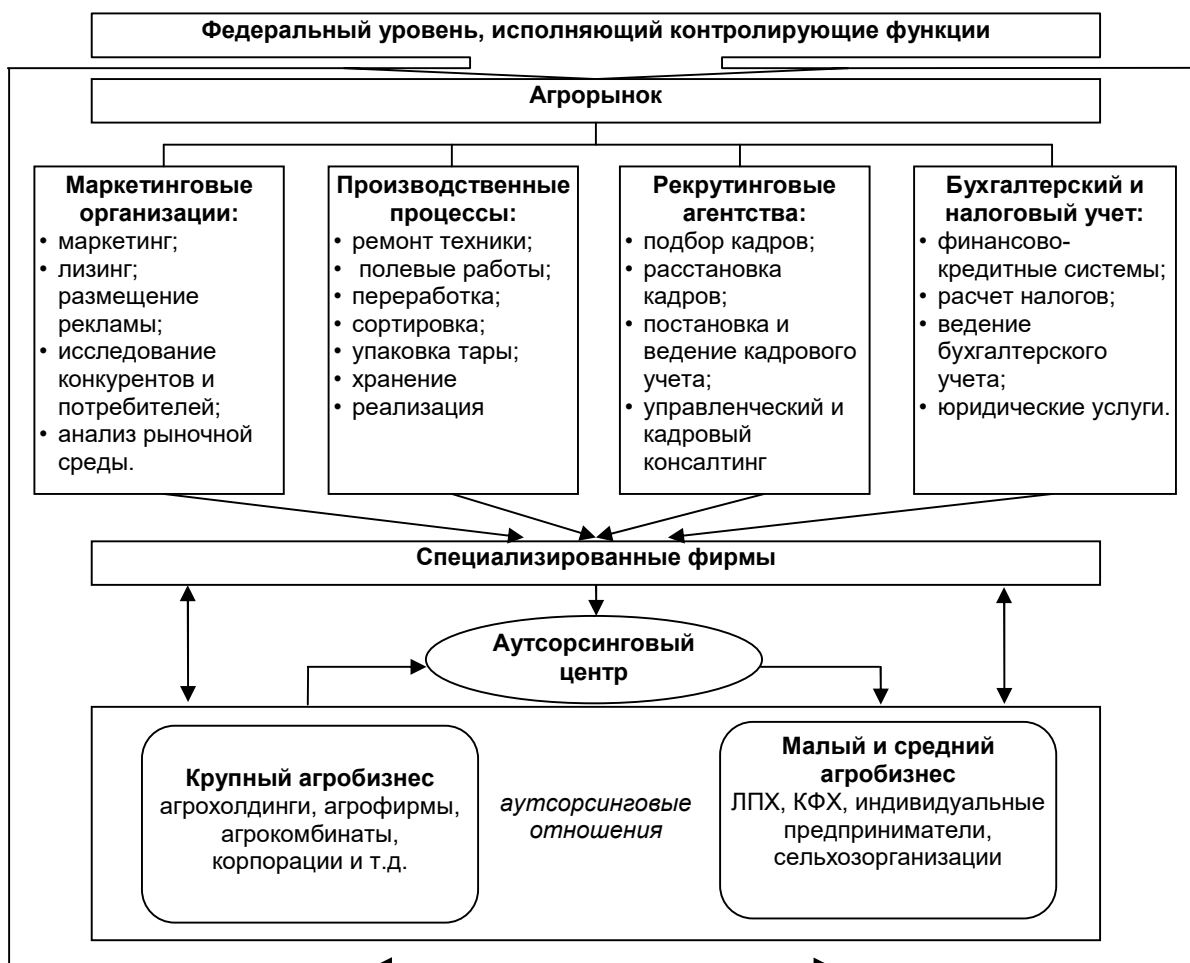
Рисунок 3 – Организационно-экономическая модель реализации аутсорсинговых отношений в региональном АПК

Механизм взаимодействия предполагает трехуровневую систему: управляющая компания, подразделения центра, предприятия-заказчики.

Управляющая компания обеспечивает взаимодействие между подразделениями, определяет стратегию развития центра. Подразделения аутсорсингового центра, специализируясь на выполнении определенной услуги, осуществляют аутсорсинговую деятельность для заинтересованных в ней предприятий.

К основным функциям такого Аутсорсингового Центра, учитывая проведенное ранее исследование теоретических аспектов и практического опыта хозяйствования, по мнению автора, можно отнести:
• создание единого экономического агропромышленного пространства;
• создание единого информационного поля, посредством аккумулирования информации и передачи её органам государственной власти;
• налаживание у организаций аграрной сферы надежных связей с поставщиками;
• повышение оперативности до требуемого уровня;
• сокращение логистических и управленческих затрат;
• упрощение управления крупными организациями в сфере АПК;
• выполнение сезонных функций;
• увеличение скорости оборота сельскохозяйственных активов.

Кроме того, реализация вышеуказанных мер может быть успешно осуществлена лишь в условиях создания необходимой нормативно-правовой базы и соответствующих по вертикали Федеральных структур [11].

Таким образом, можно констатировать, что в российском АПК намечаются предпосылки к внедрению современной формы хозяйствования и стратегии ведения бизнеса – аграрному аутсорсингу. В условиях постоянно растущей конкуренции в российском АПК, применение аграрного аутсорсинга позволит в значительной степени повысить конкурентоспособность сельхозтоваропроизводителей за счет снижения издержек, рационализации производственной и управленческой деятельности, фокусирования на инновациях.

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ПОКАЗАТЕЛИ ОЦЕНКИ РЕЗУЛЬТАТИВНОСТИ КРЕДИТОВАНИЯ АГРАРНЫХ КОММЕРЧЕСКИХ ОРГАНИЗАЦИЙ
INDICATORS FOR EVALUATION OF THE EFFECTIVENESS OF LENDING TO AGRARIAN COMMERCIAL ORGANIZATIONS

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АННОТАЦИЯ
Статья посвящена обоснованию применения в качестве методического инструментария определения эффективности системы кредитования АПК показателей оценки результативности кредитования в аграрных коммерческих организаций (АКО). Задачей исследования являлось обоснование формирования показателей на основе системного подхода оценки синергетической эффективности кредитования. В статье рассматриваются существующие подходы в оценке результативности системы кредитования АПК. Эффективность кредитования аграрных коммерческих организаций рассмотрена в рамках оценки результата системы кредитования АПК как эффективность системы, или системная эффективность. Обоснована необходимость разделения показателей оценки аллокативной эффективности кредита на уровни, с учетом двуединой сущности кредита как части общей системы финансово-кредитного обеспечения предприятия, с одной стороны, а с другой – как составляющей части общего, совокупного капитала организации. Предложена система показателей оценки результативности кредитования аграрных коммерческих организаций. Отмечены преимущества предлагаемого подхода формирования показателей для совершенствования методики оценки системы аграрного кредитования.

ABSTRACT
The article is devoted to the substantiation of the application of indicators for assessing the effectiveness of lending in agrarian commercial organizations, as a methodological tool for determining the efficiency of the agribusiness loaning system. The aim of the study was to substantiate the formation of indicators based on the systematic approach of assessment the synergistic effectiveness of loaning. The article examines the existing approaches in assessing the effectiveness of the agribusiness loaning system. The efficiency of the agrarian commercial organizations' loaning was considered in the framework of the evaluation of the result of the agribusiness loaning system as efficiency of the system, or system efficiency. The necessity of dividing the indicators of assessing the allocative effectiveness of the loan for levels is substantiated, taking into account the two-fold nature of the loan as part of the overall system of financial and credit provision of the enterprise, on the one hand, and on the other, as a component of the total, combined equity capital of the organization. The system of indicators for assessing effectiveness of agrarian commercial organizations' loaning is offered. The advantages of the proposed approach to the formation of indicators for improving the methodology for assessing the system of agricultural loaning are noted.

КЛЮЧЕВЫЕ СЛОВА
Кредит, аграрное кредитование, эффективность кредитования, маржинальный метод.

KEY WORDS
Loan, agricultural loaning, effectiveness of loaning, marginal method.

Кредитование играет значимую роль в процессе финансово-кредитного обеспечения деятельности аграрных коммерческих организаций. Система кредитования сельского хозяйства, АПК в литературе преимущественно рассматривается под углом государственного регулирования сельского хозяйства, государственного регулирования системы (механизма) кредитования в сельском хозяйстве, формы кредитной поддержки сельскохозяйственных товаропроизводителей. Определению ее сущности, регулирования, развития посвящены исследования Юняевой Р.Р. [27], Кузнецовой Н.А. [14], Поповой Л.В. [17], Дмитриева И.В. [11], многих других авторов. Так, Юняева Р.Р. отмечает, что регулирование системы сельскохозяйственного кредитования направлено в конечном итоге на реализацию её существенных функций, к которым относятся: обеспечение устойчивости системы, полный охват заёмщиков, развитие сельского хозяйства [27]. Дмитриев И.В. считает, что система кредитования сельскохозяйственной отрасли экономики направлена на содействие расширенному воспроизводству в сельском хозяйстве, и функционирует при государственной и иных формах поддержках [11].

Структура действующего в аграрном секторе экономики финансово-кредитного механизма далека от совершенства: его элементы не согласованы между собой, функционируют бессистемно, не обеспечивая главной цели - непрерывности и бесперебойности процесса воспроизводства, отмечает Попова Л.В. [17]. Представляется, что данное утверждение вполне может быть применимо к системе кредитования отрасли сельского хозяйства. Однако, на наш взгляд, при этом не правомерно называть главной целью системы кредитования сельского хозяйства обеспечение непрерывности и бесперебойности процесса воспроизводства в отрасли.

Функционирование системы кредитования связывается авторами с достижением результативности, но глубокого исследования по определению методики ее оценки не осуществлено.

Система аграрного кредитования основывается на проявлении внутренней сущности, принципов кредита, кредитования, а также составляющих элементов системы. Как вида экономической системы, ее функционирование, развитие должно быть результативным (эффективным). Логично, что целью системы кредитования более обоснованно считать достижение ее результативности (эффективности). В связи с этим аграрное кредитование рассматривается нами в триаде - «функционирование – развитие – результативность (эффективность)» - как объективные кредитные отношения, связанные с сущностью экономической категории кредита, с одной стороны, а с другой - как субъективно организуемый процесс кругооборота ссуженной стоимости у субъектов кредитования и между ними, и, соответственно, субъективной оценки воздействия кредитования на конечный результат.

Мы исходим из того, что результат является одновременно следствием функционирования системы кредитования, и причиной, побуждающей к ее дальнейшему развитию, являясь важной количественно-качественной характеристикой жизнедеятельности системы кредитования. Оценка кредитования аграрных коммерческих организаций (АКО) не может рассматриваться отдельно от системы аграрного кредитования, что, несомненно, должно отражаться в методике оценки ее результативности. В качестве методического инструментария оценки кредитования АКО представляется применение показателей, формирующих и отражающих информативный результат функционирования системы агрокредитования. Показателем называют данные, по которым можно судить о развитии, ходе, свойствах и качествах чего-либо, свидетельство о чём-либо, графические или числовые элементы, которые служат выражением каких-либо измерений (цифры, схемы и т. п.), числовое выражение течения какого-либо экономического или финансового процесса, пропорциональные соотношения распространённости чего-либо по сравнению с нормой [22].

Уровень, размер эффекта (дохода) должен обеспечивать непосредственным участникам процесса кредитования в рамках системы – кредитору, заемщику – такой уровень доходности, который соответствует как целевым ориентирам системы

кредитования АПК в целом, так и целевым ориентирам, параметрам деятельности каждого субъекта системы агрокредитования. Поскольку система кредитования является единым стоимостным пространством применения, кругооборота ссудного фонда, необходимо, чтобы показатели отражали:

- результат конечной сферы применения кредита заемщиком,

- результат кредитования как одного из основных сфер деятельности кредитора – коммерческого банка, организующего движение ссудного фонда в регулируемой ЦБ РФ плоскости,

- результат реализации мероприятий господдержки кредитования АПК.

Существующие подходы оценки эффективности кредита в организации не имеют какого-либо четкого законодательно-нормативного регулирования, и, в основном, связаны с расчетом ряда показателей. Так, приказом Министерства экономики РФ от 1 октября 1997 г. №118 «Об утверждении Методических рекомендаций по реформе предприятий (организаций)» были разработаны Методические рекомендации по разработке финансовой политики предприятия. Согласно этому документу, в некоторых случаях предприятию рационально использовать кредиты и при достаточности собственных средств, так как рентабельность собственного капитала повысится, если эффект от вложения средств будет значительно выше, чем процентная ставка [15]. Но каких-либо конкретных показателей, параметров, алгоритма для расчета эффективность кредитования в этом документе не представлено.

Хабиров А.Г., Хабиров Г.А. предлагают показатель эффективности использования краткосрочных кредитных вложений, основанный на сопоставлении результата экономии собственных источников формирования оборотных средств при привлечении краткосрочных кредитов, с результатом функционирования производства, выражаемый объемом реализованной продукции. Данный подход можно определить как оценку стимулирующего воздействия использования кредита на процесс расширенного производства, но не отражает результативности применения кредита как заемного финансового ресурса обеспечения деятельности [24].

С.В. Баранова попыталась установить степень влияния кредита на итоговые показатели функционирования предприятия с точки зрения их участия в воспроизводственном процессе. Автор предлагает слагать эффективность кредитования из двух взаимосвязанных частей показателей эффективности использования кредита: результативных (показатель рентабельности кредитных вложений, показатели относительной динамики использования кредита, абсолютные показатели эффективности использования кредита) и частных (структурные показатели эффективности использования кредитов, показатели оборачиваемости кредита). Данный перечень дополняется отраслевым показателем оценки эффективности использования кредита для АПК – показателем кредитоотдачи [4]. Методика, несомненно, представляет интерес как комплексный, системный подход, учитывающей взаимосвязи отдельных элементов кредитования, показывает отдельные факторы, влияющие на результативность производства и финансовые результаты организации. Но данная методика концентрируется исключительно на показателях результативности кредитования. При этом не учитывается взаимосвязь между субъектами кредитного процесса с точки зрения уплаты процентов за кредит, которые уменьшают абсолютный финансовый результат деятельности.

Е.С. Кривова, Е.В. Романова оценивают влияние объемов кредитования как метода заемного финансирования инвестиций на эффективность деятельности сельскохозяйственных предприятий, применяя показатели сумма кредита на 100 га с.-х. угодий, выручка на 100 га с.-х. угодий, производительность труда на 1 чел., прибыль от продаж на 100 га с.-х. угодий, прибыль на 1 руб. кредитов [13]. Представляется, что такой подход вполне применим для оценки результативности кредита с точки зрения достижения производственно-технологической цели кредитования, но не экономического эффекта системы агрокредитования.

Эффективность кредитования по отношению к оценке уровня результата системы кредитования логично рассматривать как эффективность системы, или

системную эффективность. Сухарев О.С. системную эффективность определяет как эффективность синергетическую, который характеризует общую эффективность нелинейного взаимодействия различных структурных элементов системы. Таким образом, синергетическая эффективность, по сути, представляет собой способ учёта общей эффективности системы, складывающейся из различных видов эффективности, когда невозможно просуммировать разные эффективности или перемножить их. Автор выделяет аллокативный и адаптивный типы эффективности. Первый тип описывает, насколько продуктивно распределяются, а также экономно используются ресурсы, второй - характеризует результативность в приспособлении различных подсистем к внешнему окружению, риски хозяйственной деятельности, склонность к инновациям, развитие экономической системы во времени, ее функциональность и др. [20].

Применяя вышеуказанное мнение к системе кредитования, можно сказать, что процессы, происходящие в системе, являются и линейными, и нелинейными. Они переплетены различным образом, так, что зачастую трудно установить какую-либо закономерность между ними. Оценка эффективности кредита по методике синергетической эффективности должна быть основана, на наш взгляд, на сущности кредита как составляющего элемента финансовых ресурсов и капитала АКО, т.е. как составной части общего. В связи с этим возникает объективная необходимость разделения показателей оценки аллокативной эффективности кредита на уровни, отражающие частное и обще. При этом с учетом двуединой сущности кредита следует выделять показатели для оценки кредита как части общей системы финансово-кредитного обеспечения предприятия, с одной стороны, а с другой – как составляющей части общего, совокупного капитала организации. Показатели первого уровня оценки эффективности кредита должны отражать результат применения кредита с учетом двуединой сущности, показатели второго уровня оценки эффективности кредита должны отражать влияние результата кредита на общий результат функционирования предприятия. Показатели первого и второго уровня следует подбирать с точки зрения их функциональной совместимости и динамического подобия.

Такой концептуальный уровневый подход к формированию показателей основан на методике синергетической эффективности, где аллокативная эффективность представляется нам как базовый уровень показателей, и основан на отражении результата кредита как ресурсного элемента. Его воздействие на результат совокупных ресурсов с учетом их функциональной совместимости и динамического подобия определяет основу адаптивных способностей организации в воспроизводственном процессе (3 уровень показателей), оцениваемую как синергетический эффект. Следует говорить о многоуровневой, многоаспектной системе показателей оценки эффективности кредита.

В плоскости методики оценки синергенической эффективности, на наш взгляд, должны применяться показатели аллокативной эффективности для оценки результата кредитования, его динамики, взаимосвязи с определяющими факторами, с учетом двуединой сущности кредита в АКО – как процесс кредитно-финансового обеспечения деятельности и составляющего элемента совокупного капитала (рис. 1).
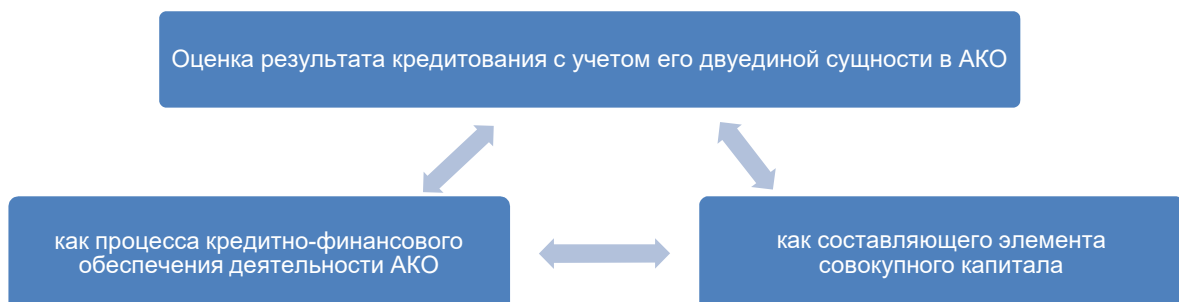

Рисунок 1 – Схема методического подхода к определению показателей оценки результата кредитования в аграрных коммерческих организациях (аллокативная эффективность)

Адаптивный подход предполагает применение комплексных методик оценки результата кредитования, раскрывающих:

- внутреннюю связь, влияния эффективности кредитования на уровень доходности АКО, позволяющих оценить возможность и уровень адаптации хозяйствующих субъектов к изменяющимся условиям внешней и внутренней среды, спрогнозировать его дальнейшее развитие с учетом функционирования системы кредитования,

- влияние других субъектов системы агрокредитования, внешних условий на формирование результата кредитования АКО, одновременно оценивая результат реализации мероприятий господдержки кредитования АПК.

Такой подход позволит выявить и определить «точки соприкосновения» в системе взаимодействия субъектов системы кредитования АКО, учитывать и формировать конечный результат системы с учетом главной базовой цели – повышение дохода АКО, относимой к приоритетам господдержки АПК как сферы обеспечения продовольственной безопасности страны.

Кредитование в современных условиях функционирования АПК выражается в коммерческой форме кредита. Для коммерческих банков основным источником прибыли считается процентная маржа. Функционирование аграрных предприятий в рамках расширенного воспроизводства предполагает получение прибыли как результата эффективного применения всех ресурсов, в том числе, кредитных. Таким образом, коммерческая составляющая для участников кредитного процесса - АКО (заемщика) и коммерческого банка (кредитора) - имеет единую экономическую сущность и связана с получением прибыли. Представляется, что логично применить единство экономической сущности кредитования - получение прибыли - при обосновании единства подходов к оценке его эффективности у субъектов кредитования.

На основе использования аналогии как метода научного познания считаем целесообразным применения методики оценки результативности деятельности коммерческого банка, в т.ч. кредитной, на основе показателей маржи в качестве методики оценки эффективности кредита как процесса кредитно-финансового обеспечения заемщика – АКО. Данная аналогия вполне имеет право на существование, поскольку основана на единстве существенных свойств применения кредита субъектами (заемщиком, банком) – возвратность, платность. Как коммерческая организация, банк всегда действует таким образом, чтобы маржа была положительная, поэтому привлечение кредита в банковской практике в абсолютном большинстве случаев экономически эффективно. Использование способа расчета маржи на основе сопоставления процентных доходов и расходов для АКО не приемлем ввиду качественного различия сферы деятельности.

Применение маржинального подхода в оценке эффективности кредита как процесса кредитно-финансового обеспечения деятельности АКО должно выражаться, на наш взгляд, в сопоставление экономической выгоды, дохода от применения кредита как составляющей процесса кредитно-финансового обеспечения деятельности АКО, с одной стороны, и экономических потерь, расходов, связанных с привлечением кредита в процессе кредитно-финансового обеспечения деятельности АКО. При этом результат, основанный на соизмерении экономических выгод и потерь, связанных с кредитованием, определяемыми относительными величинами в соответствие с традиционным применением маржи как разница в процентных показателях, можно назвать спрэд кредитования аграрной коммерческой организации (АКО). Маржинальный подход оценки эффективности кредитования как процесса, составляющей системы кредитно-финансового обеспечения деятельности АКО, предполагает применение эмпирических методов исследования - сравнение, измерение, сегментацию, т.е. исследование не только характеристик отдельных показателей, но также характера и тенденции их функционирования и развития в рамках данного маржинального подхода.

В качестве относительного показателя, измеряющего экономические выгоды от применения кредита как процесса кредитно-финансового обеспечения деятельности, считаем правомерным использовать рентабельность совокупного капитала АКО, а показателя, измеряющего экономические потери от привлечения заемного капитала (кредита) для обеспечения деятельности – цену кредита как заемного капитала. Показатель рентабельности капитала определяется как соотношение полученной величины эффекта от использования капитала к размеру капитала. В качестве показателя эффекта от использования капитала целесообразно применять показатель EBIT (Earnings Before nterestand Taxes), т.е. прибыль до вычета процентов и налогов, который достаточно широко применяется в оценке эффективности деятельности организации, управлении структурой капитала [21]. Представляется, что неправомерно применять показатель рентабельность заемного капитала, т.е. (EBIT/ Заемный капитал * 100). Как отдельный аналитический показатель его следует применять для оценки уровня эффективности заемного капитала. Для целей сравнения с ценой заемного каптала показатель рентабельности заемного капитала функционально не совместим, поскольку EBIT формируется как синергетический эффект функционирования собственного и заемного капитала, и выделить часть, формируемую отдельными составляющими капитала не представляется возможным. Кроме того, при невысоком значении заемного капитала рентабельность по EBIT окажется завышенной относительно его цены, и может сложиться неоправданное мнение о высокой эффективности кредита. Показатель EBIT более приемлем для расчета рентабельности капитала, чем чистая прибыль, или прибыль до налогообложения, поскольку показывает величину прибавочной стоимости как синергетический эффект функционирования составляющих капитала – собственного и заемного.

Применение EBIT позволяет учитывать комплексность влияния составляющих капитала организации на уровень получаемого дохода, скорректировать величину полученной прибыли с учетом ее использования на выплату процентов, восстановить величину первоначального дохода для экономически оправданного его соотношения с величиной совокупного, т.е. собственного и заемного капитала. В составе заемного капитала для целей определения рентабельности капитала следует применять платные заемные средства – банковские кредиты, займы. Формула рентабельности капитала будет иметь следующий вид:

Рентабельность капитала, % = (EBIT / Совокупный капитал) x 100

Цена заемного капитала в форме банковского кредита определяется как произведение налогового корректора и расчетной ставки процента, скорректированной на расходы по привлечению кредита [8]. Спрэд кредитования АКО по методике маржинальной оценки эффективности кредита для АКО определяется как разница между рентабельностью капитала (Р К) и ценой заемного капитала в форме банковского кредита (ЦЗКбк), и отражает уровень экономического эффекта (результата) капитала после его уменьшения на уровень потерь от цены кредита:

Спрэд кредитования АКО, % = Р К – ЦЗКбк

Положительное значение показателя свидетельствует об экономической эффективности применения кредитных ресурсов, что означает возможности использования оставшейся после выплат долговых обязательств части прибыли на нужды потребления собственников, накопления, развития. Отрицательное значение показателя свидетельствует об экономически не эффективном результате привлечения кредитных ресурсов, что означает недостаток прибыли для выплат долговых обязательств.

Так же для оценки экономической эффективности кредита предлагается применение показателя «Эффект финансового рычага-1» (первой концепции), отражающий результат влияния кредита на рентабельность собственного капитала, преимущества использования которого рассматривается многими авторами - Юняевой Р. Р. [26], Боровинских В.А. [5], Савицкой Г.В. [18], Савченко Н.Л.[19]. «Эффект

финансового рычага-1» является интегральным комплексным показателем, отражающим влияние ряда факторов на экономическую эффективность кредита:

- уровень доходности предприятия на основе величины дифференциала, являющегося, по сути, спрэдом кредитования АКО,

- размера кредита как определяющего фактора величины финансового рычага, и воздействующего на уровень финансовой устойчивости организации,

- уровень экономического риска привлечения кредита для предприятия – чем выше дифференциал, тем ниже риск новых заимствований и наоборот.

Показатели спрэд кредитования АКО и «Эффект финансового рычага -1» являются интегральными, комплексными, состоят из простых, частных показателей, что позволяет считать их результативно-факторными показателями экономической эффективности кредита.

Результативность процесса кредитно-финансового обеспечения деятельности АКО взаимосвязана с составом и структурой источников финансирования деятельности. Выявление и оценка структурных пропорций источников финансирования по видам деятельности является важной составляющей достижения эффективного результата деятельности организации. Оценку структуры источников финансирования предлагается считать как структурные показатели кредитно-финансового обеспечения деятельности АКО.

Для учета отраслевых особенностей сельскохозяйственного производства необходимо оценивать взаимосвязь кредита с основными факторами производства – земля, животные, средства производства в виде сельскохозяйственной техники и т.п. К тому же, кредитные продукты банков связаны с обеспечением функционирования этих факторов (например, кредитные продукты на проведение сезонных работ - Сезонный Стандарт Растениеводство, Сезонный Стандарт Животноводство, кредит на приобретение молодняка сельскохозяйственных животных под его залог, кредит на пополнение оборотных средств «Оборотный – стандарт» и другие АО Россельхозбанк) [10]. Факторы сельскохозяйственного производства находят отражение в Госпрограмме развития сельского хозяйства, в части государственной поддержки кредитования. В частности, Приказ Минсельхоза России от 24.01.2017 N 24 «Об утверждении перечней направлений целевого использования льготных краткосрочных кредитов и льготных инвестиционных кредитов» оговаривает конкретные объекты кредитования - товарно-материальные ценности, работы по подотрасли растениеводства - приобретение горюче-смазочных материалов; химических и биологических средств защиты растений; минеральных, органических и микробиологических удобрений; семян и др.; подотрасли животноводства - приобретение молодняка сельскохозяйственных животных; кормов; ветеринарных препаратов; приобретение сельскохозяйственной техники и оборудования, используемых в растениеводстве, в животноводстве (включая молочное и мясное скотоводство) и т.п. [16]. Показателями результативности кредитования для отражения особенностей производственной направленности деятельности АКО являются такие как сумма кредита на 100 га с.-х. угодий, сумма кредита в расчете на 1 гол КРС (свиней и т.п.). Считаем целесообразным проводить оценку результативности кредитования по показателям выхода готовой сельскохозяйственной продукции (зерно, молоко, прирост живой массы животных и т.п.) в расчете на 100 руб. привлеченных кредитов. Данные показатели отражают не прямой результат применения кредита, а измеряют интенсивность привлечения кредитных ресурсов в расчете на основные факторы производства, результативность применения кредитных ресурсов в расчете на основе полученной продукции. Можно считать их как производственно-факторные результативные показатели агрокредитования. Результат по этим показателям следует оценивать на основе сопоставления динамических индексов их значений при одновременной оценке сопоставимых результативных параметров. В качестве результативных следует применять показатели выручки от продаж, прибыли до налогообложения. Предлагаемый Е.С. Кривовой, Е.В. Романовой показатель прибыль от продаж, на наш взгляд, не вполне сопоставим с показателями кредитов, поскольку не учитывает сумму

уплаченных процентов за кредит, влияние господдержки АКО, т.к. полученные субсидии отражаются в составе прочих доходов, а проценты – прочих расходов, корректирующих прибыль от продаж [13]. Результативные показатели следует рассчитывать в виде выручки на 100 га с.-х. угодий, прибыли до налогообложения на 100 га с.-х. угодий (1 гол. КРС, 100 руб. полученных кредитов) и т.п. Для оценки результативности государственной поддержки кредитования АКО целесообразно проводить расчеты результативных показателей на основе прибыли до налогообложения с учетом субсидий и без учета субсидий.

Оценка результата кредитования как составляющего элемента совокупного капитала в рамках предлагаемого методического подхода оценки результата применения кредита с учетом его двуединой сущности (рис. 1) связана с аспектом результативности структуры капитала, в частности, заемного капитала как составляющей этой структуры. Оценка результативности заемного капитала АКО связана с показатели эффективности (рентабельности), и структурно-динамическими показателями заемного капитала. Осуществляется в рамках дискриптивной модели анализа кредита, которая является достаточно информативной методикой, в частности, проведение структурного, динамического, коэффициентного анализа.

Как видно из таблицы, предлагается подразделение показателей оценки системной эффективности кредита на три уровня (табл.1).

Таблица 1 – Показатели результативности функционирования системы кредитования аграрных коммерческих организаций (АКО) на основе синергетической эффективности

Вид эффективности	Уровень показателей	Виды, сущностная характеристика показателей				
аллокативная	1 уровень	показатели результативности системы кредитования АКО с учетом двуединой сущности кредита				
		как процесса кредитно-финансового обеспечения деятельности АКО			как составляющего элемента совокупного капитала АКО	
		результативно-факторные показатели эффективности кредита (основные показатели эффективности кредита)				
		результативность процесса кредитования			результативность заемного капитала	
		результативно-факторные показатели экономической эффективности кредита	структурные показатели кредитно-финансового обеспечения деятельности	производственно-факторные результативные отраслевые показатели эффективности кредита	показатели эффективности заемного каптала	структурно-динамические показатели заемного капитала
	2 уровень	показатели воздействия результативности кредита на результативность функционирования совокупного капитала				
		общие результативно-факторные показатели экономической эффективности совокупного капитала - собственного и заемного (производные показатели эффективности кредита)				
		модульно-факторные показатели эффективности кредитования: RCK (ROE) = РА ± ЭФР(1)			показатели финансовой устойчивости, ROE	
		цена капитала организации - WACC (Weighted Average Costof Capital)				
адаптивная	3 уровень	показатели адаптивных способностей организации в воспроизводственном процессе на основе оценки результативности кредитования				
		модель экономической добавленной стоимости (Economic Value Added - EVA)				
		модель «Матрица финансовой стратегии Ж. Франшона и И.Романе» (Результат финансово-хозяйственной деятельности = Результат финансовой деятельности + Результат хозяйственной деятельности)				

Представляется, что в качестве показателей второго уровня, оценивающих влияние кредита на общую результативность деятельности организации, следует использовать:

1. показатель рентабельности собственного капитала на основе модульно-факторного способа расчета (как результативность процесса кредитования):

$$RCK\ (ROE) = PA \pm ЭФР(1)$$

2. показатели финансовой устойчивости (как результативность заемного капитала в качестве составляющего элемента совокупного капитала АКО)

3. показатель цена капитала организации (WeightedAverageCostofCapital, WACC) как интегральный показатель оценивания влияния кредита на результативность капитала в процессе деятельности АКО.

Способ расчета рентабельности собственного капитала (РСК или ROE) как суммы рентабельности актива (РА) и эффекта финансового рычага первой концепции (ЭФР-1), рассматриваемый в литературе [8], представляет формирование рентабельности собственного капитала на основе факторов эффективности операционной деятельности (РА), с одной стороны, а с другой - факторов экономической эффективности кредита (ЭФР(1).

Показатель WACC, являясь наглядным индикатором формирования рыночной цены предприятия, имеет достаточно широкий спектр применения - в оценке уровня доходности активов (капитала), управлении структурой капитала и др., и, к тому же, является сопоставимым с предложенными показателями первого уровня оценки результативности кредита.

Показатели первого и второго уровня определяются нами как базовый уровень результативных показателей аллокативной эффективности кредита. Определение адаптивных способностей организации в воспроизводственном процессе с учетом оценки результативности кредитования, оцениваемой как синергетический эффект, предлагаем осуществлять на основе:

1. модель экономической добавленной стоимости (Economic Value Added - EVA),

2. матрицы финансовой стратегии Ж. Франшона и И.Романе.

В литературе EVA определяют как критерий оценки деятельности компании, отражающий эффективность использования капитала и увеличении стоимости компании [25], универсальный показатель, который можно использовать для финансового анализа, управления и оценки стоимости компании [9], универсальный показатель эффективности бизнеса [28].

Высокая значимость показателя подкрепляется формированием вокруг него целого научного подхода, получившего название value based management. Модель EVA содержит параметры, являющимися функционально совместимыми с параметрами расчета предложенного интегрированного показателя оценки эффективности результата кредитования - спрэд кредитования, и она, по сути, представляет собой вариант маржинального метода оценки эффективности деятельности организации, предлагаемого нами к применению в оценке экономической эффективности кредитования.

Матрица финансовой стратегии, разработанная французскими учеными Ж. Франшоном и И.Романе, используется для оценки достигнутых результатов финансово-хозяйственной деятельности и определения возможных путей дальнейшего развития предприятия. Расчеты осуществляется на основание трех показателей: результат хозяйственной деятельности (РХД), результат финансовой деятельности (РФД), результат финансово-хозяйственной деятельности (РФХД).

Показатель РФД является «связующим звеном», «точкой соприкосновения» с предложенными ранее показателями 1 и 2 уровня, позволяющим оценить:

- влияние динамики заимствования на результат финансовой деятельности в комплексе с другими показателями – проценты, дивиденды и др.,

- влияние результативности кредита, как основной составляющей финансовой деятельности, на потенциал результативности организации.

В литературе авторами отмечается эффективность матрицы как в управлении финансами компании, так и в возможностях генерирования объективного и максимально информативного заключении о финансовом состоянии компании и перспективах ее развития [7; 12; 23]. Дорофеев М.Л. [12], Воробьев А. В. и Олюнин В.И. [7] отмечают возникновение сложностей при определении месторасположения предприятия в квадрантах матрицы, поскольку используется достаточно грубая шкала оценки аналитических показателей «результат хозяйственной деятельности» и

«результат финансовой деятельности». Считаем возможным не согласиться с исследователями, поскольку по методике применения матрицы разработчики предусмотрели сравнение РФД и РХД с нулем не их абсолютного значения, а результатов сопоставления РФД и РХД с показателем добавленной стоимости (value added, VA), выражением полученных величин в процентах и сопоставлением их по шкале результатов от -10% до + 10% добавленной стоимости: менее - 10% - меньше 0, более 10% - больше 0, от -10% до + 10% приблизительно равно 0.

Добавленная стоимость считается достаточно информативным результативным показателем деятельности организации. Так, Бабынина Г.М. отмечает, что добавленная представляет собой стоимостную оценку работы предприятия, вклад работников в общую величину стоимости национального продукта, и применяется для оценки эффективности деятельности предприятия с позиции его собственников [3]. Сопоставление РФД и РХД с показателем добавленной стоимости делает модель матрицы достаточно универсальной, не требующей учета дополнительно отраслевых особенностей, поскольку основанием для оценки показателей является величина индивидуального, результативного показателя добавленной стоимости конкретной организации, измеряющего ее реальный вклад в создание стоимости ее же валового продукта, что устраняет субъективизм в оценке. Исследователями признается, что использование финансовой матрицы позволит просчитать многовариантные сценарии развития, точно идентифицировать положение в будущем и принять приемлемый для организации бюджет развития [23]; матрица дает возможность генерировать понятную всем стратегическую карту развития компании в области финансов, представляющую собой не просто красивую картинку, а еще и подробное руководство к действию с возможными вариантами выбора дальнейшего развития [12].

Финансовая матрица применяется не как самостоятельный метод оценки эффективности кредитования, а как логическая модель, отражающая влияние результатов финансовой деятельности, в первую очередь, кредитования, наряду с результатами хозяйственной деятельности, на уровень достигнутой результативности организации. Так же матрица дает возможность в общей форме дать прогноз финансово-хозяйственного состояния предприятия, определить, каким образом предприятие может предупредить неблагоприятные факторы и явления своего развития. Финансовая матрица Ж. Франшона и И.Романе вполне может применяться для характеристики адаптивной результативности, поскольку является комплексной моделью предприятия, отражающей:

- стоимостные (абсолютные) показатели формирования результата деятельности,

- относительные их характеристики в сопоставлении с размером деятельности (продукции),

- графическое пространственное изображение, обозначающее реальные и потенциальные траектории вариативной динамики дальнейшего развития.

Эти две модели – EVA, Матрица финансовой стратегии - вполне могут применяться для оценки синергетической эффективности кредитования АКО, поскольку являются комплексными, широко информативными, с оной стороны, а с другой - содержащими показатели, обладающими свойством функциональной совместимости и динамического подобия с показателями второго уровня, оценивающих влияние кредита на общую результативность деятельности АКО.

Для предложенной системы показателей, на наш взгляд, присущи такие свойства, как репрезентативность, т.е. качественная адекватность отражения сущности и особенностей системы агрокредитования; содержательность, т.е. раскрытие сущности процессов функционирования системы агрокредитования; прагматичность, т.е. достаточность, полнота, целостность, сопоставимость информации для проведения оценки результативности кредитования.

Представляется, что с учетом этого можно считать рассмотренные показатели результативности кредитования аграрных коммерческих организаций на основе синергетической эффективности применимыми для получения достоверной

информации о функционировании, динамике развития аграрного кредитования. Предлагаемая система показателей имеет преимущества по сравнению с применяемыми подходами, методами оценки эффективности кредитования, поскольку отражает результативность функционирования системы агрокредитования на уровне АКО, т.к. позволяет оценивать:

- экономический результат кредитования с точки зрения применения кредита как составляющего финансового ресурса в процессе кругооборота стоимости и создания прибавочного продукта;

- экономический результат кредитования с точки зрения условий предоставления кредита коммерческими банками в рамках взаимодействия субъектов в процессе функционирования существующей системы агрокредитования;

- результат производительного применения кредита как финансового ресурса для обеспечения непрерывности, своевременности технологического процесса производства сельхозпродукции в запланированном объеме в рамках параметров государственной программы развития сельского хозяйства;

- результат воздействия государственной поддержки системы агрокредитования на достижение заявленных в государственной программе приоритета первого уровня в экономической сфере – повышение доходов сельскохозяйственных товаропроизводителей;

- влияние кредитования на уровень эффективности активов (капитала), финансовой устойчивости, эффективности функционирования деятельности АКО.

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REDEVELOPING COMPETITIVE ADVANTAGE OF RATTAN SMES CLUSTER IN CIREBON

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ABSTRACT
Rattan SMEs Cluster in Cirebon is the national icon of rattan furniture industry even though raw materials needed for the industry do not source locally. The level of production reached 80% of the national production of rattan furniture. Rattan furniture industry in Cirebon has been going up and down for the past decades. The purpose of the study was to analyze obstacles and altenative policy needed to re-develop competitive advantage of the rattan furniture industry after the Memorandum of Understanding between 3 Ministers, the Minister of Trading, Minister of Forestry and Minister of Industry, that banned raw rattan export was issued in 2011. The design of the study was mix method. Qualitatively, the findings of the study were some obstacles the SMEs encountered in developing competitive advantage of the rattan furniture industry in Cirebon. The obstacles were related to the market, raw materials, employment, capital and regulation. As an addition, there were 15 alternative policies the local stakeholders may do to develop competitive advantage of the rattan furniture SMEs in Cirebon. Based on AHP (Hierarchical Process Analysis), quantitatively, the finding revealed that raw material should become the highest priority to ensure the rattan furniture SMEs in Cirebon got constant supply of the raw materials they needed. The percentage was 38%. On the other hand, the percentage of regulation and marketing was 10% each. At the policy alternatives level, efforts to encourage the consistency of banned raw materials exports rank first among all policy alternatives, which reaches 16%. In terms of alternative policy, the most important alternative policy was the one that encouraged raw rattan export ban. The percentage was 16%.

KEY WORDS
Rattan, cluster, SMEs, competitive advantage.

Rattan is one of the national commodities. 80% rattan used in the industry was grown in Indonesian rain forest. Therefore, the government encourages establishment of furniture industry of which raw material is either rattan or timber. Currently, rattan SMEs clusters have grown rapidly in several areas such as Solo, Sidoarjo, Malang and Cirebon.

At present, Cirebon is the largest rattan producer in Indonesia since the area produces 80% of the national rattan products. 80% of the rattan SMEs in Cirebon export their products (FT Link Consultant – SHK Kaltim, Mei, 2005). Rattan industry in Cirebon started growing in 1970s although the raw material do not source locally (Sriwarno and Iman, 2009). Table 1 describes type of raw materials the rattan SMEs used and where they are from.

Tabel 1 reiterates that the raw materials used in the rattan SMEs in Cirebon came from other regions. It is evident that Cirebon is able to develop a product despite the fact that the raw materials for the industry should be shipped from other areas and makes the industry its local competitive advantage. The rattan SMEs in Cirebon does not consider absence of the raw materials as obstacle in developing the competitive advantage of the industry.

Since 2011, due to its massive growth, the rattan furniture industry in Cirebon has become a commodity in *Kompetensi Inti Industri Daerah* (KIID) (Department of Industry of

Cirebon, 2014). There were 1,331 rattan furniture SMEs in the area in 2013 (Department of Industry of Cirebon, 2014).

Table 1 – Region Where the Raw Materials for the Rattan Industry in Cirebon are Obtained

No	Raw Material	Utility	Region where the Raw Materials are Obtained
1	*Manau*	Frame	Sulawesi
2	*Semambu*	Frame	Sulawesi
3	*Tohiti*	Frame	Sulawesi
4	*Kubu*	Rattan Woven	Kalimantan, Sumatera
5	*Jawit*	Rattan Woven	Kalimantan
6	*Lacak*	Rattan Woven	Kalimantan, Sumatera
7	*Slimit*	Rattan Woven	Aceh
8	*Sarang Buaya*	Rattan Woven	Kalimantan, Sulawesi
9	*CL*	Rattan Woven	Kalimantan, Sumatera, Java

Source: Department of Industry and Trading of Cirebon, 2014.

Although rattan furniture is one of the leading industry in Indonesia, it faces several issues especially when the government issued some policies related to rattan export. The government is unable to maintain consistent supply of raw materials for the rattan SMEs in Cirebon. During its peak, the SMEs exported 3,000 containers of rattan furniture each month but the number plummeted to 1,200 containers per month (Department of Industry of Cirebon, 2015). Besides decreasing amount of export, the policy related to raw material export had killed half of the rattan SMEs in Cirebon. There were 600 SMEs exporting rattan furniture, but now, the number declines to 280 (*AMKRI* of Cirebon, 2016).

Sharp decline the rattan SMEs in Cirebon creates public awareness that the national rattan industry is struggling. The national rattan industry can no longer compete with the rattan industry from China and Vietnam because of raw material export. China and Vietnam cannot produce their own rattan as the raw material for their rattan industries (*AMKRI* of Cirebon, 2016). The awareness has reached a turning point since the issuance of the government regulation on raw rattan export ban.

Table 2 – Growth of Rattan Industry in Cirebon between 2006 and 2013

No	Tahun	Number of SMEs	Number of Employee
1	2007	1,149	64,898
2	2008	1,160	65,519
3	2009	1,172	52,414
4	2010	1,224	54,184
5	2011	1,260	54,291
6	2012	1,298	55,011
7	2013	1,331	55,654

Source: Department of Industry and Trading of Cirebon, 2014.

Table 2 shows that the rattan industry in Cirebon reaches its lowest poin in 2009. Although exporting raw rattan was prohibited in 2011, the national rattan industry has yet been recovered completely. The 2013 data show that employment rate in the year is lower than 2008, when employment rate is 65,519. Despite of the increasing trend in the national rattan industry, the stakeholders should develop some programs to improve competitive advantage of the rattan SMEs in Cirebon.

As the effect, strategic design is needed in order to develop competitive advantage of the rattan SMEs in Cirebon in a long term after the prohibition of raw material export. In general, the objecvtive of the study is to analyze some strategies the stakeholders design in order to improve competitive advantage of the rattan SMEs in Cirebon after the issueance of the Memorandum of Understanding between three Ministers in 2011 that ban the export of raw materials.

From the explanation above, several problems can be made as follows:

- What obstacles the rattan SMEs in Cirebon encounter in developing their competitive advantage after the raw material export ban?
- What alternative policy facilitating the development of the competitive advantage of the rattan SMEs in Cirebon?

LITERATURE REVIEW

In Indonesian context, SME, which provides a lot of job vacancies, is survivalist in nature (Kuncoro, 2016). At the same time, there are abunandt SMEs in Indonesia. Such condition creates competitive business atmosphere and as the consequence, SMEs should keep on making breakthrough and developing new concept. One of the concepts to develop SMEs effectively is cluster-based one (Mawardi, 2009). Theoretically, the concept was developed by Marshal (1920) using geographical economy as the reference. Not only did cluster gather several industries geographically located close to each other, but it also referred to a group of companies and organizations that were related to each other (communality) and complemented each other (compementary) (Porter, 1998).

Therefore, cluster consists of various related entities. There are at least three entities in a cluster namely, company, supporting institution, and the government (Alyward,2006, Eisebetd and Eisebeth,2005; Sonobe and Otsuka, 2006). Besides that, one requirement for developing cluster is joint action as an effort to develop together where both small and large industries become the supporting institutions (Maridjan, 2005). Employing the concept of cluster in developing SMEs brings the following advantages, for instance1) cluster strengthens local economics; 2) it strengthens industrial reorganization; 3) it enhances networking between companies; 4) it allows public resources emphasis, 5) it improves productivity and efficiency and 6) it encourages innovation.

Good cluster should be able to realize joint action that triggers social capital as form of interaction between small and large companies, including SMEs within the cluster (Maridjan, 2005). A pretty comprehensive approach to develop cluster is called Diamond Model (Porter, 1990). Focus of the Diamond Model is that competitive advantage of a cluster is determined by four variables, namely input, supporting and related industry, demand, competitive strategy, in which competitive advantage of the cluster itself and increase in local economics become the final outcome. Input involves natural resources, human resource, information technology. Supporting and related industry involves networking, association and access to funding. Demand involves strenghtening local and international market including product quality. Finally, competitive strategy involves export strategy for global market and regulation that encourages investment to increase productivity (Porter,1990).

An attempt to develop competitive cluster should begin with mapping for development of the cluster and be followed by involvement of government policy that encourages artisanal growth into dynamic cluster. The strengthening initiation should represent top down-mixed-bottom up (Mawardi, 2009).

Based on the elaboration, it is obvious that an attempt to develop cluster should take elements that develop competitive advantage into account. Besides that, the development should be able to develop artisanal cluster into dynamic one.

METHODS OF RESEARCH

Mix method with sequential mixed method strategy was conducted to solve the problems stated above (Cresswel, (2013).

At the first stage, the study was a qualitative study where the researchers conducted in-depth interview and the business association, government and rattan community in Cirebon became the key informants. The findings were specific themes describing several issues the rattan SME clusters encountered after raw rattan export was banned.

At the second stage, the study was a quantitative study where AHP (Hierarchical Process Analysis) was conducted to identify degree of the issues obtained based on the

qualitative analysis. In addition, the AHP was conducted to describe importance of the alternative policies designed to overcome the issues. The AHP analysis was as follow:
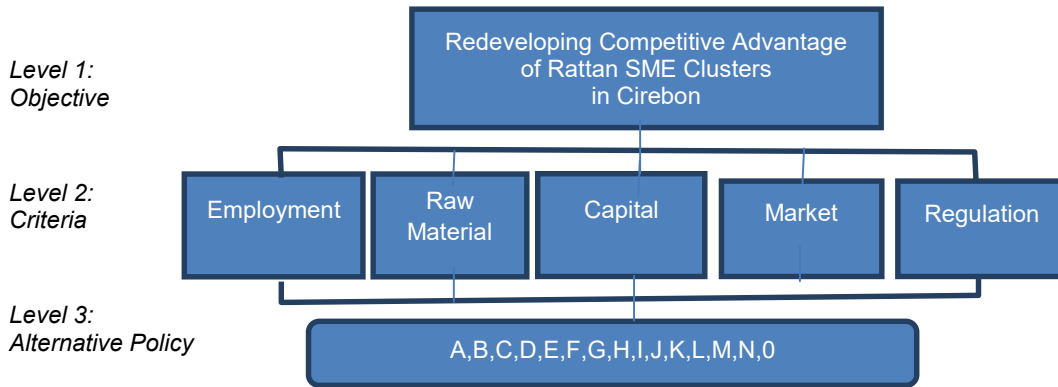
Description:
A.   Raw Material Export Ban Continuity;
B.   SME-Bank Facility;
C.   Improving the Government Program in the form of training
D.   Promoting Local Market by establishment of "kampung wisata rotan," a tourist attraction where visitors can visit the rattan industry;
E.   Bisnis matching and customer education;
F.   Promoting Eco-friendly Industry;
G.   Market intelligence training for the industry;
H.   Government-industry collaboration for job training;
I.   Strengthening Rattan Cultivation Program;
J.   Direct buying from the farmer to the industry;
K.   Developing scheme for rattan trading between regions;
L.   Threading as the Local Content for Senior High School Students;
M.   Strengthening warehouse receipts for credit guarantees;
N.   Synchronization between the regional government regulations and the governor regulation;
O.   Establishment of Rattan Industry.

Figure 1 – AHP Analysis

RESULTS OF RESEARCH

Based on the result of the AHP after comparing the criteria, and alternative policy needed to develop competitive advantage of the rattan SME clusters in Cirebon, the findings were as follow:
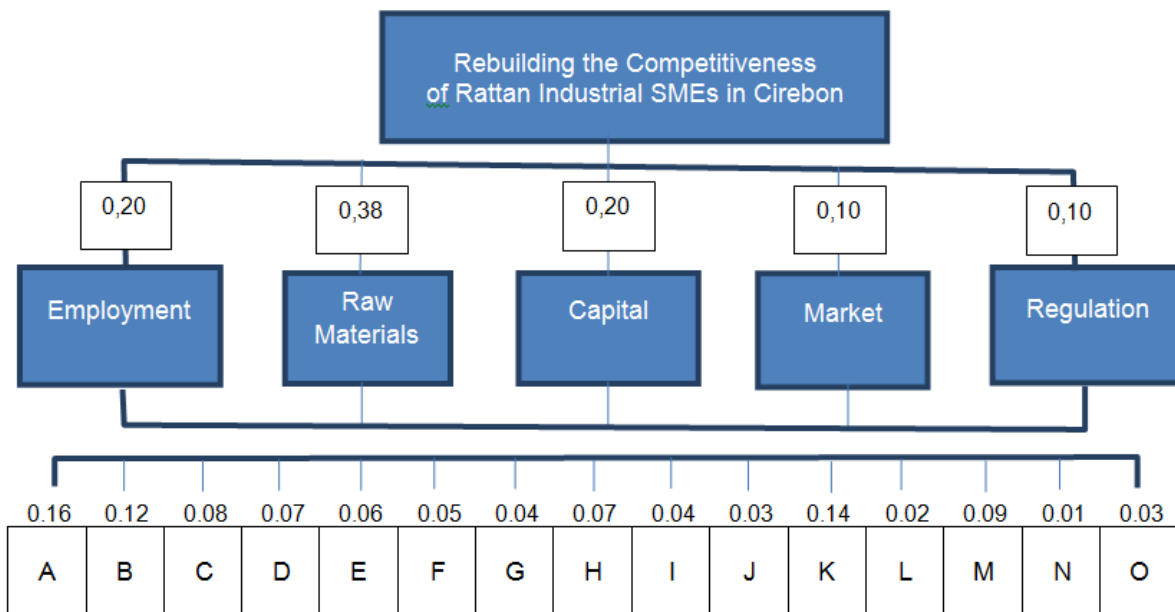
Figure 2 – Findings of study

The chart showed scores of every criteria describing the difficulties in developing the rattan SME clusters in Cirebon. It also showed scores of each alternative policy that could potentially solve the difficulties. Table 3 described degree of importance of the alternative policies. The degree of importance was as follow:

Table 3 – Degree of Importance

Aspect	Score	Ranking/Priority
Market	0.10	4
Raw Material	0.38	1
Employment	0.20	3
Capital	0.23	2
Regulation	0.10	5

Based on the table, raw material is the most important aspect to consider to develop the rattan SME clusters in Cirebon. The second aspect to consider was capital. The challenge the rattan employers encounter was to get capital. At last, the third aspect to pay attention to was skilled employees.

Based on the alternative policy to solve the issues the rattan SME clusters in Cirebon encountered, the result of the AHP analysis was as follow:

Table 4 – Degree of the Alternative Policy for Developing SME Cluster in Cirebon

Alternative Policy	Score	Rank
Raw Material Export Ban Continuity	0.16	1
SME-Bank Facility	0.12	3
Improving the Government Program in the form of training	0.08	5
Promoting Local Market by establishment of "kampung wisata rotan," a tourist attraction where visitors can visit the rattan industry	0.07	7
Bisnis matching and customer education	0.06	8
Promoting Eco-friendly Industry	0.05	9
Market intelligence training for the industry	0.04	11
Government-industry collaboration for job training	0.07	6
Strengthening Rattan Cultivation Program	0.04	10
Direct buying from the farmer to the industry	0.03	12
Developing scheme for rattan trading between regions	0.14	2
Threading as the Local Content for Senior High School Students	0.02	14
Strengthening warehouse receipts for credit guarantees	0.09	4
Synchronization between the regional government regulations and the governor regulation	0.01	15
Establishment of Rattan Industry	0.03	13

Table 4 described 15 alternative policies that were able to solve the problems the rattan SMEs in Cirebon encountered. Each of them had different degree of importance as well as contribution.The higher ranking an alternative policy had, the more important it was to consider in redeveloping the competitive advantage of the rattan SME cluster in Cirebon.

DISCUSSION OF RESULTS

Based on AHP analysis, continuous supply of raw materials was the most critical aspect in redeveloping the competitive advantage of the rattan SMEs. It was urgent to develop supply chain as soon as possible because Cirebon could not supply raw material for the rattan industry despite the fact that the area was one of the leading rattan industries in Indonesia (as seen in Table 1). The government policy that ban export of raw material needed by rattan industry caused lack of raw material for the national rattan industry (AMKRI, 2015). On the other hand, raw material was vital element to develop competitive advantage of the industry (Hongqiang, 2012). Raw materials had the largest contribution to industrial viability. Supply of raw materials will cause domino effect. In an industry in which raw materials became one of the issues to encounter, the supply of raw materials from different regions had a central message in supporting industrial sustanability (Sriwarno and

Imam, 2009). The same condition occurred in Malaysia. China considered Malaysia the major competitor as mahogany furniture manufacturer ever since the export of raw material for the industry was prohibited (Hongqiang, 2012).

The information provided a justification that the raw material guaranteed the sustainability of the rattan SMEs in Cirebon. There were several alternative strategies with different degree of importance that may be conducted. The policy with the highest priority was for the government to ban export of the raw material. It ranked first among the 15 alternative policies that were able to develop the competitive advantage of the rattan SMEs in Cirebon. There were also some urgent alternatives policies to ensure consistent and sufficient supply of the raw material in the long term; the alternative policies were strengthening the chain of raw material supply between regions to shorten the length of the supply chain, facilitating direct purchase between the rattan farmers and the rattan industry, strengthening rattan cultivation and establishing regional rattan cooperatives.

The stakeholders in Cirebon should pay attention to the effort to develop and strengthen the supply chain of the raw materials. Strong supply chain of raw materials will facilitate input that supported the competitive advantage of the cluster (Porter, 1990). Empirically, the study mentioned several strategies that revealed the vital role of raw material supply chain. The continuity of the raw material export ban was at the first rank and developing scheme for rattan trading between regions was at the second rank. Both of the policies seemed politically related and therefore, consistent contribution of both central and local government was needed to develop the competitive advantage of the SMEs cluster (Porter,1990). Besides the policy that prohibited the export of the raw material, another important strategic alternative to strengthen the supply chain of the raw material in the long run was rattan cultivation. Goal of the rattan cultivation was to accelerate regeneration of rattan and prevent excessive exploitation of the forest.

Another important aspect to redevelop the success of the rattan SMEs in Cirebon was capital. Empirically, the export of the raw material for the rattan industry decreased the competitive advantage of the rattan SMEs in Cirebon, and eventually the SMEs tended to be not bankable because the competitive advantage of Cirebon furniture products overseas was relatively low. As the result, the performance of the SMEs was also getting weaker. Unfortunately, banks were beginning to avoid rattan industry as the choice of bank marking. When the export of raw materials closed in 2011, the banks were still waiting and seeing the activities of the rattan industry before making decision whether or not the rattan industry deserved to get loan from them. It was a challenge for the growth of the SME clusters. Therefore, the degree of importance of the marking became really important and was ranked second.

Giving loan for SMEs in order to increase their capacity accelerated the growth of the SMEs. However, it sometimes was difficult for the SMEs to get access. Therefore, macro policies were needed to encourage more SMEs to grow in a cluster. It reflected the fact that the government' policy related to SMEs tend to be based on insufficient policy in cluster development so that the real role of government should be greater (Porter, 1998). As a problem frequently encountered by SMEs, the financial issues must be solved with a tangible approach. Low cost financing schemes were required for SMEs besides other technical aspects (Lundequist and Power, 2002).

Based on the data, Bank Exim provided some loan for the SMEs, especially the ones of which orientation was export. Therefore, developing network between SMEs and banks were vital. The evidence was that networking between bank and SME ranked third in the result of the AHP analysis. The upstream industry should be involved in getting access to SME financing so that the government role in strengthening warehouse receipts for credit guarantees could be implemented. Thus, the downstream industries and related industries collaborated with the support of adequate access to finance (Porter, 1990).

Employment was the real issue encountered by the rattan SME clusters in Cirebon. Customers had shifted to Chinese and Vietnamese-made rattan furniture since the export of raw materials began. Worse, the rattan SMEs employees quit their job and had another job or work for the Vietnamese rattan industry (*AMKRI*, 2015). When the government banned the

export of the raw material, the skilled employees had had other job. They were reluctant to return to their job at the rattan industries despite of the increasing demand of the rattan furniture made by the national SMEs. As the consequence, the stakeholders should race against the time to train local employees to meet the market demand. Therefore, training, the one conducted by the SMEs themselves or the one sponsored by the government, was pivotal. Training ranked 5th and 6th in the AHP analysis. Such condition reiterated the importance of input or skilled employees in this context to develop successful and sustainable cluster (Porter, 1990). As one part of the programs of which purpose was to strengthen the rattan industry, training should be conducted continuously in the long run (Sriwarno and Imam, 2009). Besides that, in order to have sustainable rattan industry, the industry (private institution) should have collaboration with the government due to the government limitation in marking (Mawardi, 2009). The training conducted by both the government and the industry indicated the increasing role of the industry. Government training lasted for 26 working days and was followed by internship; the internship would stop when an employee had become a qualified one. Another alternative to get skilled employees for the rattan industry was integration of the skill (threading) as local content for senior high school students.

The shift from the national product to one made in China and Vietnam took place when the government allowed the export of the raw material. Another factor contributed to the success of the rattan industry in the countries was human resources/ employment.

Once the export of the raw material had been banned in 2011, less amount of rattan furniture from China and Vietnam was displayed in international furniture exhibition (*Amkri*, 2015). It showed that the market had shifted to rattan furniture made in Cirebon. Table 5 showed that the amount of the rattan furniture made in Cirebon getting exported has increased since 2012.

Table 5 – Rattan Furniture Export Rate in Cirebon in 2010-2013

Year	Export Rate (Rupiah)
2010	1,392,112,174
2011	1,514,244,781
2012	1,676,132,887
2013	1,876,554,120

Source: Department of Industry and Trading of Cirebon, 2015.

Table 5 justified that putting a halt of the export of the raw material in 2011 increased the amount of exported local furniture. In other words, the ban increased the competitive advantage of the rattan furniture produced by the SME cluster in Cirebon and showed that the national product had won against their two main competitors, China and Vietnam (*Amkri*, 2015). The reality justified Porter (1990)'s diamond concept that the market affected competitive advantage of a cluster. The importance of the market reminded the government to issue a policy where development of SME clusters became the orientation; the government should issue policy related to technical assistance and both national and international marketing service (Hill, 2001). The rattan SMEs from Cirebon success to penetrate to the international market would accelerate the development of the rattan industry in Cirebon. The establishment of rattan tourism village as a forum to increase the love of rattan products was a suitable alternative to develop the national rattan furniture market. In addition, promoting eco-friendly product was a good alternative amid the demands of environmentally friendly products in Europe and America (PUPUK, 2013). Competition between rattan products with other substitution products required market intelligence from the rattan SMEs in Cirebon. More knowledge about the market the SMEs had, the better competence they had to implement the marketing strategy they had especially the one to be implemented in foreign countries.

Support from the government in the form of policy was needed to develop the competitive advantage of the SME clusters. In this context, government contribution gave a strong nuance in the development of SME cluster in Cirebon. Different level of the

government (local and provincial) on the research site frequently led to overlapping. The establishment of the Technical Implementation Unit for the rattan industry in the area by the government of West Java was improving the cluster, but at the same time, a synergy between the Technical Implementation Unit and the local government was needed because some of the related policies had yet been evaluated optimumly. Thus, in the context of the cluster context, although policies had been issued, their effectiveness still requires strengthening and synchronization between the various programs (Sato, 2000, Bery et al, 2002). Inter-institutional alignment in designing cluster strengthening programs required considerable coordination, as this problem in reality led to the inefficiency of cluster development in Indonesia in general (Porter, 1999).

CONCLUSION

As SME clusters of which raw material does not source in or around Cirebon, the growth of the cluster is pretty dynamic. The biggest challenge is the supply of raw material in the long-term. Lack of supply will affect the overall competitive advantage of the cluster.

Effort to redevelop the competitive advantage of the rattan SMEs in Cirebon should begin with analysis of the main obstacles and deciding alternative solutions using mix methods. The study reveals the degree of importance of each of the attributes that develop the competitive advantage of the rattan SME clusters in Cirebon. The aspect with the highest degree of importance is raw materials, followed by capital, employment, marketing and regulation.

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DETERMINANTS OF SAVINGS MOBILIZATION AMONG AGRICULTURAL MICRO CREDIT FINANCE GROUP MEMBERS IN DELTA STATE, NIGERIA

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ABSTRACT
The study was carried out to examine the determinants of savings mobilization among Agricultural micro credit finance group members in Delta State, Nigeria. Forty eight (48) micro credit groups and three hundred (300) micro credit group members were selected randomly from the sample frame and interviewed using structured questionnaires. Descriptive and inferential statistics were employed for the analysis of the data collected. The results of the multiple regression analysis revealed that a significant relationship at 1% level existed between amount of savings mobilized and age of group members, household size, educational level, group duration, distance to credit source, interest charged and member monthly income. It was also observed that 85% of the groups have existed for about 110 years with a mean group savings of N355,500 and an average group size of 13 persons. 92% of the micro credit groups adopted the non-random method of fund allocation with a mean distance traveled to source of credit at 15 kilometers and the mean interest charged on loans was 40 percent.

KEY WORDS
Determinants, savings, mobilization, micro credit, groups.

Agriculture in Nigeria, a developing economy has suffered serious setbacks due to under capitalization. Poor credit disbursement procedures, inadequacy of credit institutions to cater for the needs of the teaming population of farmers and poor loan repayment possibilities among farmers (Eyo and Enimu, 2015). Micro credit is about providing services to the poor who are traditionally not served by the conventional financial institutions (Upton, 1997). The pivotal place of capital in economic growth and development cannot be overemphasized and had been recognized since the pre-Keynsian era till date, because the classical ideology that monopolized economic thinking and policy formulation has stress capital to be so. It is a known fact that nations of the World place tremendous emphasis on capital accumulation by emphasizing the notion of savings that will increase the level of investment in relation to output (Igben and Enimu, 2016).

In agriculture for instance, if farmers are unable to create wealth, their ability to mobilize savings that will guarantee credit which will buffer loan repayment will be strongly hindered; and low capital accumulation can lead to financial exclusion (Deon, 1995). According to Thirlwall (1999), capital formation could be adjudged as the endogenous consequences of growth and also an exogenous cause of growth.

The role of savings is showed in capital accumulation through improved capital assets and the effects it has on the ability of an economy to make more incomes (Angyie, 2005). Savings which is regarded as a catalyst for the accumulation of capital and also a deciding factor of the cost of credit as can been seen from the law of scarcity which says that when the former is low and scare, it becomes costlier to obtain the latter (Rose, 1986). According to the classical view, savings is a major yardstick and determinant of economic growth and development. According to the World Bank (1999), developing countries that attain higher growth rate are the ones that have high savings capacities. Capital mobilized from domestic sources is very fundamental for a country's development not only because it has a low cost but also because it is durable and permanent.

Most domestic savings emanates from the rural areas usually in under-developed countries with high rural population due to the fact that there are greater savings ability and

growth potentials (Thillairajah, 1994). Also in these areas, characterized by unstable economic conditions, there is usually a high propensity to save (Yaron, Benjamin and Piprek, 1997). They further stressed that savings enable a large portion of clients to have access to credit as well as enable rural people and farmers in particular to establish or develop income generating activities and improve on their income level. The merit accruing to savings by the rural people is demonstrated through the various means and ways they used in saving and also by keeping little amount at home for immediate use (Enimu, Igiri and Uduma, 2015). In furtherance of this, when rural peoples' desire and need to save meet a safe, easily reachable avenue to operate, their ability to save and willingness to save and the amounts they will be able to save are considerably substantial.

Consequently, the study aims at establishing the determinants of savings mobilization among micro credit finance group members in Delta State, Nigeria with a view to improve the design and stimulate mobilization of rural savings for economic growth and development. The broad objective of this study is to examine the determinants of savings mobilization among micro credit finance group members in Delta State, Nigeria. The specific objectives include to describe the characteristics of agricultural micro credit finance groups in the study area; examine the operating characteristics of agricultural micro credit finance groups; assess savings mobilizations strategies of agricultural micro credit finance groups and analyze the determinants of savings mobilization among micro credit finance groups.

METHODS OF RESEARCH

Study Area. Delta State is one of the six states that make up the South-South geopolitical zones of Nigeria. The state was formed in August 27, 1991 out of the former Bendel State. The state consists of twenty-five (25) Local Government Areas. Delta State is located between longitude 5^001 and 6^045^1E and latitude 5^001 and 6^030^1N. It is bounded by Edo State on the north, on the northwest by Ondo State. Anambra State on the east and in the South east by Bayelsa State. On the southern flank is the Bight of Benin which covers approximately 160km^2 of the state's coastline (FOS, 1996). The state is marked by two seasons as a tropical climate. The dry and raining seasons with a dry spell in August commonly referred to as "August Break". The average annual rainfall is about 2667mm in the coastal areas and 1905mm in the northern areas. Rainfall is heaviest in July. Delta State has a high temperature ranging between 29^0C and 44^0C with an average of 30^0C.

The vegetation consists of the mangrove swamp forest along the coastal areas and the thick rain forest in the middle and the Savannah in the north. The 2006 population census puts the population of Delta State at 4,098,391 made up of 2,074,306 males and 2,024,085 females, with a land area of 17,011 km^2 (NPC, 2006). Delta State is purposely selected for this study because the state has many micro credit groups in the formal and informal linkage self help programmes sponsored by the Federal/State Government and Non-Governmental Organizations (NGOs) and Corporations.

Sources of Data. Primary and Secondary data were used in the study. Primary data were obtained through a well-structured questionnaire complimented with oral interview by well trained enumerators on the operating and savings mechanics of the micro credit finance groups while secondary data were obtained from their books of accounts and other published and unpublished materials.

Sampling Technique and Data Analysis. A stratified random sampling technique was applied in sample selection. A total of 48 micro credit finance groups and 300 micro credit group members were selected randomly for the study. Data obtained were analyzed using descriptive statistics such as table, frequency distribution, percentage and mean while the multiple linear regression analysis was the inferential statistical tool used.

The Empirical Model. In the regression model used, it was postulated that amount of savings mobilized by micro credit group members (SM) is a function of Age of the respondent (A) in years, household size (H) in number, educational level (E) in years, group duration (G) in years, distance to credit source (D) in kilometers, Interest charged (I) in percentage, sex of respondent (S), monthly income (M) in naira, Religion (R) and ethnicity (C).

Consequently, the mathematical model is expressed as:

$$SM = f(A, H, E, G, D, I, S, M, R, C)$$

The *a priori* expectation is that:

$$SM = b_0 + b_1 A - b_2 H + b_3 E + b_4 G - b_5 D + b_6 I + b_7 S + b_8 M - b_9 R + b_{10} C,$$

Where: b_0 is a constant, b_1 - b_{10} are the parameters.

RESULTS AND DISCUSSION

Characteristics of Agricultural Micro Credit Groups. The various agricultural micro credit groups have different characteristics that can affect their operational and savings mobilization performance.

Table 1 - Characteristics of Micro Credit Groups

VARIABLES	FREQUENCY (n-48)	PERCENTAGE
Group existence (Age) Years:		
1 - 5	26	54.17
6 - 10	15	31.25
11 - 15	4	8.33
Above 16	3	6.25
Mean = 8	**Minimum = 2**	**Maximum = 18**
Group Savings Made		
Less than ₦200,000	15	31.25
200,001 - 300,000	23	47.92
300,001 - 400,000	7	14.58
Above 400,001	3	6.25
Mean = 355,500	**Minimum = 80,000**	**Maximum = 520,000**
Group Size		
5 - 10	12	25.00
11 15	25	52.08
16 - 20	7	14.48
Above 21	4	8.33
Mean = 13	**Minimum = 6**	**Maximum = 24**
Method of fund Allocation		
Random	4	8.33
Non-random	44	91.67
Meeting Attendance		
Once a week	23	47.92
Twice a month	18	37.50
Once a month	7	14.58
Distance to credit Source (km)		
1 - 10	27	56.25
11 - 20	13	27.08
21 - 30	5	10.42
Above 31	3	6.25
Mean = 15	**Minimum = 1**	**Maximum = 32**
Supervision (No. of Visit)		
1 - 5	16	33.33
6 - 10	23	47.92
11 - 15	6	12.50
Above 16	3	6.25
Mean = 15	**Minimum = 1**	**Maximum = 32**
Interest on Loan (%)		
Less than 10	6	12.50
10 - 30	18	37.50
Above 30	24	50.00
Mean = 40	**Minimum = 8**	**Maximum = 70**

Source: Field Survey, 2016.

Table 1 presented the characteristics of the groups. The table revealed that 57% of the groups have existed for about 6 - 10 years, while 31% of the groups have existed for more than 10 years. The mean duration of existence was 8 years, while the minimum duration was 2 years and the maximum was 18 years. The table also shows that 31% of the groups had savings less of than ₦200,000 while 48% had saving ranging between ₦200,001 - ₦300,000. Only 21% of the groups had savings above ₦300,001. The means membership strength of the groups was 13 persons with the minimum size of 6 persons and a maximum of 24 persons. While 52% of the groups have membership size of 11 - 15 persons, 25% had a group size of 5 - 10 persons while 23% of the groups had group size of above 15 persons. 92% of the groups observed the non-random method of fund allocation while only 8% of the groups practiced the random method of fund allocation. It therefore implies that majority of the groups uses the non-random method of fund allocation avoiding the serial turn -by-turn fund allocation that may bring about misunderstanding and misinterpretation of information for such groups that do not believe in lotteries which affect performance adversely. The table also indicated that 48% of the groups attends meeting once a week, 37% attend meeting twice a month while 15% of the micro credit groups attends meeting once a month. 56% of the group travel about 1 - 10km to their credit source while 27% of the groups travel about 11 - 20km. 17% of the groups travel distances above 20km to their credit source. On the number of visit paid to the groups by a credit officer, 48% of the micro credit groups had visitation of about 6 - 10 times while 33% had 1 - 5 times. 19% of the groups had visitation above 11 times. The interest on loan was considered and 50% of the groups agreed that their interest rate was above 30%, while 38% had interest rate of 10 - 30 percent and 13% had interest that are less than 10 percent. The rate of interest appears to be higher than that of the commercial banks, but it is lower than the rate charged by money lenders.

Operating Characteristics of Micro Credit Groups. According to table 2, the most popular eligibility criteria for mobilization of savings are been a registered member of the group at 100%, meeting the condition of registration such as having a farm or a trade at 100%. Sincerity and honesty are other criteria that must be assessed before admitting into a group at 88%. The agricultural micro credit groups serve their members in four capacities, namely: mobilization of savings and granting of loans at 100%, mounting education programmes that will enhance economic activities of members at 50%, and attending member's social activities such as marriages/burial/dedication and child naming ceremonies at 94%.

From the table, the most popular loan monitoring strategy is to ensure that loan beneficiaries repay interest on loan during meeting at 100%, while about 98% of the groups encourage presentation of the principal and interest during meeting. The agricultural micro credit groups mobilize internal savings for the running of the activities of the groups. 100% of the micro credit groups stated that their major savings mobilizing activities were, through registration fees, weekly/monthly savings, and fines while 54% uses weekly/monthly dues. 90% of the micro credit groups allow withdrawal of membership with replacement of a capable, honest person while 25% do not allow replacement of member during withdrawal of membership from the group. 46% of the micro credit groups do not allow withdrawal of membership from the groups.

Table 2 also revealed that 100% of the micro credit groups enticed their members to mobilize more savings through access to more loans, while 85% of the groups promise to elevate members to key position in the group if they performed creditably in savings mobilization throughout the year. 67% of micro credit groups base their incentive to better savings mobilization on awards from the micro credit institutions which is usually done at the end of very year. Apart from monitoring and incentives strategies, the groups employ non-financial sanctions. Table 2 showed that 100% of the micro credit groups use suspension from group and report to village/spiritual head as their major sanction for defaulters while 54% uses denial of next loan. Confistication and selling of properties, demotion from key position held and use of law enforcement agencies had 23%, 17% and 10% respectively.

Table 2: Operating Characteristics of Micro Credit Groups

	Operating Characteristics	Frequency	Percentage
a.	**Eligibility Criteria**		
	Must register with the group	48	100
	Must have savings with the group	48	100
	Must be honest and sincere to the group	42	88
	Must meet registration conditions	48	100
b.	**Group Functions/Activities to Members**		
	Give loans to members	48	100
	Settlement of dispute	48	100
	Group educational programmes	24	50
	Attending members social activities	45	94
c.	**Monitoring Strategies**		
	Payment of Loan Interest during meetings	48	100
	Payment of Principal and interest during meetings	46	96
d.	**Group Savings Drive**		
	Registration fees	48	100
	Weekly/monthly dues	26	54
	Weekly/monthly savings	48	100
	Fines	48	100
e.	**Withdrawal from Group**		
	Withdrawal with Replacement	43	90
	Withdrawal without Replacement	12	25
	No withdrawal of Members	22	46
f.	**Incentives**		
	Access to more Loans	48	100
	Elevation to key position in group	41	85
	Award from MFIs	32	67
g.	**Non-Financial Sanctions**		
	Suspension from Group	48	100
	Report to Village/Spiritual Heads	48	100
	Denial of next Loan	26	54
	Confistication and selling of Property	11	23
	Demotion from key position held	8	17
	Arrest by Law enforcement agencies	5	10
	Maximum Responding Unit	**48***	

Source: Field Survey, 2016.
Multiple Responses were recorded.

Determinants of Savings Mobilization among Micro Credit Finance Group Members. Multiple regression analysis was applied to examine the socio-economic determinants of amount of savings mobilized among micro credit group members. Seven of the ten determinants included in the model affected the volume of savings mobilized significantly. These parameters include age of members, household size, educational level, group duration, distance to credit source, interest charged and monthly income.

Result shows that the R^2 value of 0.956 means that about 96% of the differences in the volume of savings mobilized was due to the determinants captured in the model. Using a two-tail test at 1% level of significance, the F-computed is 297.95 and F-table is 2.58, since the calculated F is greater than the corresponding table value, we rejected the null hypothesis (Ho, at P > 0.01, b's = 0) which states that there is no significant relationship between the selected determinants and the amount of savings mobilized by the group members; and accept the alternative hypothesis.

The result of the regression analysis shows that the coefficient of member's age was significant at one percent and positively related to savings mobilized. This implies that, the higher the age of the group member, the higher the amount of savings mobilized. The result conforms to Olomola (2000) and Eyo, Otu and Sampson (2008). Household size was indirectly related to amount saved and was significant at one percent. The implication is that, the more people there are in a house, the less the house head is likely to save, indicating that if there are many people living under one roof, money which could have been saved will be used to meet other house hold needs like feeding, clothing and health bills.

The coefficient of educational level was significant at one percent and positively related to amount of savings mobilized. This indicates that the higher the educational levels of group members, the higher the amount of savings he/she will be able to mobilized. Igben and Enimu, (2016) had opined that quality education is needed in group formation, management and savings mobilization strategies. In confirmation of *a priori* expectation, duration of group existence which implies the years of experience had a positive relation with amount of savings mobilized and was significant at one percent level. This implies that the higher the duration of group existence, the higher the amount of savings mobilized by the group. This work was in conformity with Eyo (2008) who opined that duration of group existence is a major factor towards group loan administration.

Distance to credit source was significant at one percent and negatively related to amount of savings mobilized. This shows that the longer the distance of the group members to the credit source the lower the amount of savings mobilized. This was in consonance with work done by Enimu,Igiri and Achike (2016) and Okpukpara (2005). The coefficient of interest charged was positively related to savings mobilized and was significant at five percent. It implies that the higher the interest rate on savings the higher the amount of savings made. Household monthly income was significant at one percent and positively related to savings mobilized. The implication is that, the higher the disposable income of the individual, the more willing the individual to save. This result agrees with the observations of Okoroeun (1992), Awosike and Nwoko (1983), who noted that the growth of income and distribution of income are the main determinants of savings. They also found out that because of low level of farm income there is severe limitation on farmer's savings capacity.

CONCLUSION

The study revealed that agricultural micro credit finance group members have high potential to save. The result of the study indicated by the multiple regression analysis showed that age of group members, household size, educational level, group duration, distance to credit source, interest rate charged and household monthly income which are the significant determinants captured have direct relationship with the dependent variable and hence each of them is an important component in determining the amount of savings mobilization among agricultural micro credit group members in the study area. Based on the foregoing therefore, it was recommended that interest rate on savings should be increased to help encourage better mobilization and that micro credit institutions should discourage long distance travelling by encouraging the use of agent and catchment banking system with the deployment of latest technological innovations and gadgets.

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THE GOVERNMENT ROLE IN DEVELOPMENT MODEL OF THE MARKET, ENTREPRENEURIAL ORIENTATION ON BUSINESS PERFORMANCE AND THE INNOVATION AS MEDIATING

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ABSTRACT
This study was proposed to knowing the effect of market orientation and entrepreneurial orientation toward business performance on Small and Medium Enterprises (SME's) with the government role. Besides, in order to know the role of innovation as the mediator in the current study. The population in this study is SME of the ornamental plants in Batu City, East Java, with the total sample of 79 respondents. The technique sampling uses the proportional simple random. PLS (part least square) is used to do the further research. The result shows that market orientation has significant effect toward innovation. Entrepreneurial orientation has significant effect toward innovation. Market orientation has significant effect toward business performance. Entrepreneurial orientation is not significant toward business performance. Innovation is significant toward business performance. Then, the government role is significant toward business performance.

KEY WORDS
Market orientation, entrepreneurial orientation, innovation, business performance, government role, small and medium enterprises (SME).

During this time the economic resilience a country particularly Indonesia is played by the big companies, a cooperative and Small and Medium Enterprises (SME). The big company as the developmental agent, cooperative as the economic agent which as the characteristic of Indonesia that democratic and kinship based, and the SME as the business actors with the largest amount in Indonesia (Longenecker, 2009). Tambunan (2002) stated that small enterprise able to employ more labor than the big enterprise. The role of small enterprise in the employ of more labor becomes the buffering of public's welfare. Another role of small enterprises was stated by Martowardjojo (2016) the SME in Indonesia contributed to Gross Domestic Product (GDP) as 60.3 %.

The small enterprise in Indonesia become one of the economic sector that able to survive in economic fluctuation. Hubeis (2009) stated that during economic crisis in 1998-2000 in Indonesia, the small enterprise show the succeed to standing by the impact of economics crisis and the rupiah exchange rate against the dollar is soaring. At the work termination moment that was conducted by the big enterprises due to the economic crisis, the small enterprise become an economic support that still standing up and able to employ the labor who was got the work termination. By doing so, its seen that the role of the small enterprise in the informal sector as one of the necessary economic resilience to a country. The reality that happen on small enterprise in Indonesia, the rapid growth of small enterprise not followed by the high competitiveness either domestically or globally, its happen due to the market agent is less focus on market needs. The necessity of market re-orientation on small enterprise is the challenge that have to realized on the higher competitiveness achievement. The market orientation has a meaning that on market orientation needs the

knowledge about the type of market that will be entered, include the characteristics on it (Narver and Slater, 1990).

The achievement process of knowledge toward the market needs is necessary to cultivate an entrepreneurship spirit toward the small enterprise actors. Suparyanto (2012) stated that the entrepreneurship spirit can be possessed as a carrier since birth and can be established through the education process and experience as well. It was suitable with the Psychological Theory of Entrepreneurship that emphasizes the importance of psychological characteristics in entrepreneurship. The entrepreneurship is the development process of a creative and innovative attitude that is made as a basic, method and resources to find the opportunity to achieve the success (Hubeis, 2009). During the activity to make a new business or ongoing. The small enterprise actor at least has an entrepreneurship orientation such as the desire to achieve the goal, brave to take the risk, and able to utilize new ideas integrated with the resources owned, and personal imagination, so able to make a big difference. They do not only make the effort as a way to survive in daily life.

Having an attitude toward the entrepreneurship orientation can create a new innovation or idea by the actor's thought. Innovation is the knowledge transformation to a product, process and new service as the action to use something new (Rosenfeld, 2002). Innovation is the success of exploitation by a new idea or with other words, it is knowledge mobilization, technique skill, and experience to create a product, process, and new service. The view that has to be owned by the small enterprise actor related to the market orientation, entrepreneurship orientation, and innovation. It will be more maximal if supported by the government role which as the country promoter that is able to form the small enterprise more competitive for the economic resilience locally. This matter is suitable with the opinion of Hakim (2003) which stated that the performance of society's entrepreneur will be maximal if the government can to support the infrastructure needs completely. The right policies for small enterprises related to support in the form of facilities or infrastructure that should be targeted to small enterprise. The establishment of the training organization and small enterprise development as well as facilitate permits, in order to obtain the business capital will be more beneficial for the small enterprise development.

The main point in the targeting of quality achievement of small enterprise is performance. The measurement of small enterprise performance not only instantly but also future orientation with the stability growth by year to year and able to face the new competitor. Business performance not only focuses on increasing of financial but specifically increase in non-financial has to be a concern as well. It was suitable with Indriarti ningtyas (2009) which stated the performance of an organization or a business was defined as the direction an organization to take an action to compete with another organization in one industry, not only on the financial indicator but also on the indicator of non-financial as well. Non-financial indicator covered the additional or market target, market loyalty, consumer satisfaction, or the confidence of the small enterprise actor (Zulkiffli and Perera, 2009).

The current study is developed by the theory that linked with the market orientation which related on the small enterprise with two points of view. These are behavior viewpoint (Kohli and Jaworski, 1990) which stated the market orientation as the set of going on activity to improve the consumer satisfaction. Furthermore, cultural viewpoint, according to (Narver and Slater, 1990), it defined as the collective values and conviction in a company that placed of consumer interest upon everything. Also, the current study is developed by the gaps of existing study, the study was conducted by Kraus et al.,(2012) and Carol and Mavis (2007) that showing the relationship between entrepreneurship orientation and innovation toward the business performance has an insignificant effect. But, on the others study such as Hoq and Ha (2009) and Mahmoud and Hanafi (2013) revealed the significant effect. The result of the previous study which still obtains the contrast result used to be the gaps in the current study.

The growth of SME in Indonesia followed by the growth of other potential regions, it's like in Batu city, East Java. The popularity of Batu city as the tourism city has a positive impact on the society around, the impact is the more of the small enterprise actors emerge. Along with the increase of Batu city image as the tourism city had emerged the various

opportunity of new business, particularly the ornamental plant business that derived by surrounding natural potential or society innovation. As the tourism city, the progress of the ornamental plant not inferior to the vegetable and fruits as the society's agricultural products. One of the region that become the center of ornamental plant cultivation in Batu City is Sidomulyo village which mostly there was various of flower in every resident home. The potential of flower cultivation in Sidomulyo village had been there since colony era. The main product flower type is rose and another flower type able to growth fertile in this tourism city.

The large of potential in ornamental plant product, it able to become the opportunity to the small enterprise actor. Even though, the popularity of ornamental plant as the commercial matter not yet to become too high. There are many factors that affected an ornamental plant become a reasonable commercial commodity. According to department of tourism Batu city (2016) it was caused by 1) the diversity and uniqueness of flora that has an opportunity to be empowered as the commercial commodity, 2) the using of technology facilitating of ornamental plant business on the cultivating and marketing, 3) the effect of trend due to the lifestyle of society toward the needs of ornamental plant.

The problem that found often about the small enterprise in Indonesia is the focus less on market needs (Tambunan, 2008). The small enterprise actor only utilized the natural resources in the surrounding environment, without has a prediction on market. If it has been seen by the large potential of the ornamental plant in Batu city, should be maximized as one of excellent product on Batu tourism city. Besides another tourism that has been existing. But, the large potential for ornamental plant sector yet to become one of excellent product and exclusive product of Batu city. Observing by the others Indonesia region that have ornamental plant industry, the large potential of Batu city to make the ornamental plant as the new identity with endorsement of tourism city. If Netherland has the ornamental plant producer name that famous in the world, its possible Batu city become the center of ornamental plant in Indonesia.

The activity of ornamental plant industry should be market oriented, the actor of small enteprise needs the entrepreneurial attitude. The market orientation and entrepreneurial able to improve on the ornamental plant sector, for example the service to the costumer and the costumer needs that not only buy the ornamental plant but also provide the professional decoration service that not owned by the competitor. The development of the small enterprise will be better if the entrepreneurial attitude able to create the new ideas in innovation form. The intended innovation is like the utilization of ornamental plant made to the other product such as extract rose beverages and jasmine oil perfume, or the cultivation way to make an ornamental plant live longer.

LITERATURE REVIEW

Market orientation. Schalk (2008) stated the emphasized of bussiness competition on globalization era have been switched to the ability to allow the business to gift the best value to the costumer consistently. The giving value to the costumer able to do through market orientation. Kohli and Jawroski (1990) defined the market orientation as the attitude on an entrepreneur to focused their self on the need s and costumer expectation, besides focuses on the competitor condition. Focus on the costumer and competitor require an entrepreneur to create an innovation based on the marketing principles. Marketing has a strong concept as the handbook to the entrepreneur to make a business decision. The marketing concept reveal that a business have to formed based on the desire and the current costumer needs or in the future, not formed by the desire and the own entrepreneur needs.

Basically the market orientation concept consist of three elements, they are market intelligence to obtain the variety of appropriate information; intelligence dissemination which the information is of is directed to the entire party in a company to get the synergy of the strategy; also responsiveness upon the market intelligence that come from a whole part on marketing strategy that suitable with the existing of market environment. According to Kraus et al (2012) market orientation provide a stimuli to an entrepreneur in make an innovation

based on marketing concept. That is mean market orientation able as the basic to make an innovation related with the owned industry.

H1: Market orientation has significant effect toward innovation

Entrepreneurial Orientation. Entrepreneurial is an intangible culture, an ability structural non fiscal that able to moved a fiscal matter. Entrepreneurial combine four produce factors, they are land, labor, capital, and skill (Sumarsono, 2010). The classification of entrepreneurial according to Lumpkin and Dess (1996) consist of two main points. First, on entrepreneurial orientation will be found the brave to take a risk that attached to an entrepreneur. Second, the pro-active attitude on business is one of characteristics of an entrepreneur. The two attitudes above are the internal factor on personal of a person that differ on every individual to respond. Mahmoud and Hanafi (2013) stated that the attitude of brave to take a risk and pro-active close related with the decision to make an innovation such as entrepreneur thought. Besides Hoq and Ha (2009) also stated that innovation is the result of creation by an entrepreneur that always responsive toward the growth of environment condition. That matter means there is a relation between entrepreneurial orientation toward innovation.

H2 : Entrepreneurial orientation has significant effect toward innovation

Innovation. Porter (1990) one the famous pioneer to discuss the related philosophy with marketing concept on business administration field, determining that company has two basic functions, these are marketing and innovation. In the current context, there is a tendency to the market orientation discussion and innovation that made collectively. The impact of market orientation on a marketing literature toward business performance able to accept clearly (Kohli and Jawroski, 1990). Means that re-orientation of market help to determine the proper policy to the business actor, where the chosen of strategy in marketing field will give effective impact to support the business performance. The result of the previous study of Carol and Mavis (2007) show that the real innovation is creative work by the group of persons, the idea, and object that occur through a community are called technology brokering. This process really strong influence to do re-combination of innovation with solving either the distance or the gaps on the existing network simultaneously. Based on this relationship then the hypothesis in this study as stated bellow:

H3: Market orientation has significant effect toward business performance

The role of entrepreneurial orientation becomes one of support the maximum performance business. That's suitable with the statement of Baker and Sinkula (2009) that entrepreneurial orientation will direct the improved company performance. By the business actor, has an entrepreneurial orientation spirit able to become a competitive advantage. This matter was supported by the previous study of Wu et al., (2008) found that entrepreneurial orientation gives the positive impact on company performance. Based on this relationship then the further hypothesis in this study as stated bellow:

H4: Entrepreneurial orientation has significant effect toward business performance

Innovation is the source of potential competitive advantage which secures the service and used a tool to compete with a competitor (Hult et al., 2005). Innovation has an important role in obtaining competitiveness by an organization through linkages with the economic activity that is described in either financial performance or non-financial (Carol and Mavis, 2007). Innovation is perceived as the commercialization process and extracting of value by the ideas and conversing the benefit in the real market. The intended benefit is the result of the business performance that more advantage than the competitor. Based on the relationship description above, then another hypothesis in this study as follow:

H5: innovation has significant effect toward business performance

Kohli dan Jaworski (1990) defined the market orientation as the set of attitudes that ongoing and the related activity with the searching information about the market needs. Fritz (1996) found that market orientation necessary to the company's success. On the other hand, Narver and Slater (1993) seeing the innovation as one of the core value to create the ability to support the relationship of market orientation performance. According to Zaltman et al., (1973) proposed that innovation is a media to the business's success that built by intelligence collectivity and decision making properly. Besides Deshpande, Farley, and

Webster (1993) speculating on the strong relationship between market orientation and innovation to achieve the superior business performance results. Similarly to Henard and Szymanski (2001) focuses on the empiric works that show the market orientation give the contribution of new product succeed.

The challenge to faced by the small enterprise is how to face the competition in the business environment that uncertainty. The change of business environment requires the small enterprise to renew the workings continuously in order to adapt to the challenge and environmental change. The factors of entrepreneurial consist of the pro-active attitude and brave to take a risk able to affect the increase of a person innovation (Jimenez and Valle, 2010). The study of Damanpour (1998) revealed that business performance as the final result depends on the high innovation grade. If the small enterprise able to increase the entrepreneurial orientation, then innovation will appear variously that useful to improve the performance. Hassim et al., (2011), and Madhousi et al., (2011) also explain that entrepreneurial orientation will stimuli an entrepreneur to more concern toward surrounding environment with the problem and experience, able to create the innovation that makes the advantage to the business.

Business Performance. According to Zulkiffli and Perrera (2009), business performance is defined as the operational ability to fulfill the desire of the major shareholders of the internal company, and it should be valued to measure the organization achievement. Besides, Zulkiffli and Perrera (2009) categorized the business performance become two large fields: operational business performance and strategy business performance. The operational business performance is defined as how the small enterprise actor improve the performance internally, which cover the human resources, increase the market segmentation, or maintenance the good relationship with the customer. While strategy business performance covered the increased of business achievement that had values in the financial matter that useful to attract the investor or increase the selling business value.

The government role. The crisis economic that happened some years ago gift evidence that SME sector able to survive to face the crisis. The government role takes a part in the economic improvement which through the policy was made to integrate each other on all of the economic actors. Hakim (2003) mentioned that the society entrepreneur performance able to be maximal if the government support the infrastructure needs completely. In order to the SME policy able to run smoothly, the government should be involved the SME actor in every process and policy implementation. Tambunan (2008) stated through the government supporting either by the business capital or training able to growing the small enterprise actor who has the entrepreneurial orientation to realized the business performance with high competitiveness.

H6: the government role has significant effect toward business performance

RESEARCH METHODS

The research method that used in the current study is explanatory research. The sample that used as 79 SME ornamental plant on Batu city, East Java. The current study using PLS (Partial Least Square) analysis with analytic hierarchy process (AHP). The questionnaire is distributed with semantic scale measurement with the range scale by 1 to 7. The market orientation measured with 8 items that are developed by Schalk (2008) and Mahmoud and Hanafi (2013), entrepreneurial orientation is measured with 6 items which adapted by Lumpkin Dess (1996) and Wiklund (2007), innovation is measured with 7 items which developed by Carol and Mavis (2007), the government role is measured with 4 items which developed by Frank (2010), and business performance is measured with 10 items which adapted by Zulkiffli and Perera (2009). The conceptual model of the current study is described in the following Figure 1.
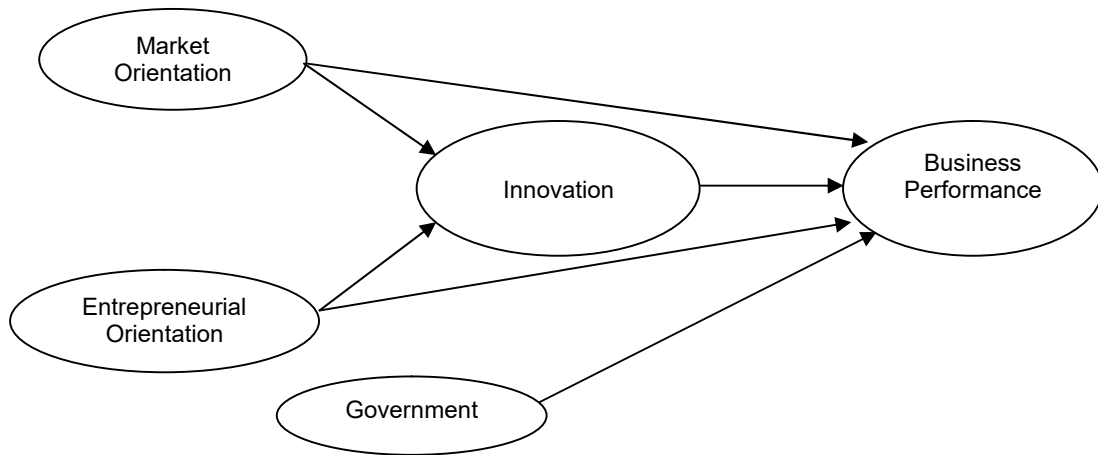
Figure 1 – Research Framework

RESULTS AND DISCUSSION

The technique to analyze the data in the current study is using partial least square (PLS). In the PLS testing statistically, in every relationship, the hypothesized is done by using the simulation that done by bootstrap methods toward the sample. The testing with bootstrap is intended to minimalize the abnormal problem of the research data. The result of the testing with bootstrapping able to see on Table 1.

Table 1 – Path Coefficient (Mean, STDEV, T-Values)

Variable	Original Sample (O)	Standard Deviation (STDEV)	T Statistics (|O/STERR|)
X1 -> I	0.433	0.1338	3.2354
X2 -> I	0.2797	0.1206	2.32
X1 -> Y	0.424	0.1178	3.5984
X2 -> Y	0.1573	0.1257	1.251
I -> Y	0.3348	0.1097	3.0516
G -> Y	0.3603	0.0974	3.7011

Source: PLS analysis.
Notes: X1 = market orientation, X2 = entrepreneurial orientation, I = innovation, Y = business performance, G = government.

So that, able to conclude that the result of analysis toward the hypothesis testing of H1, H2, H3, H5, and H6 is accepted, while H4 is rejected.

Hypothesis 1 revealed that market orientation (X1) has significant effect toward innovation with path coefficient value as 0.433 P≤0.005. Market orientation able to create the innovation that reaches out the customer needs. The small enterprise that innovated base on the marketing concept able to make the small enterprise performance better since the innovation that based on the marketing able to fulfill the needs and customer expectation. The result of this study similar with previous study of Hoq and Ha (2009) which stated market orientation has significant effect toward innovation. The small enterprise of the ornamental plant in Sidomulyo village that has market orientation able to create the new idea to compete in ornamental plant market. Furthermore, Kohli and Jawroski (1990) stated theoretically market orientation is the way of view toward the growth of the existing market so that a person have to focuses on the competition on the market. The way of view on the market able to create the innovation in order to compete to grab the new market or maintain the obtained market. The innovation that able to do is like making the various ornamental plant and fruits seeds, then packing on attractive plastics bag and modern like candy's packaging, which includes the direction how to plant the seeds. The created innovation is the potential step to respond the competition strategy understanding to the expectation and customer needs as well.

Hypothesis 2 revealed that the entrepreneurial orientation has significant effect toward innovation with the value as 0.280 P≤0.05. The small enterprise in Indonesia has the strict competition. So that the entrepreneur required to do innovation in their business continually. The result of this research similar with the previous study of Hoq and Ha (2009) which stated that entrepreneurial orientation has significant effect toward innovation on small enterprise directly. Also, the previous study of Lumpkin and Dess (1996) stated that entrepreneurial orientation is the attitude or the entrepreneur spirit that owned a person to improved their business performance. The current study show that the small enterprise of the ornamental plant on Sidomulyo village competes to get more connection with the customer, either who come directly or accept the order from the others city. The actor of small enterprise more pro-active and brave to take a risk required each of the small enterprise actor to think innovatively in many ways, example expanding the supplier connections, alliances with similar industry, and build up the good relationship with the customer which is something reasonable to do.

Hypothesis 3 revealed that market orientation has significant effect toward business performance with coefficient value as 0.424 P≤0.05. Focusing on the customer and competitor able to maintain or improve the small enterprise performance, since with market orientation the small enterprise able to fulfill the customer needs on the right target with the business concept that is run. The study of Mahmoud (2013) on the SME on Ghana similar with the current study result. The current study obtains the market orientation by a small enterprise of the ornamental plant on Sidomulyo village has significant effect toward business performance. Despite it is still identic with the finished ornamental plant, the small business actor more brave to increase the selling such as flower vase, the various of ornamental plant decoration media. Besides also brave to receive the order in large quantities and shipping to the cross area, cross-province, even cross country. Besides, the views to the existing competitor in the similar industry on one area in Sidomulyo village is strict, which is consist of three districts. For sure that is causing the strict competition among the ornamental plant business actor. The differences of the capital amount, human resources, cultivation system, and customer connection, required the small enterprise actor to conduct the strategy to improve their business performance.

Hypothesis 4 revealed that entrepreneurial orientation has an insignificant effect toward business performance with the coefficient value as 0.157 P<0.05. Entrepreneurial orientation consists of the attitude of brave to take a risk and pro-active as well, that matter is the internal factor the small enterprise actor that not all have same personal to survive improve their business. Moreover, the small enterprise in Indonesia has an education background and knowledge unequally. Sometimes the entrepreneur without business education background is succeeded, but not little the entrepreneur with the high business education background is not succeeded. That matter is the internal entrepreneur factor since the characteristics of each person are differ in the viewing their business and improve it.

Hypothesis 5 revealed that innovation has significant effect toward business performance with coefficient value as 0.335 P≤0.05. According to the live product cycle theory, at the mature phase, one of the ways to maintain and improve the business performance in order to keep maximal is innovation. Moreover to the small enterprise which has the various innovation able to affect the business performance surely. The current study similar with the previous study of Carol and Mavis (2007) and Hoq and Ha (2009). The ornamental plant business of Sidomulyo village has the various innovation to improve their business performance, one of that makes the technological of watering tools and provides the plant disease cleaning system and provide the prepaid fertilizer which distributed in several districts in Sidomulyo village. The fertilizer purchasing system and plant disease cleaner are intended have a similar work with the oil filling station in general. By doing so, the small enterprise actor able to improve the plant quality and make their product more durable to shipped to the various regions and of course will improve their business performance.

Hypothesis 6 revealed that the government role has significant effect toward business performance with coefficient value as 0.364 P≤0.05. The current study similar with the previous study of Frank (2010). The ornamental plant business in Sidomulyo village is found

that government endorsement really helps to form the entrepreneur quality. The government endorsement is applied with providing the training and development institutions through the agriculture official with providing the ornamental plant cultivation training program which has a certain quality. The small enterprise actor not only given the training of ornamental plant cultivation but also was scouted about how to sell larger Integrated Business Service in Batu city, which the center of SME in Batu city. Through this institution, the actors of small enterprise given the training how to pack the product more effectively and sale in market effectively, besides there is a training which using e-marketing to promote their product larger. Also, provide the service to get the capital to the ornamental plant business actors.

CONCLUSION

The study result on the ornamental plant business in Batu city, East Java, have an attractive result to knowing the small enterprise condition in Indonesia generally. The impact of economic condition that required more society to start their own business creates the economic climate develop. Also, the small enterprise in Indonesia proven as the strong economic supporter toward the various crisis economic fluctuation either in national or international. One of the evidence is when the economic crisis era in 1988 in Indonesia, several big companies and Banks went bankrupt. But the small enterprise still survives and growth as the nation expectancy to improve in the economic improvement at that time. Regardless of the big role of the small business, in the several parts need to change either in the entrepreneurship or the way of view toward market needs. The education and training which helped by the government in fostering entrepreneurship will be useful to improve the orientation attitude toward the market. The orientation toward entrepreneurship able to create the innovation by the various of creative thought to support the performance and competitiveness of small enterprise in Indonesia. The current study has a limitation since the sample of respondent only the small enterprise in the ornamental plant industry only. The future research is expected has a respondent characteristic more various with the amount and type of small enterprise in Indonesia from manufacture industry, service, or others creative business.

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THE ROLE OF THE BUREAU OF LOGISTICS (BULOG) IN THE ADEQUACY OF RICE IN BENGKULU PROVINCE, INDONESIA

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ABSTRACT

The availability of rice from domestic production is not stable. The role of the Bureau of Logistics (*BULOG*) is to stabilize the availability of rice by buying the rice at the time of abundant production and distribute it at the time of scarcity. The objective of this study is to analyze the sufficiency of rice in Bengkulu Province based on the availability of rice from the domestic production and the changes in the stock of *BULOG* of the Regional Division of Bengkulu. The data used are the monthly time series data of the period from 2010 to 2015. The adequacy of rice is observed at the level of regency/municipality in four categories of adequacy. The results of the calculation on the basis of annual supply and consumption show that Bengkulu Province is in the surplus of rice or in the safe category. The rice sufficiency in all regencies of Bengkulu are also in the safe category, except in the City of Bengkulu that experiences deficit with a category of severe. The rice deficit is most prevalent in December. The provision of rice from *BULOG* does not have much effect on the sufficiency of rice in Bengkulu Province. *BULOG* should be aware of rice deficit in Bengkulu City and Lebong Regency especially in the months of January, June and December since in these months centers of rice production also experience rice deficit

KEY WORDS

Adequacy, availability, rice, production.

Rice is the main staple food in Indonesia. As the nation's main staple food, rice becomes a national strategic commodity. Rice is not only an economic commodity, but also a political commodity that has a broad social dimension. The ever increasing growth of population and the declining of paddy field areas because of the land conversion cause the task of fulfilling rice for the population of Indonesia at every moment and in every region become increasingly more and more difficult.

The supply of rice in Indonesia comes from the domestic production and import. The domestic rice production is unstable since it is influenced by many factors, such as land, technology, climate, and farmers. The provision of rice through importing will have an impact on rice self-sufficiency, food independence and food sovereignty. According to Sjarkowi (2015), food sovereignty is far more important than food security, which means that in fulfilling food sufficiency we should be independent, be technologically oriented, and not be dictated by other countries, and be sustainable. Therefore, the rice supply from the domestic production should receive the most attention from the government.

The Public Enterprise of Bureau Of Logistics (*BULOG*) is an agency appointed by the government to maintain the stability of the domestic rice. *BULOG* purchases grain/rice of the domestic production which refers to the Government Purchase Price (GPP) for the Government Rice Reserve (GRR) and rice stocks for subsidized rice program for low-income communities. The rice is then distributed to the poor and the food-insecure population, in a state of emergency or disaster, in a state of social conflict, and at a time when rice prices are uncontrollable. The stock changes of *BULOG* indicates the provision of rice by the government. If the change is positive, the government's rice reserve increases and the

supply of rice for the public is reduced. If it is negative, the government's rice reserve decreases and the provision of rice for the people increases.

Based on the Map of Food Resilience and Food Vulnerability (Food Security Council, 2015), Bengkulu Province is in the category of high surplus of rice, in which the ratio of per capita normative consumption to the net production of cereals (rice, maize, cassava and sweet potato) is less than 0.5. However, the circumstance of this surplus of rice sufficiency is questionable. The question is whether the production is overestimate or the demand is underestimate. In Bengkulu Province, much rice is found from the neighboring provinces, such as Lampung, South Sumatra, West Sumatra, even from outside the island of Sumatra, such as Banten and West Java, as well as imported rice in *BULOG* of the Regional Division of Bengkulu. Therefore, the writer is interested in doing a more in-depth analysis of the role of *BULOG* of the Regional Division of Bengkulu in stabilizing the availability and the sufficiency of rice in Bengkulu Province.

METHODS OF RESEARCH

Time and Location of the Study. This study was conducted from January 2014 to November 2016 in the Province of Bengkulu. Bengkulu was selected as the study area since the contribution of the sub-sector of the agriculture to the GDP is still fairly high at 31 percent and rice is the staple food of the population. Additionally, in the Province of Bengkulu there is one city that always experiences a deficit in rice, which is surrounded by 9 regencies which are in surplus of rice.

Types and Sources of Data. The data used in this study are monthly time series data of the period from 2010 to 2015. The variables used are the size of population, per capita consumption of rice, domestic rice production, and changes in stocks of rice of *BULOG* of the Regional Division of Bengkulu.

Analytical Model. The analytical method used is the descriptive qualitative analysis. The facts, the phenomena, the variables, and the circumstances that occur at the time of study are described as they are and are presented in the form of tables, graphs, or figures.

Rice sufficiency is viewed in terms of the supply (availability of rice) and in terms of the demand (consumption of rice). Rice sufficiency means that there is a balance between the availability of rice with the amount of rice consumption. If the amount of the availability exceeds the amount of consumption, it means a surplus occurs, and vice versa, if the amount of the availability is less than the amount of consumption, a deficit of rice occurs. The rice sufficiency is stated as follows:

$$CB = QSB - QKB \qquad (1)$$
$$CB > 0 = Surplus\ of\ rice\ (ton)$$
$$CB < 0 = Deficit\ of rice\ (ton)$$

Where: CB = Rice sufficiency (ton); QSB= Total availability of rice (ton); QKB= Total consumption of rice (ton).

To reveal the role of the Bureau Of Logistics (*BULOG*) of Regional Division of Bengkulu in the sufficiency of rice in Bengkulu Province, the availability of rice is calculated by two approaches. The first approach is to calculate the availability of rice from the domestic production without role of *BULOG*. The rice availability with the first approach is calculated by using the equation:

$$QSB_1 = 0{,}6274(QPG - QGPa - QGC) - (QBPa + QBC) \qquad (2)$$

Where: QSB_1= Total availability of rice from the domestic production without the role of *BULOG* (ton); 0,6274= Conversion rate of dry milled grain into rice; QPG = Total grain production (ton); QGPa = The amount of grain used for feed (ton); QGC= Number of grain spilled (ton); QBPa = The amount of rice used for feed (ton); QBC = The amount of scattered rice (ton).

The second approach is to calculate the availability of rice from the domestic production with role of *BULOG*. The availability of rice with this second approach is calculated by using the equation:

$$QSB_2 = [0,6274(QPG – QGPa – QGC) – Q\Delta SBP] – (QBPa + QBC) \qquad (3)$$

Where: QSB_2= Total availability of rice from the domestic production with role of *BULOG* (ton); $Q\Delta SBP$ = The role of *BULOG*, proxied by variable changing the rice stok of *BULOG* (ton).

The grain used for feed and that which is scattered is respectively 0.44% and 5.4% of the supply of grain, while the rice used for feed and that which is scattered is respectively 0.17% and 2.5% of the supply of rice (Food Security Agency of Bengkulu Province, 2015). This percentage is used to proxy the availability of rice.

The consumption of a commodity is affected by the price of the commodity itself, the prices other commodities, both the substitutes and the complements, the level of income, the tastes or preferences of consumers, and the population, and other shift factors. For the commodity of rice which is the staple food of Indonesia's population, the factor of the increasing population is the major factor that causes rice consumption to continue growing from year to year.

In addition to household consumption, rice is also used for food processing industry and the needs of hotels and restaurants (Erwidodo and Pribadi, 2003). In this study the reseacher restricted the analysis of rice only for household consumption. The amount of rice consumption of the residents of Bengkulu Province is obtained by multiplying the per capita consumption of rice by the size of population, by using the following equation:

$$QKB = aJP \qquad (4)$$

Where: QKB = Total consumption of rice; a = Amount of rice consumption per capita; JP = size of population.

By substituting equation (2) and (4) into the equation (1), the rice sufficiency equation is obtained as follows:

$$CB_1 = [0,6274(QPG – QGPa – QGC) – (QBPa + QBC)] – aJP \qquad (5)$$

And by substituting equation (3) and (4) into the equation (1), the rice sufficiency equation is obtained as follows:

$$CB_2 = \{[0,6274(QPG – QGPa – QGC) – Q\Delta SBP] – (QBPa + QBC)\} – aJP \qquad (6)$$

Per capita rice consumption is obtained through three approaches, namely the actual consumption, the normative consumption, and the consumption of food-insecure households. The actual consumption is obtained from the information issued by the Provincial Food Security Agency of Bengkulu. The normative consumption is obtained from the Regulation of the Ministry of Health of the Republic of Indonesia Number 75 of 2013 about The Nutrition Adequacy Score that is recommended for Indonesian People, namely as much as 2,150 kcal/capita/day on the consumption levels. Based on the National Desirable Dietary Pattern (NDDP), 50 percent of the energy needs is fulfilled by consuming food of grains group. While the rice consumption in food-insecure households is obtained from the energy consumption of food-insecure households according to Jonsson and Tole in Maxwell et al., (2000), that is < 860 kcal/capita/day.

Rice sufficiency in Bengkulu Province is divided into four categories, namely:
1. Safe, that is the condition when the amount of the rice availability is more than the amount of the actual consumption, which means that there is a surplus of rice (CB > 0). This area is colored purple.

2. Healthy, that is the condition when the amount of the rice availability is less than the actual amount of rice consumption, but larger than the normative consumption, which means that a deficit in rice occurs (CB <0). This area is colored green.

3. Crisis, that is the condition when the amount of the rice availability is less than the amount of rice for normative consumption, but larger than the consumption of rice in food-insecure households, which means that a deficit in rice occurs (CB <0). This area is highlighted in yellow.

4. Severe, that is the condition when the amount of the rice availability is less than the amount of rice for the consumption of insecure households, which means that a deficit in rice occurs (CB <0). This area is colored red.

The sufficiency in rice can be explained in Figure 1.
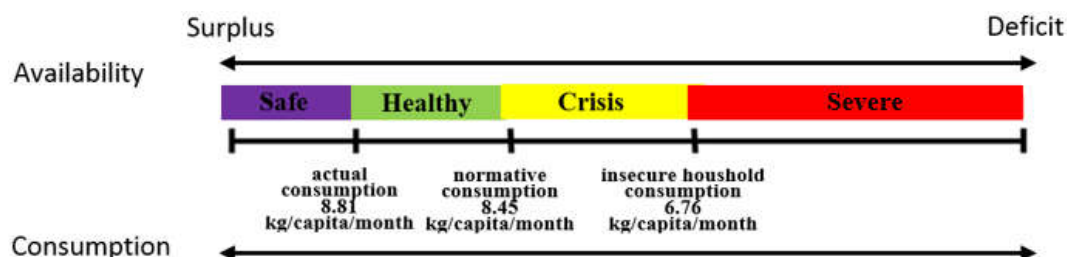
Figure 1 – The Categories of Rice Sufficiency in the Province of Bengkulu

RESULTS AND DISCUSSION

Bengkulu Province is located in the western side of the Bukit Barisan Mountains and is directly adjacent to the Indian Ocean with a coastline of approximately 525 kilometers. The astronomical location of Bengkulu Province is between latitudes 2°16'S to 3°31'S and between longitudes 101°01'E to 103°41'E. The existing area, 1,724,103 hectares (86.55 percent) as agricultural land, consisting of 1,632,452 hectares of agricultural land other than paddy fields and 91,651 hectares of paddy fields. Paddy is the food crops that is dominantly cultivated in the Province of Bengkulu, consists of 93.46 percent wetland paddy and 6.54 dryland paddy (BPS-Statistics of Bengkulu Province, 2016).

The type of climate of Bengkulu Province is categorized as type A according to Schmidt's and Ferguson's climate classification, allowing rice farming throughout the year because the availability of water is ensured. The season that occurred in the Province of Bengkulu are two seasons: the rainy season which occurs in the month of December to March and the dry season which occurs in the month of June to September. While in April-May and October-November is a transition.

The availability of rice comes from the domestic production and the changes in the stock of *BULOG* of Regional Division of Bengkulu. The availability of rice is presented in Table 1.

Table 1 – The availability of rice in the Province of Bengkulu in the period of 2010-2015

No.	Years	Rice Availability (ton)			Growth (%)
		domestic production	changes in stock of *BULOG*	Total	
(1)	(2)	(3)	(4)	(5 = 3 - 4)	(6)
1.	2010	297,193.30	4,468.94	292,601,77	-
2.	2011	288,959.42	-6,228.50	295,358,78	0,94
3.	2012	334,591.57	5,664.88	328,771,29	11,31
4.	2013	358,121.75	-5,877.34	364,160,32	10,76
5.	2014	341,078.00	1,673.83	339,358,25	-6,81
6.	2015	332,718.27	953.69	331,738,42	-2,25

The data in Table 1 show that the availability of rice until 2013 increased 7.67 % per year, but in the period of 2014 to 2015 the availability of rice declined 4.53% per year.

Rice consumption of the population of Bengkulu Province is still high. In 2015, the consumption of food of grains group reached 67.3 percent of the Nutritional Adequacy Score (Food Security Agency of Bengkulu Province, 2016). The development of consumption of food of grains group by the population of Bengkulu Province can be seen in Table 2.

Table 2 – The Consumption of the Food of the Grain Group by the Residents of Bengkulu Province in the Period of 2010-2015

No.	Years	Grain (kg/capita)	Rice (kg/capita)	Corn (kg/capita)	Wheat (kg/capita)
1.	2010	128.30	119.60	0.30	8.40
2.	2011	121.50	111.80	0.70	9.00
3.	2012	114.70	106.30	0.40	8.00
4.	2013	114.80	106.40	0.20	8.20
5.	2014	113.59	105.69	0.40	7.50
6.	2015	119.33	106.13	0.70	12.50
Average (kg/capita)		118.70	109.32	0.45	8.93
Standard (kg/capita)		100.40	91.00	2.70	6.70
Growth (% per year)		-1.36	-2.32	43.10	11.33

The data in Table 2 show that the consumption of rice per capita by the population of Bengkulu Province is the highest as compared to the consumption of corn and wheat. This is consistent with the results of the study by Cahyani (2008) and Lantarsih et al. (2011) which indicates that rice is still the main energy source in Indonesia compared to any other food of grain group.

The data in Table 2 also indicate that per capita rice consumption tends to decline due to rising income of the people. The GRDP of Bengkulu Province based on the valid prices of 2010 was 18.60 trillion. In 2015 the GRDP at constant prices of 2010 increased to 38.07 trillion. According to Engel's Law, at the time of low income, most of the budget is spent on the staple food need. When income increases, the proportion of income spent on buying the staple food is reduced, although the actual expenditures for food increased (Chai and Moneta, 2010).

The rising income of the people lead to the shifting of rice consumption to other foods made of flour, such as instant noodles and bread. This is indicated by the increase of per capita flour consumption by 8.4 kg per capita in 2010 to 12.5 kg per capita in 2015. Wheat is an imported foodstuff, the increase of its consumption will thresten the food independence and food sovereignty.
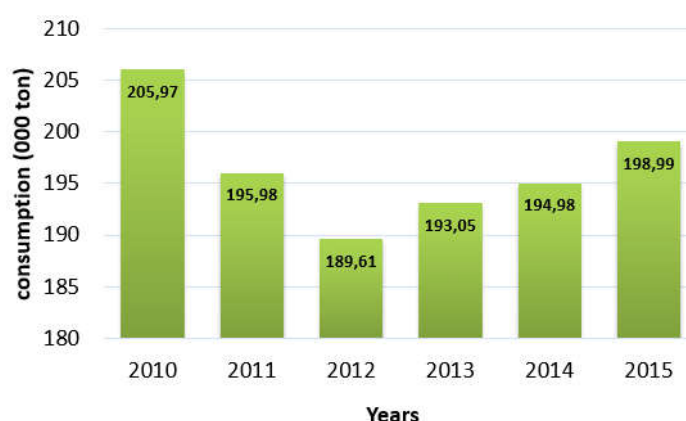

Figure 2 – Total Rice Consumption in Bengkulu Province, 2010-2015

The increasing knowledge about health and nutrition causes the decrease of rice consumption. The results of the study by Park et al. (2005) showed that the pattern of food was very closely related to education and health behaviors. According to Hu (2002), the

increase of disease risk is caused by errors of food consumption patterns, such as excessive consumption of rice can trigger diabetes.

Rice consumption decreases due to the successful implementation food diversification program. The consumption of tubers increased from 27.4 g/capita/ day in 2014 to 33.8 g/capita/day in 2015. In addition, the decline in rice consumption may also be due to saving behavior in consuming rice. The results of the study by Anriany and Martianto (2013) wasteful practices can cause a loss of 4.7 grams of rice per capita per day, an equivalent of 1.72 kg per capita per year. Total rice consumption in Bengkulu Province for 2010 - 2015 period can be seen in Figure 2.

The data in Figure 2 show that the greatest amount of rice consumption occurred in 2010. This is due to the fact that the consumption of rice per capita in 2010 was still very high (119.6 kg per capita). In the period of 2011 - 2012 the consumption of rice decreased with decreasing per capita consumption of rice. Later in the period of 2013 - 2015 per capita rice consumption was declining, however because the population continued increasing, the amount of rice consumption began to rise again from year to year. The results of this study are consistent with the results of the study by Efrita (2001) which show that the projected demand for rice increases annually in Bengkulu Province. Nur et al. (2012) suggested that the elasticity of the population against rice consumption was much higher than the elasticity of the price of rice, the price of wheat, the rice production and the income.

The results of the calculation of rice adequacy are presented in Table 3.

Table 3 – Rice sufficiency in Bengkulu Province, 2010-2015

No.	Years	Sufficiency (kg)		Sufficiency ahead (Months)	
		without the role of *BULOG*	with the role of *BULOG*	without the role of *BULOG*	with the role of *BULOG*
1.	2010	91,226.79	86,635.26	5.32	5.05
2.	2011	92,978.94	99,378.30	5.69	6.08
3.	2012	144,981.61	139,161.33	9.18	8.81
4.	2013	165,074.16	171,112.74	10.26	10.64
5.	2014	146,102.35	144,382.60	8.99	8.89
6.	2015	133,730.46	132,750.61	8.06	8.01

The data in Tabel 3 indicate that the rice sufficiency in Bengkulu Province is in the safe category. The rice availability from the domestic rice production and the changes in the stock of *BULOG* can meet the needs of the population of Bengkulu Province with safe category. The surplus of rice in Bengkulu Province can meet the needs of rice for 5 to 10 months ahead. This is consistent with the Map of Food Resilience and Food Vulnerability (Food Security Council, 2015) which states that Bengkulu Province is in the category of high surplus. These findings refute the statement of Romdhon (2013) which states that Bengkulu Province experiences a deficit in rice, in which domestic rice production meets only 30.39 percent of the need of rice.

The results of the calculation of rice adequacy in the regencies / the municipalities of the availability from the domestic rice production in Bengkulu Province are presented in Table 4.

Table 4 – Rice Sufficiency in Bengkulu Province by the Regencies/Municipalities, 2010-2015

No.	Regency/ Municipality	Years					
		2010	2011	2012	2013	2014	2015
1.	Bengkulu South	19,659	22,077	29,492	25,146	34,858	34,900
2.	Rejang Lebong	11,408	14,284	20,143	30,317	27,002	21,800
3.	North Bengkulu	18,274	14,411	24,884	22,533	31,674	11,875
4.	Kaur	9,558	5,928	17,285	16,706	11,269	17,619
5.	Seluma	25,118	19,029	29,970	28,856	17,090	14,493
6.	Mukomuko	4,041	14,074	8,061	23,029	11,961	28,209
7.	Lebong	18,637	15,459	18,183	17,010	15,371	18,018
8.	Kepahiang	3,964	9,274	13,886	17,157	16,197	13,396
9.	Central Bengkulu	11,236	8,170	10,880	9,188	8,752	6,744
10.	Bengkulu City	-30,668	-29,726	-27,802	-24,868	-28,071	-33,323

The data in Table 4 show that nine regencies in Bengkulu Province are in surplus of rice in which the availability of per capita is higher than the actual per capita consumption, therefore the sufficiecy of rice is in the category of safe and is given a purple color. The only area that experiences a deficit in rice in Bengkulu Province is the City of Bengkulu. The availability of rice from the domestic rice production in Bengkulu City is only 11-32 kg per capita, far below the consumption of food-insecure households in the amount of 80.30 kg per capita. Therefore, the rice sufficiency of Bengkulu City is categorized as severe and is colored red.

An analysis of monthly rice sufficiency is performed to see if the supply of rice from the domestic rice production and the changes in the stock of *BULOG* of the Regional Division of Bengkulu can meet the needs of rice consumption of the population of Bengkulu Province every month. The monthly availability of rice from the domestic rice production and the changes in the stock of *BULOG* are presented in Table 5.

Table 5 – The Monthly Rice Availability in Bengkulu Province, 2010-2015 (Ton)

No.	Years	Availability	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Averages
1.	2010	Production	23,141	21,377	37,536	27,161	18,362	19,431	24,111	31,289	18,462	17,431	26,032	32,860	24,766
		BULOG stock	423	1,026	-600	17	1,560	450	-864	-2,481	601	-1,646	-2,321	-633	-372
		Total	22,718	20,351	38,136	27,144	16,802	18,981	24,975	33,770	17,862	19,077	28,353	33,493	25,139
2.	2011	Production	15,964	20,517	30,298	42,465	21,916	33,297	23,479	16,894	24,659	20,560	28,366	10,544	24,080
		BULOG stock	3233	-1,240	-540	2,617	5,228	-97	-1,027	-2,315	-1,558	1,438	-511	1,000	519
		Total	12,731	21,757	30,838	39,848	16,689	33,394	24,505	19,209	26,217	19,121	28,877	9,545	23,561
3.	2012	Production	17,622	28,491	54,528	43,308	28,362	23,633	26,171	28,866	20,757	21,664	25,159	16,032	27,883
		BULOG stock	592	1,235	-740	-2,466	1,470	-246	90	-392	-3,223	2,633	-2,201	-2,416	-472
		Total	17,030	27,256	55,268	45,774	26,892	23,878	26,080	29,258	23,980	19,031	27,360	18,447	28,355
4.	2013	Production	21,769	29,014	68,086	43,487	29,219	24,270	24,624	19,120	27,764	35,043	21,458	14,268	29,844
		BULOG stock	4,889	604	-1,843	-3,063	4,753	-265	-1,163	1,676	-666	-1,021	-600	2,575	490
		Total	16,880	28,410	69,929	46,550	24,466	24,535	25,787	17,444	28,430	36,064	22,058	11,693	29,354
5.	2014	Production	19,627	35,690	62,221	28,011	17,582	29,669	23,655	19,351	38,245	35,285	19,234	12,507	28,423
		BULOG stock	2,770	-354	-3,299	2,040	-20	-3,002	-551	-606	-1,525	4,146	-227	-1,047	-140
		Total	16,857	36,044	65,520	25,971	17,602	32,671	24,205	19,957	39,770	31,139	19,461	13,555	28,563
6.	2015	Production	16,551	27,378	56,745	40,810	28,910	23,172	12,464	20,557	45,707	27,632	20,701	12,090	27,726
		BULOG stock	-1,655	265	-2,661	882	3,407	-209	-8	499	-196	-1,269	-3,254	3,244	-80
		Total	18,207	27,113	59,406	39,928	25,502	23,381	12,472	20,058	45,903	28,901	23,955	8,846	27,806
		Production	19,112	27,078	51,569	37,540	24,059	25,579	22,417	22,680	29,266	26,269	23,492	16,383	27,120
Averages		*BULOG* stock	1,709	256	-1,614	4	2,733	-561	-587	-603	-1,095	714	-1,519	454	-9
		Total	17,404	26,822	53,183	37,536	21,326	26,140	23,004	23,283	30,360	25,555	25,011	15,930	27,130

The data in Table 5 show that the minimum rice availability is 10,544 tonnes of rice which occurred in December 2011 and the maximum is 68,086 tonnes which occurred in March 2013. The average availability is 27,120 tonnes. The provision of rice from the stock of *BULOG* of the Regional Division of Bengkulu does not function properly. Supposedly, *BULOG* should increase the stock of rice by buying the rice from the farmers during the harvest and release the rice stock at the time of scarcity. In adding and releasing stocks of rice, *BULOG* did not pay attention to the fluctuations of the availability of the domestic rice as shown in Figure 3.
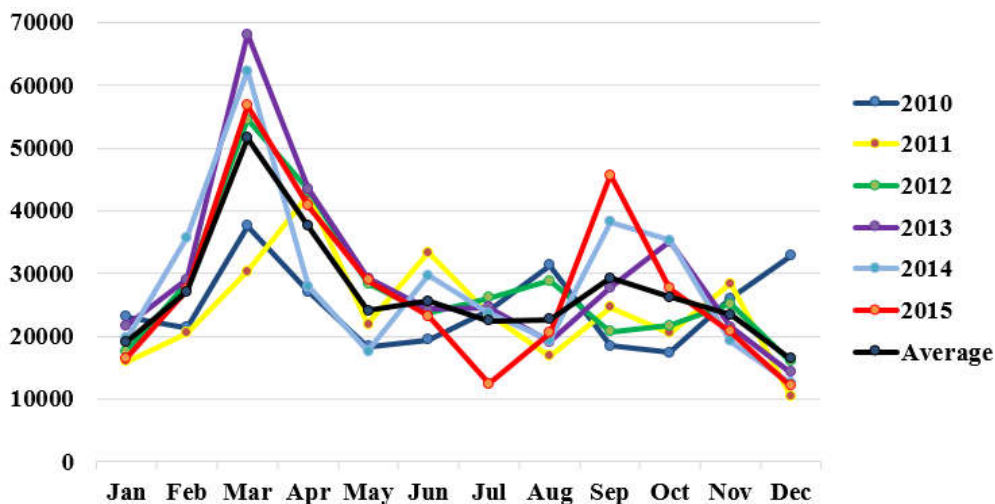

Figure 3 – The Monthly Availability of Rice from the Domestic Rice Production in Bengkulu Province, 2010-2015 (ton)

The data in Figure 3 show that the domestic rice production has a certain pattern, in which during March the production reaches its peak, then it declines and rises again in September. Then the production decreases again and reaches the lowest production in December. Thus, *BULOG* should increase the stock in March and September and release the stock from November to January. However, the opposite happens, *BULOG* releases the stock of rice at the harvest time, namely March and increases the stock of rice during the scarcity, namely in December.

Total monthly rice consumption of the population of Bengkulu Province in the period of 2010-2015 are presented in Table 6.

Table 6 – Monthly Rice Consumption in Bengkulu Province, 2010-2015 (ton)

No.	Years	Months												Growth (%)
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1.	2010	17,164	17,189	17,215	17,240	17,266	17,291	17,317	17,342	17,368	17,394	17,420	17,445	0.148
2.	2011	16,332	16,355	16,379	16,403	16,427	16,451	16,474	16,498	16,522	16,546	16,570	16,594	0.145
3.	2012	15,801	15,823	15,846	15,868	15,891	15,913	15,936	15,959	15,981	16,004	16,027	16,049	0.142
4.	2013	16,087	16,110	16,132	16,154	16,177	16,199	16,222	16,244	16,267	16,289	16,312	16,334	0.139
5.	2014	16,248	16,270	16,292	16,314	16,336	16,358	16,380	16,402	16,425	16,447	16,469	16,491	0.135
6.	2015	16,582	16,604	16,626	16,648	16,670	16,692	16,714	16,736	16,758	16,780	16,802	16,824	0.132

The data in Tabel 6 show that the amount of rice consumption increases each month. The increase of the amount of consumption depends on the amount of rice consumption per capita and the population growth.

The results of the calculation of rice adequacy from the domestic rice production without the role of *BULOG* are presented in Table 7.

Table 7.Monthly Rice Sufficiency in Bengkulu Province Through the Availability of the Domestic Rice Production Without the Role of *BULOG,* 2010-2015

No.	Years	Months											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.	2010	5,977	4,188	20,321	9,921	1,097	2,140	6,794	13,946	1,094	37	8,613	15,415
2.	2011	-367	4,162	13,919	26,062	5,490	16,847	7,004	396	8,136	4,014	11,795	-6,050
3.	2012	1,821	12,668	38,682	27,439	12,471	7,720	10,235	12,908	4,776	5,660	9,132	-18
4.	2013	5,682	12,905	51,954	27,332	13,043	8,071	8,402	2,876	11,497	18,754	5,146	-2,067
5.	2014	3,379	19,420	45,929	11,697	1,246	13,311	7,275	2,949	21,820	18,838	2,765	-3,984
6.	2015	-31	10,774	40,119	24,162	12,240	6,480	-4,250	3,821	28,949	10,852	3,899	-4,734

The data in Table 7 show that the frequency of the deficit in the period of 2010 to 2015 is only 8 months, in which 3 months of them are in the healthy category (green), 1 month is in the crisis category (yellow) and 4 months are in the severe category (red). The deficit frequently occurs in December. The most frequent deficits occurred in 2015.

The results of the calculation of rice adequacy originating from the availability of the domestic rice production with the role of *BULOG* are presented in Table 8.

Table 8 – Monthly Rice Sufficiency in Bengkulu Province Through the Availability of the Domestic Rice Production with the Role of *BULOG*, 2010-2015

No.	Tahun	Bulan											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.	2010	5,554	3,162	20,921	9,904	-464	1,690	7,658	16,428	494	1,683	10,934	16,048
2.	2011	-3,601	5,401	14,459	23,445	262	16,943	8,031	2,710	9,695	2,575	12,307	-7,050
3.	2012	1,229	11,433	39,423	29,906	11,001	7,965	10,144	13,300	7,999	3,027	11,334	2,398
4.	2013	792	12,301	53,797	30,395	8,290	8,336	9,565	1,200	12,163	19,775	5,746	-4,642
5.	2014	609	19,774	49,228	9,657	1,266	16,313	7,825	3,554	23,345	14,692	2,992	-2,937
6.	2015	1,624	10,509	42,780	23,280	8,832	6,689	-4,242	3,323	29,145	12,121	7,153	-7,978

The data in Table 8 reveal that only after the intervention of government, namely through *BULOG* of the Regional Division of Bengkulu, there are 7 months of deficit frequency, namely 1 month in the healthy category, two months in the crisis category, and 4 months in the severe category.

In terms of quantity, the government intervention caused the frequency of deficits to decrease from 8 to 7 months. But in terms of quality, the government intervention does not significantly affect the sufficiency of rice in the Province of Bengkulu.

Table 9 – The Monthly Rice Sufficiency of the Population of Bengkulu Province
by Regency/Municipality, 2010-2016

No.	Regency/Municipality	Months											
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.	South Selatan												
	2010	2,400	1,095	6,781	2,938	283	-162	1,771	2,025	-121	102	1,923	523
	2011	-1,091	928	5,847	8,551	1,063	-545	-1,212	-1,158	2,355	1,833	5,490	-77
	2012	-1,177	-1,094	7,405	15,032	1,287	-1,229	-1,179	-313	1,212	7,631	2,838	-1,007
	2013	-1,320	-154	10,820	6,126	261	-1,188	-793	-819	4,591	4,965	2,542	30
	2014	-416	493	15,369	3,355	-475	-744	-1,333	-1,191	4,662	12,509	3,264	-712
	2015	-1,260	1,039	14,700	8,411	-1,336	-1,023	-1,323	-443	3,841	13,242	255	-1,286
2.	Rejang Lebong												
	2010	-414	-88	957	446	1,195	1,939	1,254	2,080	115	167	1,295	2,357
	2011	863	137	56	1,974	768	610	-377	153	3,110	2,911	2,288	1,700
	2012	613	2,579	1,038	785	2,567	3,768	2,028	1,211	2,553	229	1,094	1,590
	2013	7,991	4,630	5,230	2,550	1,507	-680	-829	-1,562	522	6,652	4,205	24
	2014	1,032	5,381	5,718	3,129	1,591	918	-13	-243	1,139	2,445	3,943	1,889
	2015	879	3,075	5,738	3,017	1,561	-457	880	244	3,373	1,734	1,718	-30
3.	North Bengkulu												
	2010	3,989	2,018	3,148	1,613	2,494	1,492	597	2,515	-455	-473	626	399
	2011	-222	2,045	5,392	4,586	1,220	604	1,609	292	862	-596	-548	-1,127
	2012	2,085	4,990	2,978	2,915	2,996	1,427	1,078	410	56	1,143	3,020	1,512
	2013	1,646	1,805	6,035	842	1,515	-179	2,991	3,360	1,569	1,768	131	766
	2014	3,612	3,398	5,152	1,342	1,392	2,298	6,860	2,466	1,709	1,399	11	1,759
	2015	4,056	1,181	831	212	-179	1,824	-400	1,821	1,733	52	-1	471
4.	Kaur												
	2010	1,322	1,109	2,989	2,482	-834	-63	901	-69	-125	-477	1,139	1,101
	2011	1,953	978	-63	1,024	-746	2,004	228	-347	2,244	-1,034	258	-652
	2012	-177	3,371	9,288	4,215	394	-908	-787	1,853	1,603	-201	-780	-659
	2013	141	91	9,890	4,062	-368	-1,007	-844	852	994	1,450	1,121	252
	2014	1,346	3,667	2,826	1,979	670	-247	-686	239	897	862	-199	-154
	2015	2,871	4,901	7,902	2,136	48	-877	-465	593	1,034	-608	800	-787
5.	Seluma												
	2010	2,591	3,382	4,746	2,997	-39	-727	94	2,715	1,317	413	1,222	6,279
	2011	1,885	790	1,259	1,457	2,464	3,474	3,011	4,854	-10	1,112	-206	-1,184
	2012	2,776	6,093	15,260	4,755	-1,503	-1,361	283	7,026	951	-1,336	-1,484	-1,604
	2013	-1,595	8,759	14,387	5,866	-371	-830	-789	2,064	1,311	864	-495	-423
	2014	-957	5,745	7,483	1,788	454	-948	-1,396	2,601	5,683	-266	-1,568	-1,633
	2015	-1,317	5,409	6,628	4,061	13	-1,647	-1,647	2,898	4,629	-1,495	-1,651	-1,495
6.	Mukomuko												
	2010	-425	-452	1,116	-1,015	-867	-63	441	2,298	34	-395	1,822	1,328
	2011	-1,283	-130	1,293	4,365	731	888	106	-630	1,490	2,253	6,027	-1,246
	2012	-791	-1,145	-1,086	77	3,916	-921	2,867	-1,198	334	-578	5,224	1,167
	2013	1,122	-664	238	3,330	7,135	4,332	3,422	-940	2,979	3,434	-926	-637
	2014	-483	2,177	3,444	-1,223	-1,535	-1,538	656	2,545	7,233	1,489	-8	-1,001
	2015	-1,388	-529	4,269	3,173	3,300	-121	1,264	361	13,619	934	2,637	486
7.	Lebong												
	2010	-648	-226	306	10	1,379	955	3,374	4,310	-69	1,994	1,825	5,316
	2011	-569	-392	-99	3,684	582	11,826	4,350	-957	-870	-851	-551	-791
	2012	514	286	-525	-742	298	6,919	7,857	5,255	-599	-638	-265	-269
	2013	-166	-587	-515	-780	4,583	8,995	6,996	937	-854	-459	-618	-614
	2014	-792	-892	-733	-81	1,206	13,918	5,468	-522	-357	-106	-870	-960
	2015	-966	-958	-422	2,506	10,634	11,491	47	-823	-793	-881	-934	-974
8.	Kepahiang												
	2010	-656	-540	972	519	-953	519	141	214	940	655	1,174	899
	2011	-371	391	1,306	422	1,881	937	611	26	964	716	1,685	636
	2012	1,368	59	2,365	929	685	1,470	351	991	530	1,938	909	2217
	2013	826	2,484	2,886	1,463	1,090	1,676	556	816	1,990	470	1,980	857
	2014	1,345	1,564	3,428	845	1,005	1,408	897	308	1,565	3,267	537	-39
	2015	-44	-83	138	-34	536	580	1,028	2,577	2,024	1,678	2,552	2382
9.	Central Bengkulu												
	2010	878	974	1,443	1,443	1,082	1,068	1,104	909	995	439	703	90
	2011	389	1,692	1,118	2,498	492	10	1,642	32	103	93	285	-276
	2012	-501	426	2,192	1,425	3,466	1,377	622	-119	237	232	1,469	-32
	2013	3	-521	2,631	3,552	170	-163	696	1,175	1,022	306	-420	649
	2014	1,399	587	3,588	2,486	-75	1,297	-121	-327	129	-553	302	-47
	2015	242	-237	2,554	1,713	755	-186	-501	-306	1,986	-707	1,671	-328
10.	Bengkulu City												
	2010	-3,060	-3,084	-2,137	-1,513	-2,644	-2,816	-2,883	-3,051	-1,537	-2,388	-3,116	-2878
	2011	-1,919	-2,277	-2,192	-2,499	-2,965	-2,962	-2,963	-1,869	-2,111	-2,424	-2,933	-3033
	2012	-2,890	-2,896	-233	-1,951	-1,636	-2,823	-2,884	-2,208	-2,101	-2,760	-2,891	-2933
	2013	-2,966	-2,938	353	322	-2,478	-2,886	-3,003	-3,009	-2,627	-695	-2,374	-2971
	2014	-2,708	-2,701	-345	-1,923	-2,987	-3,051	-3,057	-2,927	-840	-2,208	-2,645	-3085
	2015	-3,105	-3,024	-2,218	-1,032	-3,093	-3,104	-3,133	-3,098	-2,498	-3,096	-3,146	-3173

Indeed, *BULOG* managed to eliminate the rice deficit which occurred in December 2012 and January 2015 and reduce the degree of deficit of rice in December 2014 which was originally severe turned into a crisis by releasing the stock of rice. However, *BULOG* mistakenly increased the stock of rice, so that in May 2010, month of rice deficit occurred, although it was still in the healthy category, then it aggravated the degree of deficit that

occurred in January of 2011, which originally was in a healthy category turned into a crisis category, and in December 2013 from the category of crisis turned into a severe category.

The monthly rice sufficiency in the regencies/municipalities can be a guideline for *BULOG* in making a purchase and distributing the rice stock. The monthly sufficiency of rice of Bengkulu Province in the regencies/municipalities are presented in Table 9.

The data in Table 9 show that the city of Bengkulu always experiences a deficit of rice with severe category (red). The regency which experiences most deficits is Lebong Regency. Therefore, the issue of rice insufficiency for the population of Bengkulu and Lebong Regency really need to be heeded by *BULOG* compared to other regions. *BULOG* can purchase rice in surplus areas, such as Rejang Lebong, Bengkulu Utara, Kepahiang and Central Bengkulu. The right time to make a purchase is in March, April, May, and September. Whereas the time to be on alert and to release the rice stock is January, June and December.

CONCLUSION

Bengkulu Province is in surplus of rice. The domestic rice production and the changes in the stock of *BULOG* of Regional Division of Bengkulu can meet the needs of the rice consumption of the people of Bengkulu. All of the regencies in Bengkulu are in surplus of rice except Bengkulu City that is in deficit condition with the category of severe (red). The monthly rice supply is unstable, consequently in January, July, and December rice deficit occurs. The deficit in rice in Bengkulu Province most frequently occurs in December.

The role of *BULOG* Regional Division in Bengkulu does not have much effect on the sufficiency of rice in Bengkulu.

IMPLICATION

BULOG Regional Division in Bengkulu should buy rice in Rejang Lebong Regency, North Bengkulu, Kepahiang, and Central Bengkulu, in March, April, May, and September. *BULOG* should be on the alert for distributing the stock of rice in the City of Bengkulu and Rejang Lebong Regency in January, June and December.

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THE IMPLEMENTATION OF THE RULE OF THE MINISTRY OF RELIGIOUS AFFAIRS #9 YEAR 2015 ON THE MANAGEMENT OF HAJJ IN MOJOKERTO DISTRICT

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ABSTRACT

Long waiting lists of Hajj does not decrease people's enthusiasm to fulfill the fifth obligation as moslem that is Hajj. Therefore, Hajj agencies should always provide excellent Hajj service. Excellent service should start by providing good implementation of the process of enrollment, implementation, and the closing. Well-prepared and well-implemented Hajj program prevents Hajj applicants from unexpected problems. The Hajj program should be professionally handled from the enrollment process. This study attempts at reviewing the implementation of the rule issued by the Ministry of Religious Affairs Number 9 Year 2015 about the implementation of Hajj program in Mojokerto District in optimizing Hajj service and providing easiness for Hajj applicants during the process that support Hajj applicants to become more independent. This program is the realization of the current laws issued by the Ministry of Religious Affairs in Indonesia. The main focus of this study is the implementation of the policy issued by the Ministry of Religious Affairs on the implementation of public service and its impact to Hajj applicants. This study employed an interactive research method and descriptive qualitative approach which intended to 1) describe the implementation of the Rule of the Ministry of Religious Affairs Number 29 Year 2015 about the implementation of Hajj program in Mojokerto district, 2) analyze the efforts made by Hajj agencies in improving Hajj service in Mojokerto district. The result of this study shows that the implementation of Hajj program in Mojokerto district has been optimally administered. Yet, it is necessary to improve the facilities that support the Hajj program to create transparent service and provide accessible information about the Hajj program. Moreover, in this modern era, public demands effective and efficient Hajj service. Besides, the massive use of social media should support the government in socializing any information about Hajj and enhance the quality of Hajj service in Mojokerto district.

KEY WORDS

Implementation, Hajj program, public service.

The law number 13 year 2008 states the guideline of the implementation of Hajj program in which the government set certain standards that should be applied by Hajj agencies including the consultation, service and protection for Hajj applicants. This program is intended to provide good preparation, service and protection for Hajj applicants in conducting their Hajj obligation, allowing them to focus on their Hajj obligation as moslem. However, the real implementation of the law number 13 year 2008 cannot yet fulfill public's expectation and demands. Hence, a recommendation to modify or change the rule number 13 year 2008 about the Hajj management to be the Rule of the Ministry of Religious Affairs number 25 year 2014 about the funding of regular Hajj program has appeared. Regarding to the problems that appeared during the Hajj process, the government through the Ministry of Religious Affairs has made some enhancement on the Rule of the Ministry of Religious Affairs Number 25 year 2014 and shifted it to the Rule of the Ministry of Religious Affairs number 29 Year 2015.

The long waiting list does not demotivate people in Mojokerto in administering the fifth obligation as moslem. The increasing number of Hajj applicants in every year causes the waiting lists become longer. Moreover, as stated by Drs. HM. Sakur, M.Si (the head of Hajj program of the Ministry of Religious Affairs in East Java) in the socialization of Hajj in Hotel

Puncak Ayanna, Trawas-Mojokerto on the 9th-11th of Februrary 2016, the waiting list of Hajj in East Java has reached 22 year of waiting. It shows that if a Hajj applicant applies for Hajj in 2016, she/he will be able to administer the Hajj in 2038. Another problem appeared as the result of recklessness done by Hajj agencies which caused 3 elder Hajj applicants passed away during the Hajj program due to chronical diseases which triggers a question directed at the credibility of the Hajj applicants' health selection team. Meanwhile, the term *istita'ah* refers to the Hajj condition which requires Hajj applicants to have good state of physical and mental health.

Those problems have triggered various responses to seek for the solutions. In addition, problems that occurred among the public need to be solved through the implementation of effective policies. However, the policies applied by the government cannot simply solve all of the problems. Therefore, the policies should be adjusted to the kinds and the characteristics of the problems. Those problems during the Hajj program also have created some policies to solve them. Changes and modification have been applied to certain policies for the policies were considered unable to solve the problems. Edwards in Winarno (2012, p.177) stated that studies on the implementation of certain policies are necessary to conduct for the betterment of public administration and public policy. The implementation of certain policies is one of the steps in administering public policy including the planning of the policies and the consequences of the policies toward the public.

LITERATURE REVIEW

The Implementation Model of George Edward III. According to Edwards in Winarno (2012, p.177) studies on the implementation of public policies are crucial for the betterment of public administration and public policy. The implementation of public policies is a step in the realization of the public policies which also includes the planning of the policies and the consequences of the policies to the public. If a public policy is unable to solve or decrease certain targeted problem, it implies that the policy is a failure even if the policy was well-implemented. On the other hand, a well-planned policy might also fail if the policy is not well-implemented.

In reviewing the implementation of public policies, Edwards in Winarno (2012, p.177) proposed two questions; what are the conditions needed to get a policy successfully implemented? And what are the obstacles that make a policy fail? Edwards tried to answer these questions by analyzing for factors or crucial variables of the implementation of public policies. The factors or the variables are communication, resources, disposition, and bureaucratic structure.

Within the context of the analysis of the Hajj program implementation, the implementation started from the abstract condition related to the fulfillment of the success factors of a public policy implementation as proposed by George C. Edwards including the communication, resources, disposition and bureaucratic structure.
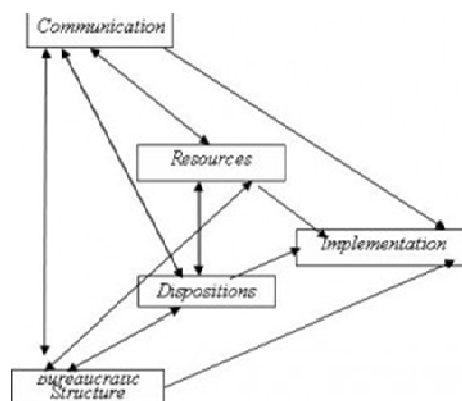
Source: George C. Edward III (1980, p.148)

Figure 1 – Direct and Indirect Impact of Implementation Edward III

Hajj Management as a Public Service. Basically, the implementation and the management of Hajj program is a public service which includes three kinds of services including; the consultation and *Hajj Manasik* before and after the Hajj, transportation, accommodation, catering and health services. As a public service, Hajj management should be held upon some principles; public interest, law certainty, equality, equity, professionalism, participation, non-discrimination, transparency, accountability, facility and special service for those with special needs, time efficiency, effectiveness, easiness, and accessibility. In addition, Hajj management should also consider the rights of Hajj applicants as stated in the law of consumer protection.

METHODS OF RESEARCH

This study employed an interactive method and descriptive qualitative approach. The focuses of this study included; 1) the implementation of Hajj program held by the branch of the Ministry of Religious Affairs in Mojokerto, especially related to the communication maintained among the Hajj officers, resources, disposition, and bureaucracy structure of the Hajj committee. 2) Government's role in improving the quality of Hajj service in the branch office of the Ministry of Religious Affairs in Mojokerto district.
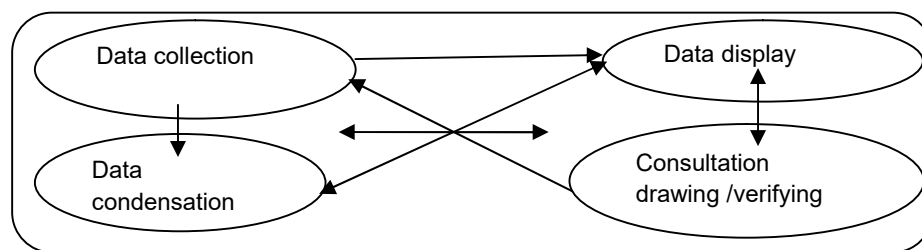
Source: Miles, Huberman dan Saldana (2014: 14)

Figure 2 – The Components of Data Analysis: An Interactive Model

This study was held in the Ministry of Religious Affair office in Mojokerto. The data of this study were obtained from informants, events and documents. The data were collected through interviews, observations, and document analysis. Furthermore, in analyzing the data of this study, the researcher referred to the theory proposed by Miles and Hubberman and Saldana, (2014: 14). This following figure shows the scheme of the data analysis proposed by Miles and Hubberman and Saldana (2014:14).

RESULTS AND DISCUSSION

Description on the Implementation of the Rule of Ministry of Religious Affairs Number 29 Year 2015 about Hajj Management in Mojokerto District. One of some points applied within the rule number 29 year 2015 is that Indonesian Hajj applicants should be at least 12 years old. In addition, for Hajj applicants who have done Hajj previously are allowed to enroll for another Hajj after 10 years started from the last Hajj. The use of the Hajj quota as stated in the article 1 refers to the applicants with following criteria: applicants who experienced system failure in paying the fund, applicants who have conducted Hajj previously are included in the remaining quota, applicants who are older than 75 years old are prioritized, the merge of families (heirs/wife) should be proven by legal marriage book and family card, the merge of *mahram* (heirs/parents) should be proven by the birth certificate, additional applicants who have fully paid the fund and the next year Hajj applicants.

Communication within the Implementation of Hajj Program Management in Mojokerto District. Communication is organizational events or activities that connects individuals, individuals and groups, and between organization and the surroundings. Communication has a major function in an organization, even communication is the factor that supports

organizational administration, especially in managing the human resources. According to Elbert in Handayaningrat (1992, p.95), Communication may be defined as the transfer of information from one person to another signs, signals, or synables from a mutually understood language system. Within the context of communication in the Ministry of Religious Affairs office in Mojokerto, intensive communication has been enhanced to communicate and socialize the policies about Hajj management number 29 year 2015 to all of the staffs in order to enhance the Hajj service as expected by the rule.

Particularly, intern communication should be maintained based on the main jobs and functions in order to perform good implementation of a policy as stated by Effendy which goes in line with Edwards (Widodo, 2012, p.97) in which communication is seen as a process of delivering certain information of a communicator to a communicant. In this context, communication refers to the delivery of message related to certain policies or programs to the executors of the policies or programs. The certainty of this information should be guaranteed to support the success of the policies or programs. Hence, it is necessary that executors have deep understanding on the policies or program in order to be able to deliver important information for each of the client that will also support the success of certain policies or programs.

Resources in the Implementation of the Hajj Program Management in Mojokerto District. The most dominant resources that appears in this context is the human resources. Human resources in the Ministry of Religious Affairs office in Mojokerto has been considered lacking since the researcher found only 8 members who found it difficult to handle the complex jobs of the office This number is not appropriate compared to the number of the Hajj applicants who should be handled. Human resources are the major key to the success of the any implementation of programs or policies. The main resource refers to the staffs or employees in the office. It is important to note that staffs or employees do not simply guarantee positive contribution to the implementation of certain policies or programs. Therefore, more number of employees and staffs does not automatically guarantee good implementation of certain programs or policies. The human resources should also be equipped with good skill person of each individuals. However, it should be noticed that few number of staffs or employees may also create complex problems in the implementation of certain programs or policies. Moreover, the lack number of staffs or employees also triggers difficult problems related to the implementation of the Hajj program. In line with Mathis and Jackson (2006, p.3), human resources refer to a design of formal systems within an organization to guarantee that the potency of the human resources is effectively and efficiently explored to achieve the goals of the organization.

Dispositions in the Implementation of Hajj Program in Mojokerto District. Leaders of a bureaucracy are the persons in charge of an implementation of certain programs who work under the authority of the government. The implementation of the programs or policies is under their responsibility. More importantly, persons in charge do not have any influence toward their disposition. Government bureaucracy has some characteristics which differ from non-government institutions'. More importantly, the notion of dismissal in government-owned institution is considered as something shameful and disadvantageous. Therefore, the Ministry of Religious Affairs in Mojokerto regularly conducts workshops and education related to the implementation of the rule number 29 year 2015 to all of the staffs and employees in order to motivate them to work with high responsibility and commitment since their works are related to the implementation of Hajj program which is their routine works and they are well-experienced in performing the job. Regarding the fact that the staffs of the Ministry of Religious Affairs Office in Mojokerto are the experts of the field, it can be assured that the implementation of the program runs well.

The Bureaucracy Structure of the Hajj Program Implementation in Mojokerto District. The bureaucracy is the executor of a certain policy. Either consciously or subconsciously, a bureaucracy creates a form of organization based on the collective agreement to solve social problems in this modern era. The bureaucracy is not only under the government's structure, but it can also be included in non-government organization even sometimes a system of a bureaucracy is created to run certain policies. According to Edwards III (Anggara, 2014,

p.253), a bureaucracy structure refers to a work mechanism formed by the executor of a certain policy. It emphasizes on the importance of the standard operating system (SOP) which guides the flow of a work among the executors, moreover when the work relates more than one institutions. Edwards also highlighted that sometimes fragmentation is needed when the implementation of a certain policy requires complex programs and involves many institutions to achieve the goals. Within the implementation of the rule of the Ministry of Religious Affairs number 29 year 2014, the office of the Ministry of Religious Affairs in Mojokerto is expected to always work based on the predetermined SOP made by the leaders of Hajj program.

The tasks distribution is done by the head of the Hajj program in a flexible way even sometimes fragmentation on the structure of a bureaucracy of Hajj program occurs. For instance, within the committee of Hajj program, the head of the program is allowed to place certain staffs to handle certain work based on the quality of the human resource. Fortunately, the result of the system shows good implementation and meets the expectations.

Government's efforts to improve the quality service of the Hajj program implementation in Mojokerto District. The Hajj program service in Mojokerto is started from the socialization of the Hajj policies to make sure that the society receives clear information related to the procedure of Hajj program provided by the Ministry of Religious Affairs office in Mojokerto. The information contains detailed explanation related to the schedule and the enrollment procedure, Hajj fee (*Biaya Penyelenggaraan Ibadah Haji/BPIH)*, Hajj *manasik* program and the Hajj event. One effort which has been done by the government to improve the quality of the Hajj service is in the form of a computer-integrated Hajj system (*siskohat/sistem komputerisasi Haji terpadu).* This system connects all of the data reaching up to the district level and it provides easiness and efficiency of Hajj service, enrollment management, and the payment of the Hajj fee, national Hajj quota management using a network and giving the certainty of the queue number, allowing the applicants to be treated fairly in getting their turn for Hajj. Hajj enrollment through the *siskohat* provides Hajj service throughout the year which can be monitored and controlled at anytime and in the real time. In addition, the one-stop Hajj service that is implemented by Hajj agencies in Mojokerto is the innovation proposed by the head of the Hajj program in Mojokerto district. This enhancement has successfully made Mojokerto district becomes the role model for other districts to implement similar Hajj system.

CONCLUSION AND SUGGESTIONS

Hajj applicants in Mojokerto were not yet able to independently take care of their own Hajj needs and they still needed the help of the Ministry of Religious Affairs of Mojokerto district to ensure that the Hajj program was done with more structured management to enhance better safety as expected by the law of the Republic of Indonesia Number 13 year 2008 and the law of the Ministry of Religious Affairs Number 29 year 2015.

The role of the government in the implementation of Hajj program is held by the Ministry of Religious Affairs office in Mojokerto which holds three main responsibilities including; service, consultation, and protection for Hajj applicants. The support from the government has given positive effect for the society related to their religious occasions, in which they will be given the certain time of their Hajj departure followed by deep explanation on their rights and obligations to receive protection as the citizen of Indonesia.

The implementation of Hajj program in Mojokerto has been well-conducted in accordance with the rule of the Ministry of Religious Affairs number 29 year 2015. Even though in this study, some problems were found, yet generally, the program has been optimally implemented. This was proven by the result of the data analysis done based on the principle of the public service. Therefore, the implementation of Hajj program performed by the Ministry of Religious Affairs office in Mojokerto has been done with good implementation.

It is suggested that the office provide call canter (free-toll) or customer care via social media or mass media for the socialization of the program. It is recommended that the office conduct events for the staffs and the employees such as exercises to boost up their physical condition that will support their performance in giving Hajj service. The government is also

expected to eliminate the Hajj extra-fund which used to be stored in banks. It is also important to improve the participation of the Hajj applicants. In order to improve the quality of the Hajj service in Mojokerto, innovations are necessary to be created by the Ministry of Religious Affairs office in the form of one-stop Hajj service. The one-stop Hajj service refers to the merger of two institutions into one.

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PREGNANCY MYTHS IN PETANG SUB DISTRICT, BADUNG, BALI

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ABSTRACT

This research was done to understand pregnancy myths in Petang Sub District, Badung, Bali. This research background was the inequality between assumption and reality in field. Ideally, society in this global era will prefer and believe medical treatment for pregnant women. But the reality is different. They believe myths more than medical treatments. The questions were: (1) What are the myths of pregnancy in Petang Sub District, Badung?; (2) What is the ideology between those myths?; and how do the society interpret those myths?This research method was qualitative method. Primary data source was supported by secondary data. The data was collected by observation, interview, forum group discussion (FGD), and literature study. The data was reviewed in cultural study perspective and analyzed with critical theories.The research results showed that: (1) the form of pregnancy myths in that sub district are passed in form of oral tradition, such as prohibitions and suggestions to consume food and drinks, acts, and ritual ceremonies from pregnancy until the baby is born; (2) Ideology between those myths is prevention from pregnancy risks, safety, health, and religion ideology; (3) Those myths are sustainable because they have safety meanings, keep the family relationship, health education, and cultural conservation.

KEY WORDS

Ideology, myths, pregnancy, mythical meaning, Bali; culture.

Indonesia is a multi-ethnical country that has various traditions and unique culture as the society's adaptation in solving their daily life's problems. Besides the behavioral habits and life equipments, there are also myths as belief that can protect them from problems in life. In ideal level, culture can be viewed as ideas, thoughts, values, norms, and rules. As ideal form of those cultures, the society then takes them as the guideline to organize their behavior in life (Danandjaya, 2002).

There is an element that have more specific characteristic than the cultural value system, called ideology concept and myth (Alawiyah, 2009). As a multi-ethical country, Indonesia has ideology and myths related to various aspects of life, such as politics, women's life, sex, and also pregnancy myths (Barthes, 2007).

Myth is a form of belief that is assumed to be true (Barthes, 2003). Until now, there are still many myths in Indonesia. Those myths are various, corresponding to the customs of every region (Argawa, 2007). Myths in Java will be different with those that developed in Bali. Some research showed that Indonesian people are still thick with supernatural or mythical things (Barthes, 2007; Danandjaya, 2002; Rafi, 2009).

People in Petang Sub District, Badung, Bali, are still using the myths to treat pregnant women. Based on the myth, pregnant woman are vulnerable to be disturbed by evil spirits. Therefore, pregnant women must perform some rituals and use an amulet to be spared from evil spirit's disturbance (Argawa, 2007). People in Petang Sub District, Badung, Bali, used the myths to keep the health of pregnant women. This can be seen from their obedience to those myths. Their belief is so strong towards those myths, and even become their cognitive maps that local pregnant women should know and obey the pregnancy myths. This means that pregnancy myths are thought to be a knowledge that should be known and obeyed in order to be safe from miscarriage. The myths are believed by the society as natural knowledge (Barthes, 2007).

In this global era, people's belief in Petang Sub District, Badung, Bali, to pregnancy is interesting to be studied. Critical study about this topic will lead us to the meanings behind

the cultural phenomena. The background of this study is the inequality between assumption and reality in the society. Ideally, society in this global era will prefer and believe medical treatment for pregnant women. But the reality is different. They believe myths more than medical treatments. From this background, some questions could be raised: (1) What are the myths of pregnancy in Petang Sub District, Badung?; (2) What is the ideology between those myths?; and how do the society interpret those myths?

METHODS OF RESEARCH

This research was done by qualitative research method. Primary data source was supported by secondary data from related research results. The data was collected by observation, interview, forum group discussion (FGD), literature study, and documentation technique. Those techniques were used in order to find the meanings of pregnancy myths to people in Petang Sub District, Badung. For example, symbols and problems are solved by group discussion. Group discussion technique was used to reveal the perception about pregnancy myths phenomena. Information from the discussion were then collected to reveal or answer the perceptions about perception, group attitude, and group decision of pregnancy myths. All collected data were then critically analyzed by using deconstruction theory, mythology theory, and semiotics theory.

RESULTS OF RESEARCH

The Form of Pregnancy Myths in Petang Sub District, Badung, Bali. Based on data analysis, it could be understood that the form of pregnancy myths in Petang Sub District, Badung, Bali, are passed through oral tradition. Oral tradition is an institutionalization process of cultural values, which is orally and hereditary transmitted (Pudentia, 1998). Pregnancy myths in Petang Sub District are in form of prohibitions and suggestions to consume food and drinks, acts, and ritual ceremonies from pregnancy until the baby is born. Some of those prohibitions and suggestions are subject to the pregnant women, and some of them are subject to the husband. Prohibition myths for pregnant women are such as not to consume some food like durians, pineapples, *pakel* mangoes, strawberries, *salak*, and watermelons.

Local people believed that if pregnant women disobey that myth, they will experience unfortunate thing like miscarriage. To prevent that, the elderly of Petang Sub District appealed that pregnant women should keep their health by obeying the myths believed by the people. Various guidelines about pregnant women's health were also stated that in order to make the developing baby healthy, the mother should consume healthy foods (Emmas, 2001; Dalimartha et al., 2001: Sutomo et al., 2010).

Besides prohibitions to consume some fruits, there are also myths of suggestion to consume the meat of *cerucukkuning* bird and *murai* or *kedisbecica* bird. Chicken's liver, green beans and bean sprouts are also suggested foods to consume. Local people believed that if pregnant women consume the birds' meat, green beans (*Vigna radiate*), and bean sprouts (*Phaseolusaureus*), the developing baby will grow healthy, smart, and has thick hair. Some beverages were also prohibited to drink, such as carbonated soft drinks, alcohol, iced water, and large amount of water. Local pregnant women named Mrs. PutuPuspa said that if that myth is disobeyed, the baby will not develop normally.

People in Petang Sub District were also having myths in form of ceremony rituals and prayers. A pregnant woman is suggested to always pray and ask for their safety, in orders to be guarded and has peaceful soul. Pregnant women is suggested to do *melukat*, taking a bath with water and flowers during full moon. Besides that, pregnant women is suggested to do *pangerujakan* and *pagedong-gedongan* ceremonywhen their pregnancy reach 5 months old. Those ceremonies are believed to make the pregnant women's soul become peaceful and the baby become a good and responsible child.

Ideology behind Pregnancy Myths. Essentially, ideology is formed through reciprocity that furthermore legitimate political dominance, identity, beliefs, action orientations, and

systemic communication distortion in ideological domain of people (Jorge, 1996). Ideological perspective is identical to people's collective perspective, as well as people in Petang Sub District that view the importance of pregnancy myths to be done in this global era. Ideology in every people's thoughts in that area will direct their action collectively. Through language and action, ideology is socialized and spread by the elderly as social reality in that area. In relation to pregnancy myths, traditionally the treatment of pregnant women was done by customary abstinence and suggestions according to Balinese cultural value. According to *LontarEkapratama*, it was mentioned that the fetus is assumed to be surrounded by its siblings (*nyamacatursanak*). This can be illustrated in Figure 1.
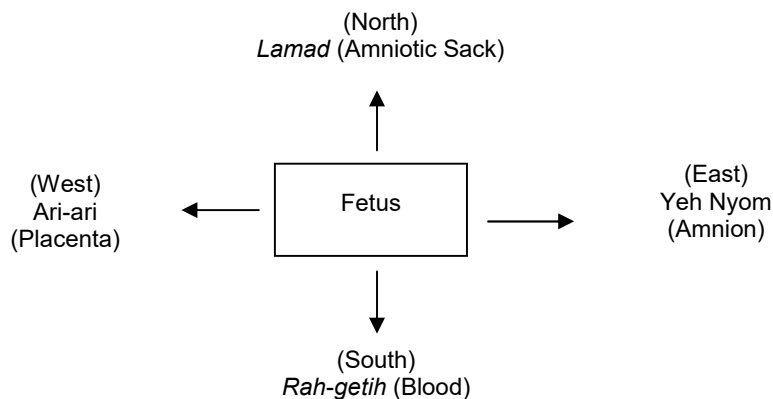
Figure 1 – NyamaCaturSanak as One of Balinese Belief

According to Kanda Pat Rare, it was explained that the fertilization between *kamaputih* (sperm) and *kama bang* (egg cell) will produce *purusa-pradana*. In the first month, it is in the form of sun and moon. In the second month, it is in the form of *bayu, sabda*, and *idep*. In the third month, it is in form of *Umanis – Pahing – Pon – Wage – Keliwon* (*Pancawara*) or *pan-cendriya*. The fourth month is the meeting of DewataNawaSanga. In the fifth month, the arth and sky (*Akasa*) meets to become the fetus, called "*PuntiMaha-yanti*". In the sixth until ninth month, will be born: *BabuLembana, BabuAbra*, *BabuUgian*, and *BabuKakered* (*CaturSanak* or four siblings). They have a shared meaning from the holy water from "*SindhuRahasiaMuka*". In the tenth month, the baby will be born with his/her siblings, Sang *Anta* (placenta), *Sang Preta* (umbilical cord), *Sang Kala* (blood), and *Sang Dengen* (*yehnyom* / amniotic fluid).

The baby will then ask for help to *Sang CaturSanak*, to get him/her out of the mother's womb. The first is to the *yehnyom* (amniotic fluid), to open the way from the front. The second is to *rah* (blood) to open it from the right. The third is to the placenta, to open it from the back. The last to the *lamad* (amniotic sack) to open it from the left.After all the way is open, then *ragasarira* (ourselves) can pass. *Sang CaturSanak* agreed to help the baby, with one condition that after the baby is born, the baby should not forget them. If the baby forgets the four siblings (*Sang CaturSanak*), they will not help the baby anymore whenever he/she meets a trouble. The baby agreed with that condition, and after made a deal with *Sang CaturSanak*, the baby is ready to be born to the challenging world. *Yehnyom* open the way, blood gives the strength, lamas gives lubricant, meanwhile the placenta and umbilical cord push the baby out. By the cooperative work of *Sang CaturSanak*, the baby born perfectly to the mysterious world and life (Tonjaya, 1989). This explanation was based on *LontarEkapratama*. Meanwhile, the medical perspective mentioned that the process of pregnancy begins after the conception (fertilization) until the baby is born (Meilasari, 2006).

Pregnancy is the period that begins after the fertilization in women's uterus until the baby is born (Bahiyatun, 2009). Pregnancy may occur when a women has sex in her fertile period (when the ovary produces a mature egg cell), and the sperm of her partner fertilize her egg cell (Candra, 2009). Fertilized egg cell will attach itself to the uterine wall, and then it

will grow and develop until approximately 40 weeks (280 days) in normal condition (Wiknjosastro, 2002).

Blood (*rah-getih*) or hemoglobin/Hb is metalloprotein (protein that consist of iron) in red blood cells that have function to carry oxygen from the lungs to the whole body and also to carry carbon dioxide back to the lungs and exhaled out of the body (Leveno, 2009).

According to WHO data, the level of Hb can be classified into three levels: normal (>11 g/dl), mild anemia (8-11 g/dl), and severe anemia (<8 g/dl). Placenta consists of more than 200 or more blood vessels and delicate veins; its form is resembled to raw liver (Neu, 2007). The maternal side that attach to the uterus appears rough and hollow. It has deep red color and divided into 15-20 cotyledon bulges, which are villi or fingerlike protruding. The fetus' surface is so delicate, and the umbilical cord is usually in the center. A mature placenta has flat disc-like shape (Tripathy, 2014). It weighs approximately 500 grams, 20 cm or 8 inches in diameter, and 2,5 cm or 1 inch of central thickness. The size and the weight of placenta is various according to the size of fetus. Placenta is usually located on the top part of uterus, but if it is located in the bottom part it is called *placenta previa*. Placenta's function is to deliver nutrients and oxygen from mother's blood to fetuses, and also to carry back carbon dioxide and waste from the fetus to the mother's blood (Macdogall, 2003). This can be illustrated in Figure 2.
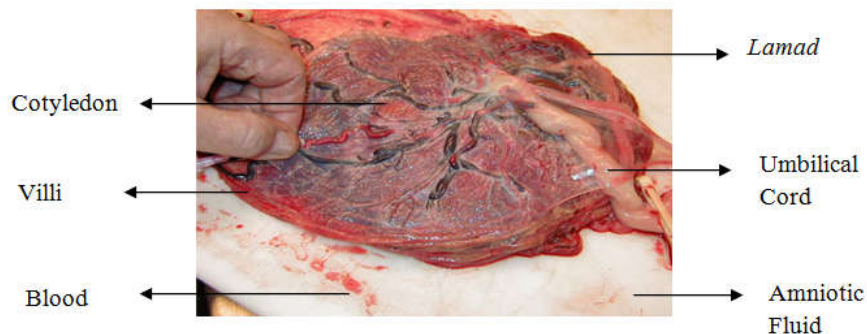
Figure 2 – Placenta

Figure 2 shows a placenta. Amniotic sack (*lamad*) is a membrane that protects the fetus during the pregnancy. This membrane originates from the mother's body part and the fetus' part. Disturbance in amniotic sack such as chorioamnionitis may be dangerous for both the mother and the baby. Pregnant women in Petang Sub District believe that to prevent the risks of pregnancy disturbances they should obey the myths.

After the baby born, people in Petang Sub District assumed that boys are considered as important and he will be responsible in sustaining the generations. Meanwhile, girls will leave after she gets married, but will be replaced by other girl as wife so that it remains balance. The patriarchy history forms human civilization that viewed boys as the more powerful (superior) than girls in private, family, society, and country life.

According to *Lontar Kuna Drsti* and *Pula Kerti*, the *ManusaYadnya* ceremony could not be held before the pregnancy reach 5 months old. A month in Balinese month is 35 days. In other words, *ManusaYadnya* or *Pagedong-gedongan* ceremony can be held if the pregnancy has reach 5 months or more. Difficult delivery is believed by the people to be neutralized by *Sapuh Leger*, a ceremony or ritual in which traditional puppet or wayang is performed.

The Meanings of Pregnancy Myths in Petang Sub District, Badung, Bali. Until this day, pregnancy myths remain sustainanble in Petang Sub District, Badung. This is because the people in that area believed that the pregnancy myths are important and beneficial to their lives. The pregnancy myths in Petang Sub District, Badung are used as the guidelines to treat pregnancy.

Meanings are formed through the knowledge and experience of local people, and then they are internalized (Clair and Anderson, 1989). Some experts had reviewed meanings by various methods and theories according to their own disciplines. Meaning is revealed and

discussed by understanding various signs in normal society life, called semiotics (Hoed, 2008). Everything that appears in life can be seen as a sign. The human thoughts can be realized as an activity and life signs (talking, working, eating, drinking, and any other activity) are understoodas a meaning. Saussure saw those signs as the meeting of illustrations in someone's cognition, and meanings can be understood as the use of signs (Hoed, 2008).

The meanings of pregnancy myths in Petang Sub District, Badung are mostly the same as other people's meaning in Bali. But, the meaning that developed in Petang Sub District had relevance with the condition of natural environment and religion system of the local people. The relationship between people's meanings and those two aspects made the meanings of pregnancy myths in that area remains exist although modern medications had entered that area.

In order to prevent pregnant women from having pregnancy problems, people in Petang Sub District obeyed the prohibitions related to pregnancy. Prohibitions and suggestions to consume foods and drinks for pregnant women are various, such as pregnant women should not consume pineapples and durians. If pregnant women consume those fruits, they believe that it will endanger the baby's safety. A pregnant woman is believed to have miscarriage or premature birth if they consume pineapples and durians. That can be understood medically, because pineapples and durians contain high amount of alcohol and that can disturb the baby's health. Those prohibitions related to pregnancy had been explained by Suwigno and Fitria (2010) and Tino (2009).

Although the gender theory had stated that this time human evolution had been on parental level, but the reality showed that family hegemony in Petang Sub District still occurs. Harmonic family relationship in Petang Sub District are often be related to the attitude and tolerance of a daughter-in-law to the values and norms in that place. Pregnancy myths are often be used as a measure in assessing a daughter-in-law (Gillespie, 2013). The more violations to the myths, the more misunderstandings will occur between a daughter-in-law and a mother-in-law. And the more obedience a daughter-in-law to the myths, then the more harmonic the relationship will be.

Pregnancy myths are commonly related to customary abstinence, consumption and action suggestions. Those myths are already existed long time ago (Barthes, 2003). Myths are transferred through non formal education in family (Rafi, 2009). The sustainability of the myths containing values and norms is a continuum of long process (Jorge, 1996). Education process in every family starts after the baby recognizes the nearest environment (family), and then when he begins to recognize societal environment, until he understand the values and norms in his cultural environment (Argawa, 2007).

Tradition is a custom or repeated action, shaded by the customs that contain normative value (Danandjaya, 2002). In the Petang Sub District, there are many myths that should be obeyed by pregnant women in order to keep the mother and baby healthy. The myths are sustainable because they are assumed to be beneficial in life, so they must be used and obeyed. According to the local people, by following the myths their minds are in peace. Meanwhile, the modern pregnancy treatment will also make the mother and baby healthy. This had caused the sustainability of pregnancy myths in Petang Sub District.

CONCLUSION

Based on the explanation, it can be concluded that the form of myths in Petang Sub District, Badung, Bali, were passed in form of oral traditions, which are prohibitions and suggestions to consume foods and drinks, actions, and ritual ceremonies from the early pregnancy period until the baby is born.

Ideologies between pregnancy myths are:

Prevention ideology from the pregnancy risks that implemented in form of various customary abstinences and suggestions to consume foods and drinks, and ethical actions according to Balinese cultural values. People saw pregnancy as a very important period and vulnerable to miscarriage threat so that the safety of both mother and baby should be kept by implementing the myths.

Mother and baby's safety ideology. People in Petang Sub District believed that obedience to the customs throughout the pregnancy will have a big effect on the mother and baby's safety.

Religion ideology. People in Petang Sub District had implemented the myths by doing ritual ceremonies related to the threats (magic) that may happen. The ceremonies are *Pangrujakan, Pagedong-gedongan*, traditional puppet (*wayang*) performance of *Sapuh Leger*, and *Mebayuh*. They believe that those ceremonies will make the baby grows healthy and strong.

People in Petang Sub District keep sustaining the myths because they think that pregnancy myths are meaningful to the mother and baby's safety, meaningful as family relationship keeper, and meaningful as cultural conservation. Tradition is a custom or repeated actions shaded by customs that contain normative values. Those myths are well maintained because they give benefits to people's lives, so that they will always being followed and obeyed.

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ESSENCE OF REJANG LILIT PERFORMING ARTS IN MUNDEH TRADITIONAL VILLAGE, TABANAN, BALI IN GLOBAL ERA

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ABSTRACT

The aim why this research is conducted is to understand the essence of Rejang Lilit Performing Arts in Mundeh Traditional Village, Tabanan, Bali in global era. This research is done because there is an imbalance between assumption and reality in the field. Generally, developed and modern community will be more glad to modern and showable performing arts. However, the questions may be different. The questions are: (1) How is the form of Rejang Lilit Performing Arts?; (2) What values are contained in the Performing Arts?. This research uses qualitative method. Types and data sources, both primary source and secondary source, of this research are obtained from observation technique, interview, FGD, and literature study. All data is analyzed critically in the perspective of cultural studies. The research result reveals that: (1) Rejang Lilit Performing Arts is shown in form of playless performance by a group of girl dancers aged 6-8 years old followed by Semar Pegulingan *gamelan*; (2) Till nowadays, local community still maintains Rejang Lilit Performing Arts because it is considered having religious, social, and local culture meaning for local community. The strong belief of local community on myth about life essence causing that they keep maining Rejang Lilit Performing Arts until now.

KEY WORDS

Essence, form, Goddess of Yadnya Ceremon, Rejang Lilit performing arts.

Rejang Lilit Performing Arts is a traditional performing art of Bali danced by a group of girl dancers aged 6-8 years old, accompanied by Semar Pegulingan *gamelan* (Suwariyanti, 2014). Based on observation result in field, it can be known that Rejang Lilit Performing Arts in Mundeh Traditional Village, Tabanan, is shown in aesthetic concept of traditional performing arts. It can be seen from the regularity, coreography balance, performance structure, fashion make up, and accompaniment of the shown performance.

Rejang Lilit Performing Arts performed in aesthetic concept of traditional performing arts look very united with Ngusaba Desa ceremony that is being conducted in the village. Regularity, symbols serving balance, movement variety, performance structure, stage pattern, and music accompaniment that accompany dance in the context of Ngusaba Desa ceremony look very harmonious and religious.

In Bali, there are some kinds of performing arts for ceremony (Bandem and Frederik de Boer. 1973). As expressed by some observers that Bali has various performing arts (Vickers,

1989). There are also some say that performing arts of Bali are dominantly in religious nuance (Hobart, 2007). It is also same as Rejang Lilit Performing Arts which until now is still preserved in Mundeh Traditional Village, Tabanan.

As a ceremony dance, Rejang Lilit Performing Arts in Mundeh Traditional Village besides having interesting performance, its serving process is unique and special. It is different from other performing arts for ceremony in Bali. Ceremonial dance is related to religious symbols (Dibia, 1985).

Before dance, the dancers of Rejang Lilit consisting of children are quarantined first for 16 days in Pesamuan Temple area in the local village. During quarantine, the children are taught about cultural values, customs of local community. Some cultural activities like learning of dancing, singing, wearing traditional clothes of Bali, praying, and making traditional snacks taught by *stakeholder,* as Hindu figures in the local village. Traditional snacks produced by them are brought to community's houses in the village. As the reward, the children are given rice to be produced as the ingredient to make snacks again. Process of cultural preservation towards young dancers of Rejang Lilit Performing Arts is performed in 16 full days in Pesamuan Temple in the local traditional village. It is a challenge for community in Mundeh Traditional Village, Tabanan, who have been developed and modern.

Generally, the developed and modern community will tend to adopt global, critical, and full-of-rational-consideration, and profit-oriented culture. Their lives in global era that is busy facing some life problems in order to increase their income to fulfill their daily needs makes them tend to choose practical and efficient things. However, the fact is different. Until now, community in Mundeh Traditional Village seems to maintain their cultural tradition. Even if at that time, they must expense much and leave their jobs for a moment in order to participate in preparing ceremony which is always completed with Rejang Lilit Performing Arts.

The phenomenon is interesting to be observed in order to comprehend what causes culture and tradition especially Rejang Lilit Performing Arts is able to maintain in this global era?. What values are contained in Rejang Lilit Performing Arts in Mundeh Traditional Village, Tabanan?

The expression of the phenomeon has theoretical and practical urgency. Theoretically, this research result is expected to give advantages in developing knowledge specially in performing arts aspect through deep discussion regarding to Rejang Lilit Performing Arts. Practically, this research result can be used as relevant information with preservation of performing arts especially in Bali and other areas.

METHODS OF RESEARCH

Research method used to investigate the phenomenon of Rejang Lilit Performing Arts in Mundeh Traditional Village, Tabanan is qualitative research method. Types and sources of research data both primary and secondary data, are obtained through observation technique, interview with relevant informants, FGD, and literature study.

Primary data are obtained directly through interview with relevant informants selected baed on purposive sampling techniqu. The chosen informants such as community figures, village figures, dancers, drummers, dancer coaches, drum coaches and local community. The addition of informant is to complete data which is less done by using snowball sampling technique. This research also utilizes secondary data obtained from literature study through search of similar research results made by previous researchers.

RESULTS AND DISCUSSION

Form of Rejang Lilit Performing Arts. The establishment of performing arts is not separated from human adjustment with their environment (Hall, 1997). Local social and demography values also influence the form of a performing art (Bandem and Frederik de Boer, 1973). Local human behavior is also influenced by superstructure ideology in it (Sanderson, 1993). Superstructure (value system, belief system, and customs) are the foundations and mindsets of relevant community (Spradley, 1972). Socio-culture,

demography, and superstructure are arts ideology for a community both in creating or in preserving it until the existence of performing arts are sustainable (Geertz, 2004).

Based on data analysis result, it is found that Rejang Lilit Performing Arts shown in the context of Ngusaba Desa ceremony in Muneh Traditional Village, Tabanan is a ceremonial dance served in form of playless dance, accompanied by Semar Pegulingan *gamelan*. Form of performing arts can be seen from performance, coreography, movement variety, performance structure, performance stage, and other relevant elements (Dibia and Ballinger, 2004). Form is a physical element that can be observed as media containing certain values such as idea, opinion, and theme (Dibia, 1985). There are three components that become attention in discussing form of performing arts such as sign, message or text; actor; audience as message receiver delivered through certain symbols. Opinion delivered through sign and symbol (Fitzgerald, 1966).

Rejang Lilit Performing Arts shown by a group of girl dancers aged 6-8 years old is conducted once in 10 years, specifically on Goddess of Yadnya ceremony in Kahyangan Tiga Temple in local village. As a ceremonial dance, Rejang Lilit Performing Arts is really related to religious symbols. It can be seen from the process of dancers selection, dancers' sanctification, ritual offerings, magic formula, head accessories, stage pattern, or properties brought by dancers. According to custom elder of local village, symbols expressed in Rejang Lilit Dabce performance has religious meaning as sanctification towards *bhuwana agung* (natural environment) of where they live in. As media of natural sanctification, Rejang Lilit Performing Arts is performed through phases as follows.

Before dance, the dancers called *Jero Permas* which means angels are made up first. While they are made up, the ceremony heads called *pemangku* and all community in Mundeh Traditional Village prepares ritual offerings for ceremony in Pesamuan Temple. After making the dancers up, they are guided to enter the area in temple called *jeroan* to be worn crown or head accessories namely *gelungan*. After all dancers wear head accessories which is previously purified by ceremony heads, they pray together in front of pure building of temple called *pelinggih*. After praying, the dancers start dancing surrounding Kahyangan Tiga Temple in Mandeh Traditional Village. Before stepping, the ceremony head presents ritual offerings in form of *Banten Segehan Cenik* which is rice offerings as thankfullness symbol to Goddess of Fertility believed as existing in Rejang Lilit Performing dancers' body.

Rejang Lilit Performing Arts is performed together with Goddess of Yadnya ceremony conducted in Pesamuan Temple. Started with *pengenter* (dance guide) brings *pasepan* (flame) as the symbol of natural sanctification, the dancers of Rejang Lilit Performing Arts in Pesamuan Temple. They make a line to be 3 groups with order as follows: *first,* it is called *Pengarep* (a dancer in the front), *second,* it is named *pemade* (five dancers in the middle), and *third,* it is called *pekitut* (a dancer in the back). The order of dancers are adjusted by dancers' age, the oldest one is followed by the younger dancers.

Image 1 – Dancers pray before dancing Courtesy of Ruastiti, 2015

The dancers of Rejang Lilit Performing Arts with variety of *ngelikas* dance movement which is the movement of walking slowly with swung hands and accompanied with *ngenjet* movement which is the movement of stamping on body up and down. Then, the dancers walk with *tayung* movement (swung hands) and *ngenjet* movement. The dancers take shawl as well as *ileg-ileg* movement (head movement to right and left) with both hands released to side. This dance movement is done repeatedly while making round stage pattern, surrounding *jeroan* (middle yard) of Pesamuan Temple for three times, turning right like clockwise turn. Before leaving Pesamuan Temple, the dancers dance surrounding *banten,* ritual offerings placed in the middle of temple area.

Afterwards, the dancers make a line and walk with *tayung* movement guided by *pengenter* (dance leader) headed by Pesimpangan Kangin Temple. After they finish dancing in Pesimpangan Kangin Temple, *segehan cenik* (rice ritual offerings) is presented. The dancers of Rejang Lilit Performing Arts then make a line to Pesimpangan Kauh Temple, and back to Pesimpangan Temple again. When they are in Pesimpangan Kangin Temple, in Pesimpangan Kauh Temple, in Pesimpangan Temple, they dance with similar coreography and stage pattern. It can be seen from figures as follows.

Image 2 – Rejang Lilit Performing Arts in Mundeh Traditional Village, Courtesy of Ruastiti, 2015

Rejang Lilit Performing Arts uses soft girl fashion make up as shown in the figures above. It can be seen from the use of *eye shadow* (red, yellow, blue), *blush on,* and lipstick. Every colors contains certain meaning (Geertz,1994). As a ceremonial dance, Rejang Lilit Performing Arts uses special fashion. Some parts of the dance fashion are made sacred in Pesimpangan Temple of local village like hand accessories namely *gelang,* belt namely *sabuk*, and crown/head accessories namely *gelungan.* Crown/head accessories of Rejang Lilit Performing Arts is decorated with frangipani flower called *bancangan*. In every crowns, it is decorated with three *bancangan.* While in the back part of the crown, it is decorated with white paper set hang loosely like hair. In the front part of crown, it is decorated long earrings called *prakapat.*

For fashion design, the dancers of Rejang Lilit Performing Arts uses fabric called *kamen gringsing*, body cover called s*abuk prada* worn in dancers' body, shawl worn on the right of waist and the left side of dancers' waist, long fabric in form of yellow shawl called *lamak* which is used as chest cover of Rejang Lilit Performing Artsrs.

Rejang Lilit Performing Arts is accompanied with *Semar Pegulingan* gamelan. *Semar Pegulingan Gamelan* is a traditional instrument of Bali categorized as medium *gamelan*. Music can make certain situation tertentu (Tenzer, 1991; Fischer and Cooper, 1998; Gold, 2004). As religious nuance that accompanies Rejang Lilit Performing Arts in Mundeh Traditional Village, Tabanan. The local community makes religious nuance by using *Semar*

Pegulingan gamelan completed with *Gender Rambat* consisting of 15, *gong* and *Kempli*. As expressed by Jro Mangku Istri, the coach of Rejang Lilit Performing Arts, it is stated that since long time ago Rejang Lilit Performing Arts is accompanied with Semar Pegulingan *gamelan* that has soft nuance as the present for Goddess of Fertility in Mundeh Traditional Village, Tabanan.

Essence of Rejang Lilit Performing Arts in Mundeh Traditional Village. Essence is part of sematic and speech (de Saussure,1996). The definition of essence itself is various, essence is always united in sentence or speech or its community collectively. It means that essence as part of life created from tradition experience, history, and its social relationship. Essence is intangible socially which then it gives more value on its society behavior. As community in Selembung Village, Karangasem values Rejang Lilit performing Arts as part of ceremony in Puseh Temple which is used by local community as mediation in seeking for their arts competence since childhood for ritual ceremony of environment purity where they live collectively.

Deconstructively, Performing Arts is aesthetical practice symbolized by collective belief of local community (Coast, 2004; Coldiron, 2004). As the performance of Rejang Lilit Performing Arts in Mundeh Traditional Village in which they still maintain the performance until now since they value it as fertility ceremony. Through ceremony involving their power relation in re-setting their social structure for collective interest. The construction process then gives effects towards positive image of community in Mundeh Traditional Village for harmony enforcement and social control in that village. The religious activity can proliferate respect and discipline to create a harmony for life unity in that community (de Boer, 1996).

Aesthetic Essence. The beauty of Rejang Lilit Performing Arts in Mundeh Traditional Village has aesthetical essence. In the performance of Rejang Lilit Performing Arts, it shows beauty elements seen from its dance movement variety which is harmonic with its music. Harmonic essence of a performance can be made if there is a balance concept among its movement variety, stage pattern, and music (Ruastiti, 2010).

Rejang Lilit Performing Arts starts with the appearance of a dance guide bringing *Pasepan*, they dance in order like a rope with dancers order are started from the oldest one. They dance starting from Pesamuan Temple, in Pesimpangan Kangin Temple, in Pesamuan Temple, Pesimpangan Kauh Temple, and back to Pesamuan Temple. They dance by using *Gringsing* fabric and a pair of yellow shawl, beauty essence on self strength element, certainty, firmness, and religiousity.

Aesthetic essence of Rejang Lilit Performing Arts fashion makeup consisting of soft girl *make-up* and ceremony clothes in form of fabric covering body and feet in yellow and white colors. Yellow means purity (Geertz, 1994). As the cover of lower body cover, fabric called *kamen* is worn. While, to cover upper body, *sabuk* is worn which is yellow fabric worn surrounding dancers' body. On that fabric, there is a touch of prada in goldish color containing essence of beauty and greatness. While, face make up of Rejang Lilit Performing Arts consisting of eye shadow mean sun light beauty, and red lipstick means beauty.

Rejang Lilit Performing Arts covers balance, harmony, and respect values expressed through movement variety and stage pattern shown in balance composition between right and left. Hamornization between movement and music can create peaceful situation (Gold, 2004; Herbst, 1997). While, the beauty of Rejang Lilit Performing Arts which is full of religious symbols are valued as pure truth (Dibia, 1985). Rejang Lilit Performing Arts containing movement of walking in order can be valued as truth manifestation, sincere offerings of purity to God as the Universe Creator.

Religious Essence. Community of Mundeh Traditional Village, Tabanan places Kahyangan Tiga Temple as *state of power*, center of religious power. Nature environment as *Palemahan* for community of Mundeh Traditional Village, Tabanan, is believed as having magical power to free themselves from anxiety in their lives. Besides, by performing Rejang Lilit Performing Arts, they believe that their relationship with nature will create a harmony. Nature, belived by society, has power in giving blessings or disasters. Both blessings and disasters in the world are not separated from natural natural law. It is also believed that natural law works in regulating universe cycle and every phase of cycles determined by

power of Ida Sang Hyang Widhi. Natural energy mastered by Gods is believed as having supranatural power for safety and luck of human life. The magic of natural energy makes human wonder. It can be seen from community in Mundeh Traditional Village, Tabanan who still worships Its existence through ceremonial symbols as well as Rejang Lilit Performing Arts. The religious practice still continues peacefully because it is valued as having magical power since long time ago.

Rejang Lilit Performing Arts in Mundeh Traditional Village, Tabanan during this time can recall its community comprehension towards the existence of Ida Sang Hyang Widhi. Religious practice is belived by local community as the source of happiness and *adikodrati* power. God has higher value regarding to life essence (Geertz, 2004).

Rejang Lilit Performing Arts which is done frequently and continously can give happiness, soul comfort of community in Mundeh Traditional Village, Tabanan. It means that *Adikodrati* power can be pursued through religous appreciation. As in the implementation of religious value towards power of Ida Sang Hyang Widhi and its manifestation explicitly and implicitly is seen from the whole structure of Rejang Lilit Performing Arts. In religious aspect, ceremony moment for Mundeh Traditional Village has a role in intensifying and re-thicken the dependence between human and Ida Sang Hyang Widhi as well as Its manifestation as religiousity center. In that context, community of Mundeh Traditional Village, Tabanan can keep their kinship unity through Rejang Lilit Performing Arts in a ceremony moment in Pesamuan Temple. Community has life essence which needs religious obedience (Picard, 1996).

Theoretically, ritual is the expression of religious belief of community which is very difficult to change (Hobart , 1987; Hitchcock, and Norris, 1995.). The religious essence of Rejang Lilit Performing Arts is strengthened and kept in every person of community in Mundeh Traditional Village. So that Rejang Lilit Performing Arts can still alive until now in its community synergy. It is reflected by the expression of relevant parties who are serious and glad in continuing the cultural tradition (Slattum & Schraub, 2003).

Social Essence. Rejang Lilit Performing Arts tremendously upholds togetherness aspect. It can be observed from every ceremony conducted by community. The togetherness makes community in Mundeh Traditional Village feel easier in performing Rejang Lilit Performing Arts for purity ceremony in their environment. All religiousity aspect covering the ceremony is a mechanism in having relationship between human and nature where they live spiritually. While, community empowerment that has been manifested on human animo in performing Rejang Lilit Performing Arts seriously has effects to the beauty performance of traditional ceremony. The animo shows spirit of social religious in performing Rejang Lilit Performing Arts for comprehending the almightiness of Ida Sang Hyang Widhi.

Solidarity essence in Rejang Legong Dance includes involvement of relationship among community in order to keep harmony in togetherness. It is needed to solve complex life problems. Community frequently uses performing arts as media to strengthen social relationship (Ruastiti, 2005; Hobart, 2002; Herbst, 1997).

Solidarity essence has a meaning that all people in community of Mundeh Traditional Village collectively support one another in presenting Rejang Lilit Performing Arts in every ritual ceremony. It is started from preparation, all commnity in Mundeh Traditional Village conducts social activity volunteerily that is *ngayah* to prepare everything related to ceremony. This *ngayah* activity actually is still relevant in proliferating integration, communication, and unification of comprehension in releasing collective burden and village security. Through arts activity, community can preserve their tradition and culture (Fischer & Cooper, 1998).

Culture Essence. Rejang Lilit Performing Arts can mean culture. It means that community of Mundeh Traditional Village who always performs Rejang Lilit Performing Arts in every traditional ceremony in Puseh Temple in local village has implication on cultural preservation. Culture can be preserved through internalization, socialization, and inculturation (Sanderson, 1993; de Zoete and Spies, 1938).

Therefore, community of Mundeh Traditional Village continues local values through Rejang Lilit Performing Arts considered important to preserve because it is elemental culture giving identity, special feature, and pride as the society of Mundeh Traditional Village. They

consider that the most relevant action to preserve as well as keep unity of social unity started to be planted since children. The chosen children as the dancers of Rejang Lilit Performing Arts become pride for their parents becuase the children as considered as the most important children. The children who are prioritized are not separated from their worth to get responsibility as the representatives of the angels in giving blessings through environment sanctification ceremony *(bhuwana agung)*. It means that as dancers of Rejang Lilit Performing Arts, they who are still children have been considered being chosen as culture preservation delegate in their village. The artists feel proud of being given chance to perform in presenting their ability in front of audience (Hobart, 1987; Hobart , 2002; Ruastiti, 2010).

Although in the effort of strengthening process of cultural values preservation, besides Rejang Lilit Performing Arts, the dancers as the actors and local community participate in the process of local cultural values preservation and continuation in global era. Some culture components in Rejang Lilit Performing Arts indirectly are preserved because it is sustained since they are young. Cultural tradition considered having worthy values is always used by community to run their lives (Savarese, 2001; Coldiron, 2004; Coast, 2004).

By seeing cultural activities taught to the dancers, it seems that during the process, they obtain ethical education in form of politeness in their community. It really supports the cultural life in the village. Every cultural elements has certain meaning that influences social's opinion. When they start dancing and performing Rejang Lilit Performing Arts, the dancers obtain informal education about religion, arts, and culture. The sustainability of cultural values continuation phenomenon through Rejang Lilit Performing Arts conducted frequently in Mundeh Traditional Village has implication on character strengthening for local community.

The dancers of Rejang Lilit Performing Arts that have mastered material indirectly are advantageous for cultural values continuation of local community. It can be seen from attitude and enthusiasm of community in preparing and presenting the dance that has given positive image for actors in public. It makes their community culture orientation is always in line with their community culture system. Community of Mundeh Traditional Village seems always present Rejang Lilit Performing Arts as a show which is always supported by community of Mundeh Traditional Village showing the suitability with the customs of the village.

Cultural tradition which is considered having *adiluhung* value will always be used by the community in running their lives (Hobart, 2007; Picard, 1996; Ruastiti, 2005). It is in line with perspective of community in Mundeh Traditional Village towards Rejang Lilit Performing Arts who considers that the dance is very beneficial for daily life fulfillment. It can be seen from attitude and way of local community in performing Rejang Lilit Performing Arts show which has been adjusted with norms of community culture in Mundeh Traditional Village. It means that by maintaining the dance, they have participated in continuing cultural values sustainably to their generation. Cultural values are the identity of local community (Bandem and de Boer, 1995. Vickers, 1989). Therefore, Rejang Lilit performance danced by the children is really meaningful in culture inculturation in Mundeh Traditional Village.

CONCLUSION

Based on the explanation above, it can be concluded that Rejang Lilit Performing Arts is a ceremonial dance performed in form of playless dance by girl dancers aged 7-9 years old accompanied with Semar Pegulingan *gamelan*. Rejang Lilit Performing Arts is performed with performance structures: (a) ceremony of dancers sanctification conducted by praying together led by *Pemangku* in Dalem Temple of Pesamuan Agung Village; (b) dancers surround *Palinggih* of Pesamuan Temple, Dalem Temple, Kayangan Temple, and back to Pesamuan Temple; (c) dancers beg for blessing in praying again together in Pesamuan Temple.

Rejang Lilit Performing Arts is made by *ngembat* movement variety which is movement of right and left hands straightened to side, *ngenjet* is stamping movement of body up and down, and *ngileg* is head push movement to right and left side. The dancers walk in order surrounding *Palinggih* as the symbol of binding, unfiying, and purifying *bhuawa agung.*

Until nowadays, community in Mundeh Traditional Village, Tabanan, Bali, still maintain Rejang Lilit Performing Arts because it is considered having religious, social, and cultural essence for local community.

The strong belief of local community on myth about life essence is the cause why Rejang Lilit Dace is still maintained up to now by the local community of Mundeh Traditional Village.

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THE INFLUENCE OF WORD OF MOUTH (WOM) ON BRAND EQUITY AND THE IMPACT TO PURCHASING DECISION: A STUDY ON COSPLAY COMMUNITY

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ABSTRACT
The development of technology communication and the society high activity makes the needs of the community even more diverse, especially related to the hobbies. The channel communities share their hobbies in a community, then with this community, they try to find the products that can support their activities. This study aims to determine the relationship between word of mouth (WOM) to brand equity and purchasing decisions. This research use survey method and questionnaires to collect the data. The sample of the research is Costume Play (Cosplay) community. The result show that brand loyalty and brand association not significant toward purchase decision.

KEY WORDS
Word of mouth (WOM) , brand equity, purchase decision, cosplay community.

The emerge of the similar hobbies on an activity supporting formed a community. With the community, they compete for each other to find the product in order to support their activities. By the business actor this matter is the good opportunity then many people take a chance with becoming the seller of the product which is searched by the customer. By doing so, there are many shop emerging either online or offline. To the customer, the appear shop will greatly benefit to them since with the more type of product being offered they will have many opportunities to choose the suitable product with their wishes. But, to the seller, that matter will suffer them since the more business actor then the higher competition will be. Since, eventually, the customer requires higher value as well as diverse, due to they faced on various chosen of product and service.

This condition makes the seller facing the great competitiveness. They have to find the other way more effective to grab the customer. The easiest and cheapest way to introduce their product is through the word of mouth (WOM) in a community. The consumer will get the various information with the peer friends about the attractive offered by a product, the attract coupon by one of the newspaper, or the discount sale in a shop (Peter dan Olson, 1996). The community is one of the tools to accelerate the word of mouth information. Consumer learns about the new product, restaurant, or retail outlet from their friends and reference by the other group such as with observing or participate with them, due to they use a product and service, or searching or receive the suggestion and information from them (Hawkins et al., 2001). Consumer more relies on the information from the others in order to make a purchasing decision, especially when the consumer knows nothing about the situation.

Word of mouth playing the important role in consumer opinion formation as well as become the great power in the communication (Allsop et al., 2007). Word of mouth often has an impact in distribution and selling process, and obviously, WOM promotion becomes a standard part of the many marketing plans in companies (Berger and Schwartz., 2011). The companies which able to build up the organic customer (the customer that formed by WOM) face the benefit prospect in the better long term (Villanueva et al., 2008). WOM able to influence the expectation and consumer wish, brand company image, and finally the future and company's beneficial.

The current study investigating the impact of WOM element on brand equity based on the consumer empirically. This study aims to introduce the way to create the brand equity. Not like the advertisement, which costly, WOM is free and distributed to the people quickly. If

the company compress the WOM power, then will be profitable for the company on creating the Consumer Based Brand Equity (CBBE). Another study by Cheng et al. (2011) about the online company that using WOM as the advertisement on creating the brand equity. This study adopts the brand equity model in order to explore the possibility of factors to create the online brand equity. The result of the study shows that the online communication tools, by mouth to mouth and virtual communication have a significant impact on brand equity, where the online communication tools able to use to improve the brand awareness and brand association. Furthermore the brand equity able to causing the purchasing decision.

Image 1 – Ladies *Cosplayer* from Magi Animation film

In the current study, the community that will analyze is the costume play (cosplay) community, there is two big community of cosplay in Malang, they are Cosplay Daisuki (COSUKI) (https://www.facebook.com/Cosukimalang) and FAMIGLIA Cosplay Community (https://www.facebook.com/f.famiglia?fref=ts). Currently, cosplay is really liked by the young generation in Malang. Begins by the number of anime movie and an offline game or online for mature, then appear the favorite characters which make the young generation would like come into being the favorite character. The more they similar with the character played the more they feel proud that their creation has been appreciated by the society.

LITERATURE REVIEW

Word of Mouth (WOM). According to Hawkins et al. (2001), WOM is the individual information share with which the important impact on consumer decision and succeed business. The WOM communication is caused by the sender needs and the information receiver, and the receivers of the purchasing risk (Mowen and Minor, 2002). Richins and Root-Shaffer in Assael (1992) stated that WOM serving two functions, they are the product involvement to drive the consumer to inform and influence the others. The news about product give the information to the consumer, the important matter as the media to make the product awareness. After the awareness is formed, then after hearing the experience of a product from friend or kin will make the consumer able to assess the benefit of a brand or another else.

The motive to seek the word of mouth, according to Assael (1992), first: friend and kin are the product information sources. Second, the information which derived from the personal sources will make the purchasing easier, such as: save the shopping time to find out from kin about the store that has not the desired.

Brand equity. Brand not only a logo or name. a brand is the company identity and a direct relationship between company and society. According to Batey (2008), the definition of the brand is determined by how the brand is felt by the society on the awareness phase and how the brand resonance with them on semi or under awareness phase. According to Nicolino (2001) brand is the entity which recognizable and give the certain values. The

recognizable is easy to separate one of the similar goods with the others. The entity is something that has special existence and differs. The certain value is a product or service make a claim about what they able to give to the consumer, while the value is something that makes the customer cares until certain limitation. According to Shimps (2003) brand is the proper label and serve to describe an object be marketed.

According to Aaker et.al (2004), brand equity is defined as a set of assets and obligations related the brand which adds or reduce the product value or service to company or costumer. Aaker (1991) classified the brand equity become five type, they are: (a) Brand loyalty (b) Brand awareness (c) Quality perceived (d) Brand association (e) Other property brand assets. The five categories which underlie the brand equity displayed as the base of brand equity to create a value to the costumer and company:

a) Brand loyalty. In any business, to obtain the new customer is costly and tend to be cheap if maintain the existing customers, especially the customer who satisfied and with a brand. The customer loyalty can reduce the weakness in the brand competition. The higher loyalty will make the higher selling.

b) Brand name awareness and the symbol. People will be often to purchase a brand which is not strange since feel comfort, reliable in trading and has a standard quality. A brand which is not known had a little opportunity.

c) Quality perceived. A brand related with the quality perceived entirely should not base on the specific knowledge about a product. The quality perceived influence the purchase decision and brand loyalty directly. Particularly when the buyer does not motivated or able to do analyzed about a product in detail. The quality perceived able to be a base to expand the brand, if a brand is valued in one context, then assumed will have a high quality in the related context.

d) A Set Of Associations. The value that underlies a brand mostly underlie by the related specific association. If a brand on good position in a product attribute class (such as there is a planned like service or superior technology), the competitor will difficult to attack it, since they will face the credibility problem so that the association able to become protection from the competitor attack.

e) Other Proprietary Brand Assets. The five categories as the other proxy of the owned brand asset like a patent, trading brand, and relation distribution. The brand asset become really valuable if they against or prevent the competitor that want to scrape the customer basis and customer loyalty. The asset able to take with several ways such as the trading brand will protect the brand equity from the competitor which want to confuse the customer using the same brand name. The brand equity has several advantages as follow: 1) give the value to the customer, 2) give the value to the company.

Purchasing Decision. According to Engel et al. (1995) purchase is the final big phase in a consumer behavior model, the consumer has to take three decisions: (1) when to do the purchase (2) where to do the purchase and (3) how to do the payment. Purchasing is a function of the two determinations (Engel et al., 1995), they are (1) intention and (2) the environment influence or the individual difference. According to Peter and Olson (1999), the consumer decision making is the integration process that combines the knowledge to evaluate two or more of the alternative behaviors and choose one of them. In this context, the consumer decision making is the problem-solving process. According to Dharmmesta and Handoko (2011), the purchase decision is taken by the buyer as the collection of decisions.

Every purchase decision has a structure as seven components. The components will be discussed in the relation purchase:

a. Decision about the product type. Consumer able to make decisions to buy a product/ service or use their money for the other purpose.

b. Decision about the product form. Consumer able to make the decision to buy a product. The decision also about the size, , complexion, and others.

c. Decision about a brand. The consumer has to make a decision about which brand that will be bought. Every brand has the owned differences.

d. Decision about the seller. The consumer has to make a decision where the product will be bought. Whether in the department stores, electricity stores, or other stores.

e. Decision about the number of products. The consumer has to make a decision about how many products that will be bought. The purchase might be will be more than one.

f. Decision about when to do the purchase. Consumer has to make a decision when he/she will do the purchasing. This problem will related the budget to buy the product.

g. Decision about how to do the payment. Consumer has to make a decision about the payment way toward the product was bought in cash or credit. The decision will influence the decision about the seller and the amount the purchase.

METHODS OF RESEARCH

This research is quantitative research. The type of research used in this research is explanatory research. Explanatory research is a study that explains the causal relationship between the variables and hypothesis testing, the research analyzed the relationship between the formulated variables. (Riduwan and Kuncoro, 2011). The samples used in this study are 78 respondents from 2 communities Cosplay (COSUKI and FAMIGLIA) in Malang. Source of the data obtained in this research comes from the primary data. The primary data obtained directly based on respondents answers to questionnaires. The analysis techniques used are descriptive analysis and inferential statistical analysis with Path Analysis.
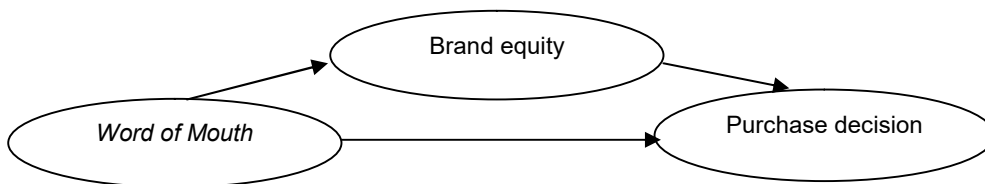
Figure 2 – Conceptual Model
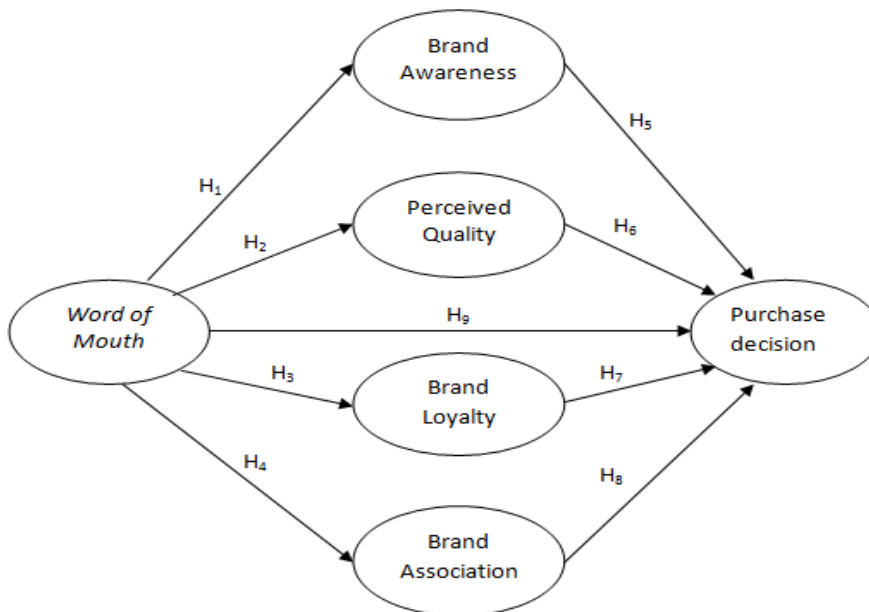
Figure 3 – Relationship between variables

Hypothesis:
H1: Word of Mouth significant effect on brand awareness.
H2: Word of Mouth significant effect on perceived quality.
H3: Word of Mouth significant effect on brand loyalty.

H4: Word of Mouth significant effect on brand association.
H5: Brand awareness significant effect on purchase decision.
H6: Perceived quality significant effect on purchase decision.
H7: Brand loyalty significant effect on purchase decision.
H8: Brand association significant effect on purchase decision.
H9: Word of Mouth significant effect on purchase decision.

RESULTS AND DISCUSSION

In this study tested 9 relationships between variables. Significant effect is characterized by a significance value less than 0.1 (sig ≤ 0.1), while the effect is not significant if the significance is greater than 0.1 (sig> 0.1). The following is presented in full analysis of the relationship between research variables.

Table 1 – The Result Hypothesis for Direct Effect

Variable	Path coefficient	Significance	Supported
H1: *Word of Mouth* (X_1) → Brand Awareness (Y_1)	0.370	0.001*	YES
H2: *Word of Mouth* (X_1) → Perceived Quality (Y_2)	0.429	0.000*	YES
H3: *Word of Mouth* (X_1) → Brand Loyalty (Y_3)	0.245	0.031*	YES
H4: *Word of Mouth* (X_1) → Brand Association (Y_4)	0.371	0.001*	YES
H5: Brand Awareness (Y_1) → Purchase Decision (Z_1)	0.193	0.027*	YES
H6: Perceived quality (Y_2) →Purchase decision (Z_1)	0.424	0.000*	YES
H7: Brand Loyalty (Y_3) → Purchase Decision (Z_1)	0.022	0.791	NO
H8: Brand Association (Y_4) →Purchase Decision (Z_1)	0.034	0.717	NO
H9: *Word of Mouth* (X_1) → Purchase Decision (Z_1)	0.334	0.000*	YES

*significant ≤ 0,1

Table 1 shows the results of the direct effect in this study. The influence test between the variables shows if the significance value is less than 0.1 (sig. ≤ 0.1), then the hypothesis is acceptable. The following hypotheses are H1, H2, H3, H4, H5, H6 and H9. Hypothesis 1 states that WOM significantly effect on Brand Awareness. Hypothesis 2 states that WOM significantly effect on Perceived Quality. Hypothesis 3 states that WOM significantly effect on Brand Loyalty. Hypothesis 4 states that WOM significantly effect on Brand Association. Hypothesis 5 states that Brand Awareness significantly effect on Purchase Decision. Hypothesis 6 states that Perceived Quality significantly effect on Purchase Decision. And Hypothesis 9 states that WOM significantly effect on Purchase Decision.

While hypothesis 7 states that Brand Loyalty not significant effect on Purchase Decision, and hypothesis 8 states that Brand Association not significant effect on Purchase Decision. So, hypothesis 7 and hypothesis 8 are rejected.

CONCLUSION

Word of mouth has significant influence toward the brand awareness, quality perceived, brand loyalty, and brand association. This study supports the result of the study by Rezvani, et al. (2012) which stated that one of the variables in the word of mouth which in the current is measured with the volume to influence positively to the brand awareness in Iran. Besides, similar to the previous study of Cheng, et al. (2011) which stated that the online communication tools like advertisement able to increase the brand awareness in Taiwan. The brand awareness, quality perceived significantly effect toward purchasing decision. This study supports the previous study of Kazemi, et al. (2013) which stated the variable on the brand awareness has an advantage on learning the product, determining a product, and the chosen a product to become the important matter by the consumer on purchasing decision. On the study of Doostar, et al. (2012) stated the brand awareness has a direct effect toward purchasing decision on the food product in Iran, similarly with the study of Nigam dan Khausik (2011) stated the brand awareness has significant effect toward purchasing decision of car on India.

Word of mouth has significant effect toward the purchasing decision is the resulted study by Zhenquan dan Xueyin (2010) which stated on the first hypothesis, the more of word of mouth effectively is searched by the consumer, the more of influence word of mouth sender on consumer purchasing decision. The result by this hypothesis was significant which mean responded that analyzed in china, their purchasing decision is influenced by word of mouth process. Besides, in the study of Wang dan Chang (2008) show that with high of product knowledge and purchasing involvement prefer to choose the online word of mouth as the information in purchasing decision. The purchasing decision process the adolescent in China was influenced by the online Word of Mouth since the adolescent who has the high rate to use the internet.

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INTEGRATING THE CONCEPTS OF CITY BRANDING AND TOURISM EVENT ON BEHAVIOURAL INTENTION IN DOMESTIC URBAN TOURISM

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ABSTRACT

Despite the significance of city branding in both academia and industry, literature on its conceptual development is limited. The current study aims to explain and test a theoretical model of city branding, which integrates the concepts of the tourism event on decision to visit and intention to revisit. Type of this research was explanatory, and data was collected by distributing questionnaires to 116 domestic tourists in Banyuwangi, Indonesia. Path analysis was used to analyse the data. The study results show that city branding and tourism event directly and indirectly affect intention to revisit through decision to visit. It is proposed that the decision to visit is a mediator between city brand and tourism event influence on intention to revisit. The results confirmed that intention to revisit is influenced by decision to visit which is a critical mediator between city brand and tourism event. It suggested that government and entrepreneurs in tourism sector should consistently maintain city branding of Banyuwangi and to promote more tourism attractions in order to increase tourist visits to Banyuwangi. In addition, creating synergy among travel agents and initiating more innovative tourism event are also become policy recommendation that should be taken into account by the goverment.

KEY WORDS

City branding, tourism event, decision to visit, revisit intention, Banyuwangi, Indonesia.

The growing research has concentrated on tourism sector since it has contributed to the economic growth. Tourism previously is used to be a tertiary need, now it becomes a primary need. The tourism is a business that increasing rapidly, therefore, it needs an appropriate strategy that enables to manage the tourism potential of each region. From this perspectives, the destination needs to be unique and differential to be selected as a final decision. Thus, the concept of city branding is critical for a destination to be identified and differentiated from alternatives in the minds of the target market.

Brand is an identity that cannot be separated from a product either in the form of services or goods. Kotler and Keller (2009) reveal that brand is a name, term, sign, symbol or design and its combination that is aimed to identify goods or services of one of the sellers or a group of sellers and differentiate it from the competitors. Anholt in Moilanen and Rainisto (2009) defines the city branding as an image management of a destination through strategic inovation and coordination of economic, commercial, social, cultural, and government regulation. The role of city branding is to create positioning and difference to introduce the potential of the region to their tourists.

One of the region potential is attraction in terms of events or festivals. According to Mill (2000) the attraction is an area that is developed earlier to attract the attention of the visitors. Attraction is something that can attract the tourists or a destination that serves different characteristics of each region. Usually, event functioned as one of the strengths of local governments and societies to attract the tourists to visit a particular destination.

As one of small city in Indonesia with has a lot of interesting culture, Banyuwangi conducted a regular festivals to promote their unique culture as part of tourism agenda of the region. The tourism development of Banyuwangi use the continuous concept such as annual event namely Banyuwangi Festival. In 2016, Banyuwangi Festival has a theme "EXPLORE BANYUWANGI you must want to come back". Along with the city branding "The Sunrise of Java", Banyuwangi use the events to attract domestic and international tourist.

According to Liu (2015), city branding can give an impression so that it increases the care and strengthens positioning on the brand that functions to invite the tourists. Yoeti (2002) reveals that event has functions as tourism education by showing the culture or custom of local people in daily life. City branding and event can create the perception to the visitors so that it can stimulate the decision to visit. In addition, create the pleasure so it appropriate pushes to explore more the attraction in Banyuwangi that impact on shaping attitudes of intention to revisit.

LITERATURE REVIEW

City branding is a management of destination through strategic innovation and coordination of economic, social, commercial, cultural, and government's regulation (Anholt in Moilanen and Rainisto, 2009). Kavaratzis and Ashworth (2005) mention that city branding is a concept that is generally practiced by few cities in context of competitions that attract the tourists and investment of environment intensively to promote the regional development. City branding is a strategy that gives brand to the city that functions as a tool to introduce or market the potential of region to all stakeholders from local to internationals. One of purposes of city branding is to attract the investors' and tourists' attention to develop and market the potential of tourism that is owned.

City Branding has a function as a tool to communicate places (city, regency, or province) to the stakeholders (Yananda and Salamah, 2014). Anholt creates city branding hexagon to measure the effectivity of city branding. According to Anholt (2007) the measurement of effectivity of city branding consists of six aspects namely Presence, Potential, Place, Pulse, People, Prerequisite (see Figure 1).

Source: Anholt (2007).

Figure 1 – City Brand Hexagon

According to Getz (2008), event is something that happens as an output or part of any activities. Noor (2009) asserts that event is an activity that is held to commemorate important things, either individually or in a group. Event is an attraction that can be in the form of tradition, sports, culture, ritual of religion, and certain celebration. Moreover, Yoeti (2002) explains that the success of a destination and industry of tourism really depend on attraction, accessibility, and amenities.

The decision making of consumer is a process of interaction between affective attitude, cognitive attitude, behavioral attitude with enviroment factor and people that do changes in all aspects of life (Peter and Olson in Nitisusastro, 2012). The decision to visit in this research is concept that is equal to the decision of buying. Nitisusastro (2012) defines a decision to visit as a stage of last process from a series of process stages that happen in the consumers' behaviors. The decision to visit is a process that is faced by the consumers before visiting that involves finding the information (knowledge) and need of product or

destination, so that they want it that then making a decision to visit that place after passing some stages.

The experience that is obtained by the consumer from a product with a certain brand will make positive impression on that product and the consumer will buy again (Hellier *et al.*, 2003). The intention of re-buying is a form of positive behavior after buying; in this condition the concept of intention of visit is same with the intention of re-buying. The intention to revisit is a form of tourists' care about destination based on previous experience (McKercher and Wong, 2004). The intention to revisit is an intention that refers to the willingness of tourists to visit the same destination (Um *et al.*, 2006). Butcher (2005) argues that the intention of consumers to re-buy is one of success measurement of a company, especially Service Company.
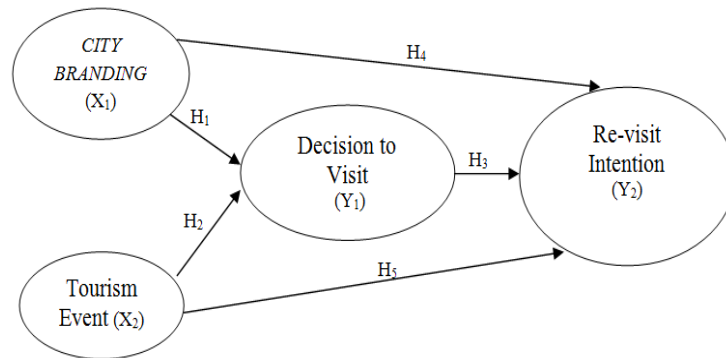
Figure 2 – Research Model

The following is hypotheses of this research:
H_1: City branding significantly influences on decision to visit;
H_2: Event significantly influences on decision to visit;
H_3: Decision to visit significantly influences to the on intention on revisit;
H_4: City branding significantly influences on intention to revisit;
H_5: Event significantly influences on intention to revisit.

METHODS OF RESEARCH

Type of research that is used is explanatory research with quantitative approach. A small city namely Banyuwangi was chosen since this region has an anual festival that quite famous in Indonesia. Four variables under researched were city branding, event of tourism, decision to visit and intention to revisit. This research employs purposive sampling technique to obtain 116 sampel from domestic tourist in some places when Banyuwangi Festival conducted. Questionnaires were distributed to obtain the research data. Path analysis and descriptive analysis were conducted to analyse the data of research.

RESULTS OF RESEARCH

Based on the result of the research it shows that 116 respondents that consist of 49.1% men and 50.9% women. The large amount of respondents originate from East Java province which is 73.3% or 85 people while the rest spreads from Central Java, West Java, Jakarta, Yogyakarta and Bali. Respondents in this research ranged from the youngest age of 18 years old up to the oldest age of 42 years old. However, the largest amount of respondent were aged of 28 years old which is 12 people (10.3%). Largely, respodent in this research were tourists that have visited Banyuwangi with the last educational background is bachelor degree.

The whole tourists that become respondent in this research mentions that they know "The Sunrise of Java" as a brand of Banyuwangi regency. Largely, 71 people or 61.2%

respodents state that they have visited Banyuwangi twice. Vacation is the most reason of respondents to visit which consist of 103 people or 88.8%.

Six indicators in city branding with the mean score of each: (4.38) potential (4.39) place (4.46), pulse (4.33), people (4.31), pre-requisite (4.26). Variable of event has three indicators with mean score of each: attraction (3.77), accessibility (3.69) and amenities (3.69). Structure of decision to visit is an indicator of variable of decison of visit with mean score (3.79). Trasactional, referential, preference and eksplorative are indicators of intention to revisit variable. Those four indicators have mean score of each: transactional (3.69), referential (3.62), preference (3.70) and eksplorative (3.72).

The influence of city branding on decision to visit has beta coefficient of -0.178, t_{count} -2.220 with probability 0,028. Value of probability on the result of analysis is smaller than 0.05 (p<α), it can be concluded that H_0 is rejected. Thus, first hypothesis in this research states that city branding has a significant influence on decision to visit (H_1) is accepted.

Table 1 – Result of Test of Path Analysis

Exogenous Variable	Endogenous Variable	β	T_{test}	Probability	Note
City Branding	Decision to visit	-0.178	-2.220	0.028	Sig
Event	Decision to visit	0.507	6.317	0.000	Sig
Decision to visit	intention to revisit	0.404	4.356	0.000	Sig
City Branding	Intention to revisit	0.181	2.241	0.027	Sig
Event	Intention to revisit	0.200	2.176	0.032	Sig

The influence of event on decision to visit has beta coefficient of 0.507, t_{test} 6.317 with probability 0.000. Probability value in the result of analysis is smaller than 0.05 (p<α), it can be concluded that H_0 is rejected. Therefore the second hypothesis in this research states that, event has a significant influence on decision to visit (H_2) is accepted.

The influence of decision to visit on the intention to revisit has beta coefficient of 0.404, t_{test} 4.356l with probability 0.000. Probability value in the result of analysis is smaller than 0.05 (p<α), it can be concluded that H_0 is rejected. Thus, the third hypothesis in the research that states decision to visit affects significantly on intention to revisit (H_3) is accepted.

The influence of city branding on the intention to revisit has beta coefficient of 0.181, t_{test} 2.241 with probability 0.027. Probability value in the result of research is smaller than 0.05 (p<α), it can be concluded that H_0 is rejected. Therefore, the fourth hypothesis in the research states that, city branding affects significantly on intention to revisit (H_4) is accepted.

The influence of variable of event on the intention to revisit has beta coefficient of 0.200, t_{test} 2.176 with probability 0.032. Value of probability in the result of analysis is smaller than 0.05 (p<α), it can be concluded that H_0 is rejected. Therefore, the hypothesis in the research states that event affects significantly on intention to revisit (H_5) is accepted.

DISCUSSION OF RESULTS

The result of direct path analysis shows that variable of city branding has a significant influence on the variable of decision to visit, with the level of contribution value (-0.178) or (-17.8%). Based on that result it can be concluded that the negative sign on the influence of city branding to the decision to visit shows that the variable of city branding is not the only consideration to visit Banyuwangi residence. Dealing with brand of Banyuwangi "The Sunrise of Java", domestic tourists pay attention more on the tagline as a tool to know a city in forming the decision to visit.

The finding of this research also underlined Anholt' (2007) point of view that the function of city branding as a tool in promoting the potential of city to attract the attention of societies widerly. This promotion is aimed to increase the number of visit of tourists, develop tourism event, increase economic power and introduce culture. City branding which is intentioning can function as an emotion attraction or tourists' attention to visit that place (Winfield-Pfefferkorn, 2005).

The result of direct path analysis shows that event variable has a significant influence on the decision to visit with contribution 0.507 (50.7%). Based on that result it can be concluded that the decision to visit is influenced by positive event. In contrast, if the judgment of the tourists is negative, so it tends to cause the cancellation of decision making to the event. This result supports the research findings conducted by Fitriani and Andari (2013) that there is a relation and influence between variable of event on the Museum of Asia Africa Conference and decision to visit in the city of Bandung.

In each region that has potential of an attraction, it can be used for special event as an additional attraction that conducive the high tourism visit (Getz and Page 2015). In this current condition Banyuwangi also use event as a tool to promote the potential of tourism. Festival is something that cannot be separated from tourism activity because it could attract the tourists (Cudny, 2013). Event has a significant impact or influence on the decision to visit and help to increase the popularity of city (Getz, 2008).

The result of direct path analysis shows that variable of decision to visit has significant influence on the intention to revisit with the contribution value 0.404 (40.4%). Based on that result it can be concluded that the intention to revisit is influenced by positive visit decision. Banyuwangi as the tourism destination can give positive experience to the tourists, so it has a big opportunity to attract the intention of tourists to visit again. This result supports the opinion from Kotler and Armstrong (2008) that states on the evaluation stage, the consumer forms preference on the brands that exist in the collection of choices, and at that time it also forms the intention to buy the product that they like.

The result of decision to visit shows that city branding variable has significant influence on the intention to revisit with the contribution 0.181 (18.1%). Based on that result, it can be concluded that city branding is one of variables that gives positive influence on the tourists to form an intention to revisit. This proves that "The Sunrise of Java" can give good impression for the tourists to decide the intention or intention to revisit to Banyuwangi regency.

This research supports the research result conducted by Hellier *et al.* (2003) that states, strong brand has direct influence on forming the intention of re-buy. This research also supports the research conducted by Filieri and Lin (2016) that states, there is positive relation between brand and intention to revisit. The research result is supported by the opinion of Chiu and Won (2016) that states, to form the intention of re-buy it needs commitment of strong brand. According to Silva (2013) destination brand can influence the tourists easily to visit the same city again.

The result of direct path analysis shows that event variable has a significant influence on the revisit intention with contribution 0.200 (20%). Based on that result it can be concluded that the intention to revisit is influenced by positive event. Based on that result it can be concluded that event is one of variables that gives significant influence on the tourists to form the intention to revisit. The impact of tourists' experience when visiting, it gives positive impression so that it forms the want or intention to revisit. This research result supports the research conducted by Yu *et al.* (2012) event in Shanghai in 2010 that can influence significantly to the variable of intention to revisit.

This research also support previous research result from Kuusik *et al.* (2014) that states a certain event has significant influence on the tourists' behavior to visit that lead to the next visit. This research highlighted the idea of Grappi and Montanari (2011) that event or festival can attract and increase the attention of tourists. The explorative intention is an intention of tourist to explore each event or attraction provided by the government or businessmen of tourism of Banyuwangi regency. Thus, the tourists do not feel bored because they get different attraction visit in each visit to Banyuwangi.

CONCLUSION

City branding variable has a significant influence on the decision to visit. This indicates that tourist use variable city branding as the consideration to visit Banyuwangi regency. Event variable has significant influence on the decision to visit. This indicates that the tourist judge positively B-Fest event so that it makes event as the consideration to make a decision

to visit in Banyuwangi regency. Variable of decision to visit has significant influence on the intention to revisit. This shows that the tourist feel happy so that there is a tendency to form the intention to revisit to Banyuwangi regency.

City branding variable has significant influence on the intention to revisit. It proves that the tourist judges positively "The Sunrise of Java" as a brand of Banyuwangi regency, so the tourist recommends to other people, look for the information related to it and visit again in the future. Event variable has significant influence on the intention to revisit. It means that the tourist judges positively and feels happy for the visit to Banyuwangi regency. So the impact, the tourist has a tendency to visit again and make the B-Fest event as the preference of their holiday.

It is recommended that the government of Banyuwangi should develop more strategiy to positioning their city brand by promoting "The Sunrise of Java" and more Banyuwangi Festival. In addition, synergizing with the businessmen of tourism could be done to increase the intensity of tourism visit. Another strategy through the development of promotion program that describes the condition of Banyuwangi would be helpful to increase the awareness of the region. This concept could be focused on the fields of culture, natural resources and the strengthness of societies' economy.

It is suggested that the government of Banyuwangi can increase the number of tourist through cooperation with tour or travel agent, through the development of event and new policy to facilitate the business tourism activities. The new policy is related to the easyness of business permission, the forming of business group, so that the entrepreneurs in tourism sector can help to increase the number of tourism visit. This research is still limited to the variables of city branding, event, the decision to visit and intention to revisit. It is suggested that in the future research could use other variables and different research methods to obtain more comprehensive results.

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THE INTERPRETIVE PARADIGM IN FINANCE RESEARCH: AN OVERVIEW OF BEHAVIORAL FINANCE

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ABSTRACT

Until now, the financial research is dominated by functionalist paradigm. Whereas there are other paradigms in this world such as the radical structuralist, radical humanist, and interpretive. Particularly, in behavioral finance research, it is very relevant to use interpretive paradigm because behavioral finance explains the what, why, and how infestation works from human perspective. Interpretive paradigm is used to understand the world as it is, understand nature from the social world in subjective experience, and explain individuals and subjectivity consciously. In the future, it is expected that there is another contribution of financial studies by using other paradigms, particularly by the interpretive paradigm. Interpretive paradigm consists of several types, such as ethnomethodology, phenomenological, and symbolic interactionism. Those three types of paradigm can touch the study object that not only depends on its financial market but also on individuals, households, and others so that it has deeper, meaningful, and more diverse research results.

KEY WORDS

Finance research, behavioral finance, research paradigm, interpretive paradigm.

Recently, financial behavior has become a trending topic in terms of financial journals. As one of the behavioral finance initiators, Thaler (1993) suggested that behavioral finance is a new approach to financial markets that has emerged, at least in part, in response to the difficulties faced by the traditional paradigm. In broad terms, it argues that some financial phenomena can be better understood using models in which some agents are *not* fully rational. More specifically, it analyzes what happens when we relax one, or both, of the two tenets that underlie individual rationality. In some behavioral finance models, agents fail to update their beliefs correctly. In other models, agents apply Bayes's law properly but make choices that are normatively questionable, in that they are incompatible with Savage's notion of Subjective Expected Utility.

The research on financial behavior has been conducted in various parts of the world, such as Spindler (2011) on the European continent, Shiller (2003) in the American continent, and Sasongko et al. (2016) in the Asian Continent. While in general, the research revolves around the phenomenon of mainstream financial markets. Why is this happening? Whereas in October 2002, the Journal of Empirical Finance and the Limburg Institute for Financial Economics (LIFE) at the University of Maastricht jointly organized a conference on behavioral finance in Palma de Mallorca (Spain). Methodologically, behavioral finance operates at three levels: (i) it conducts experiments with subjects under controlled laboratory conditions; (ii) it studies real-world financial decisions made by individuals, households, financial professionals and corporations; and (iii) it looks into the behavior of financial markets (Editorial, 2004).

Ardalan (2003) believed that the paradigm of financial research is positioned on a continuum formed by four basic paradigms such as functionalist, interpretive, radical humanist, and radical structuralist. The hierarchical structure of this paradigm is composed of 3 levels namely paradigms, metaphors, and puzzles. It is expected that in the future, such kind of finance research that use interpretative paradigm, radical humanist, and radical structuralist could be well established. Furthermore, Muradoglu and Harvey (2012) the primary input to behavioral finance has been from experimental psychology. Methods developed within sociology such as surveys, interviews, participant observation, focus

groups have not had the same degree of influence. Typically, these methods are even more expensive than experimental ones and so costs of using them may be one reason for their lack of impact. However, it is also possible that the training of finance academics leads them to prefer methodologies that permit greater control and a clearer causal interpretation.

Based on the opinions and those three limits and scopes, it is considered that it could help to provide research opportunities on different objects and paradigms. For examples, making in-depth observations on individuals, households, and financial professionals in financial decision-making. One of the paradigms that can be used to deeply observe a decision-making phenomenon is the interpretive paradigm.

Behavioral Finance. Theoretical and empirical research in finance proceeded as if the human factor in financial decision-making did not matter very much. Many financial economists admitted that the intuitive judgment of investors and their advisors revealed some shortcomings, but they also maintained that the forces of rational arbitrage ensured that market prices were efficient, i.e., stock prices quickly and adequately reflected all available information. The psychology of money was seen as a captivating topic but one that may well be ''too interesting`` for economists and that may distract them ''from the pervasive market forces that should be [their] principal concern'' (Miller, 1986).

This point of view is less widespread and it has become less plausible. One reason has to do with the extraordinary events of the 1980s and the 1990s. A second reason is that a new approach has emerged. Behavioral finance thinks about financial issues with the help of ideas borrowed from psychology. It not only casts doubt on the predictions of modern finance, such as the notion of efficient markets but also on its micro-foundations, i.e., expected utility maximization, rational expectations, and Bayesian updating. Prospect theory, mental frames, heuristics and related psychological concepts form the basis for a new theory of finance. Opinions differ, but so far, it appears, behavioral finance has been a fertile paradigm. In the area of asset pricing, for instance, it has been used to interpret and/or to discover empirical anomalies in the speculative dynamics of stock returns, e.g., under- and overreaction to news. Additionally, through detailed surveys and archival studies of trading behavior, a great deal has been learned about the conduct of investors, analysts, money managers, and others. In corporate finance, the behavioral approach has stimulated interest in the determinants and the quality of executive decision making, e.g., excessive risk aversion, unjustified optimism, hubris and so on (Kahneman, 2002).

Psychological factors play a role in a financial decision-making. Therefore, financial analysis that is using psychology and financial science is known as financial behavior. Thaler (1993) said that behavioral finance is simply open minded finance-claiming that sometimes in order to find the solution to an [financial] empirical puzzle it is necessary to entertain the possibility that some agents in the economy behave less than fully rationally some of the time. Lintner (1998) on the other hand proposed that behavioral finance is the study of how humans interpret and act on information to make informed investment decisions. Olsen (1998) also said that behavioral finance does not try to define "rational" behaviour or label decision making as biased or faulty; it seeks to understand and predict systematic financial market implications of psychological process. It is followed by Shefrin (2000) which defines behavior finance as a study of how psychological phenomena affect their financial behavior.

Ricciardi and Simon (2000) suggested that the key to defining behavioral finance is to first establish strong definitions for psychology, sociology and finance.

Figure 1 demonstrates the important interdisciplinary relationships that integrate behavioral finance. When studying concepts of behavioral finance, traditional finance is still the centerpiece; however, the behavioral aspects of psychology and sociology are integral catalysts within this field of study. Therefore, the person studying behavioral finance must have a basic understanding of the concepts of psychology, sociology, and finance to become acquainted with overall concepts of behavioral finance.

Tversky and Kahneman (1979) reveal that there are three factors in human behavior that are contrary to the assumptions underlying the classical economic model in decision-making. This phenomenon is referred to as "cognitive illusions" because it is associated with the perception that often leads to errors.
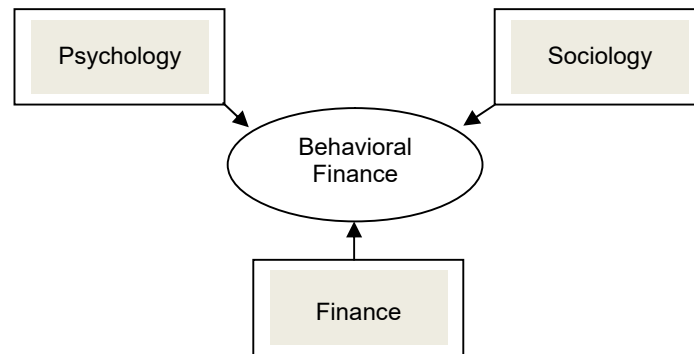
Figure 1 – Behavioral Finance among Psychology, Sociology and Finance
(Ricciardi and Simon, 2000)

1. Risk attitudes. The fundamental assumption in economic theory points out that humans are creatures that do not like risk. Investors will prefer an investment that provides a definite rate of return compared to an investment that contains uncertainty in return. There is a positive relationship between the level of risk and the level of return expected by the investor. Because investors act like they risk averse, then they are just willing to take a riskier investment opportunity if they can obtain higher profit levels.

2. Mental Accounting. This factor refers to the tendency of investors to classify their finances on different accounts based on subjective criteria such as sources of funding and the purpose of utilizing income. The allocation of different functions to each of these accounts often causes irrational impacts on financial decision-making (both in terms of expenditure and savings) in which it deviated from conventional economic concepts.

3. Overconfidence. It is undeniable that humans have a tendency to be overconfident of their ability and predictions to succeed. This condition is a normal thing that is also a mirror of a person's confidence level to achieve or get something.

Interpretive Research Paradigm. Interpretive paradigm is also known as subjective interactionist. This alternative approach comes from German philosophers who focus on the role of language, interpretation, and understanding in social sciences. This paradigm has a base thought that the rules applied in natural sciences cannot be applied to social sciences. The perspective of nominalists who see social reality as something that is only a label, a name, or a concept is used to build a reality and nothing real.

The nature of this paradigm believes that social reality is consciously and actively built by individuals so that each individual has the potential to sense every deed they were done. In other words, social reality is the result of a series of interactions between social actors in a particular environment. For interpretive paradigm, science cannot be used to explain and to predict. This is similar to positivism paradigm but rather to understand. Burrell and Morgan (1979) prove that interpretive paradigm is informed by a concern to understand the world as it is, to understand the fundamental nature of the social world at the level of subjective experience. It seeks explanation within the realm of individual consciousness and subjectivity, within the frame of reference of the participant as opposed to the observer of action. The following table is a comparison of the functionalist (positivism) and interpretive paradigm (Table 1).

Burrell dan Morgan (1979) argue that interpretive paradigm consists of several types such as ethnomethodology, phenomenological, and symbolic interactionism. Ethnomethodology is an approach developed in the 1960s, with a unique terminology in which it combines theory, philosophy, and methods. Meanwhile, Mehan and Wood (1975) believe that Ethnomethodology is not a body of findings, nor a method, nor a theory, nor a world view. I considered that Ethnomethodology is a form of life, is an attempt to display the reality of a level which exists beyond the sociological level, it differs from sociology much as sociology differs from psychology.

Phenomenological is a research strategy in which researchers identify the nature of human experience in relation to a particular phenomenon. Understanding human life

experiences make Phenomenological philosophy as a method of research whose procedures require researchers to have a relatively long and direct study on a number of subjects in order to develop the patterns and relationships of meaning (Moustakas, 1994).

Table 1 – Comparison between the Functionalist (Positivism) and Interpretive Paradigm

Metatheoretical Assumptions About	Positivism	Interpretivism
Ontology	Person (researcher) and reality are separate	Person (researcher) and reality are inseparable (life-world)
Epistemology	Objective reality exists beyond the human mind	Knowledge of the world is intentionally constituted through a person's lived experience
Research Object	Research object has inherent qualities that exist independently of the researcher	Research object is interpreted in light of meaning structure of person's (researcher's) lived experience
Method	Statistics, content analysis	Hermeneutics, phenomenology, etc.
Theory of Truth	Correspondence theory of truth: one-to-one mapping between research statements and reality	Truth as intentional fulfillment: interpretations of research object match lived experience of object
Validity	Certainty: data truly measures reality	Defensible knowledge claims
Reliability	Replicability: research results can be reproduced	Interpretive awareness: researchers recognize and address implications of their subjectivity.

Source: Sandberg, 2004.

Francis (1982) in his theory explains that symbolic interactionism is essentially a sociological-psychological perspective that is especially relevant for sociological investigations. This theory will deal with social structures, concrete forms of individual behavior or alleged inner qualities. Symbolic interactionism focuses on the nature of the interaction, on the dynamic patterns of social action and social relationships. The interaction itself is considered as a unit of analysis: while the attitudes are put into the background.

Interpretive Research Paradigm in Behavioral Finance. All theories in finance are based on the philosophy of science and the theory of society. Many researchers do not seem to realize or ignore, the philosophical assumptions underlying financial theory. They emphasize only some aspects of the phenomenon and ignore the others unless they come out of the basic philosophical assumptions of the theory.

Each analysis is inseparable from the role of the research paradigm. In social theory, it is understood that there are four key paradigms, namely functionalist, structuralist, radical humanist, and radical functionalist. Those paradigms are found on different views of the social world. Each of which produces different theories, concepts, and analytical tools from each paradigm. These four paradigms are very important to any scientist because the knowledge of the paradigm makes scientists aware of the boundaries in which they approach their subject. Each of the four paradigms implies a different way of social theory in general. Mostly, the financial theories are within the limits of the functionalist paradigm. They abandon other paradigms that are necessary and interesting to investigate.

According to Burrell and Morgan (1979), each theory can relate to one of the four research paradigms. The four paradigms are based on different assumptions about the nature of sciences (the subjective-objective dimension), and the nature of society (the dimensions of radical regulation of change), as presented in Figure 3.

This model of organizational analysis developed by Burrell and Morgan classifies sociological theories along the two orthogonal dimensions of regulation vs. change and subjectivity vs. objectivity (Burrell & Morgan, 1979). This divides sociology into four fairly distinct paradigm clusters. There is internal consistency under each paradigm, in terms of assumptions about individuals, groups, societies, goals of the study and accepted forms of evidence. However, each cluster neglects, excludes or opposes some the insights generated under other paradigms.
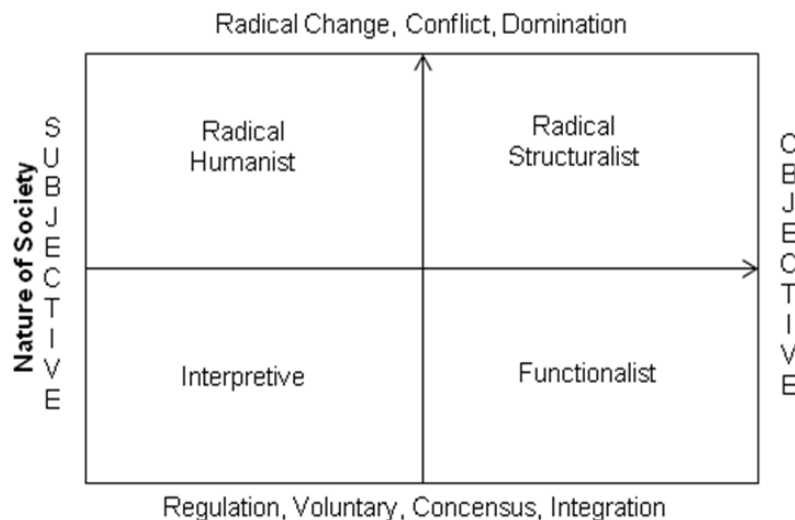
Figure 2 – The Four Paradigms (Burrell and Morgan, 1979)

Burrell and Morgan's model was later taken into social work research, where it was used to define four approaches to understanding the problems of social work clients. This application of the model is illustrated below.

1. Radical Humanist (Change-Subjective): Social opportunities and ideologies are controlled by large social institutions, often leaving people marginalized, voiceless and disempowered, leading to widespread alienation and the breakdown of communities. Interventions are aimed at concrete individuals and groups, establishing mutual aid and consciousness-raising networks that will lead to eventual changes in social and economic structures.

2. Functionalist (Regulation-Objective): Societies are the coming together of populations with shared civic values who establish a social order which on the whole benefits everybody. Individuals and some identifiable groups may fall into misfortune or maladaptive patterns. The goal of intervention is to help them adapt to existing structures, perhaps making minor institutional adjustments where warranted.

3. Radical Structuralist (Change-Objective): Fundamental underlying contradictions and regularities make our entire way of living unjust and untenable. Distressed individuals and groups can be helped to mollify the impact of structural problems, but lasting change can only be achieved by a complete transformation of the society. Intervention must be integrated across political, regional, community and interpersonal levels.

4. Interpretive (Regulation-Subjective): The meaning of social situations is largely a matter of interpretation. Anyone can feel trapped by their situation, but viewing things in a new light can open up new options and lead to better situations. Intervention focuses on helping people reframe events and adjust the maxims they use to regulate their own behavior.

Basically, behavioral finance tries to explain what, why, and how infestation works from a human perspective (Ricciardi and Simon, 2000) so that it is very relevant to use the multi-paradigm approach in behavioral finance research particularly the interpretive paradigm. Interpretive paradigm is informed by a concern to understand the world as it is, understand nature from the social world in subjective experience, and explain individuals and subjectivity consciously. This paradigm believes that social reality is consciously and actively built by individuals so that every individual has the potential to interpret every act. In other words, a social reality is the result of a series of interactions between social actors in a particular environment. As for interpretive paradigm, science cannot be used to explain and to predict as well as the functional paradigm but more to understand (Burrel and Morgan, 1979).

CONCLUSION

Epistemologically, behavioral finance research raises a controversy which generally uses a functional research paradigm. In this case, it raises the question that why financial research generally uses a functional research paradigm? Whereas there are four research paradigms such as functionalist, radical structuralist, radical humanist, and interpretive. The paradigm of financial research positioned on continuum formed by four basic paradigms so that it is expected that there is another contribution of financial studies by using other paradigms, particularly the interpretive paradigm. Interpretive paradigm consists of several types, such as ethnomethodology, phenomenological, and symbolic interactionism. Those three types of interpretive paradigm can touch the study object that not only depends on its financial market but also on individuals, households, and others so that it has deeper, meaningful, and more diverse research results.

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THE INFLUENCES OF LEADERSHIP STYLES, ORGANIZATIONAL COMMUNICATION, AND JOB SATISFACTION TOWARD EMPLOYEES' JOB PERFORMANCE IN DOING CONSTRUCTION JOBS: A STUDY ON THREE CONSTRUCTION COMPANIES IN JAKARTA

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ABSTRACT

This study was conducted to investigate and to analyze the influence of leadership styles, organizational communication and job satisfaction toward workers' performance in doing construction jobs in three different construction companies in Jakarta. The study attempts at explaining causal-effect relationship among the variables of this study through a quantitative approach and positivism paradigm. The population of this study included all employees who were actively involved in the projects of 3 construction companies; PT. Mega Persada Indonesia, PT. Jaya Teknik Indonesia, and PT. Jaga Citra Inti. Those three companies were in the process of completing construction jobs. Hence, those companies were seen to be able to provide information as the data of this study. The samples were determined through quota sampling method in which only certain employees in certain level including the senior staffs or managerial staffs who understood the detail of the projects. Generalized Structured Component Analysis (GSCA) was employed to analyze the data of this study which results show that; (1) leadership styles do not have any significant influence on job satisfaction. (2) Organizational communication has an influence on employees' performance. (3) Leadership styles do not have any significant influence on the construction job performance. (4) Organizational communication has a significant influence on the construction job performance. (5) Job satisfaction has a significant influence on the construction job performance. (6) Job satisfaction is not the mediating variable between leadership styles and construction job performance. (7) Job satisfaction is a mediating variable between the organizational communication and the construction job performance.

KEY WORDS

Leadership styles, organizational communication, job satisfaction, job performance.

The development of construction industries is mainly affected by the economic development. Indonesia has recorded a significant economic growth within the last five years at 5% to 6% in each year. This economic growth holds a major role in stimulating the growth of construction industries in Indonesia. The growth of construction industrial market is also followed by the increasing competition among construction companies. Besides facing the era of local autonomy, construction companies are also facing the globalization era marked by the implementation of the Asean Free Trade Area (AFTA) in 2003 and the ASEAN Economic Community in 2016 which allow construction companies from abroad to compete in the national construction market in Indonesia. Construction companies are challenged to stay competitive in this global market (Marboen, 2014). The competitiveness of construction companies relies on the professionalism of the companies. Companies are required to be keen on seeking chances to take for longer-term period. Excellent project management becomes a key point to the success of the construction companies. It is stated in the American Standard Project Management of Body of Knowledge, *Palang Merah Indonesia* (PMI) there are 9 key factors that should be owned by a project manager including; a) Project

Integration Management; b) Project Scope Management; c) Project Time Management; d) Project Cost Management; e) Project Quality Management; f) Project Human Resources Management; g) Project Communication Management; h) Project Risk Management; i) Project Procurement Management.

A project manager should possess leadership capabilities besides having good managerial skills. Previous study conducted by Kerzner (2001) showed that leadership styles determine whether or not a person is chosen as a project manager. Leadership within the context of construction industry has a key role as the jobs in the field are quite complex in which various aspects are involved in the project (Hillebrandt, 2000). Besides leadership styles have a great role to the success of a construction company in handling construction jobs, Bjeirmi *et al.* (2007) highlighted that inefficient communication may also trigger low quality work, financial claim, safety and inefficiency. Good communication is one of interpersonal competences which plays an important role to the success of doing construction jobs. Other studies also showed that a project supervisor should intensively communicate and pass any information to make sure that workers are doing their jobs based on the standards in order to avoid problems. According to the statements of Yang, *et al.* (2007); Bjeirmi *et al.* (2007) and; Watson and Gallagher (2005), communication plays an important role to do successful construction jobs that meet certain targets or expectations.

High job satisfaction felt by employees also has a crucial role for an organization to support high quality performance as expected by the organization. Review on the correlation between job satisfaction and job performance is still necessary to conduct in different organization and different job sectors. The high competition among construction companies demands companies to show their high-quality work and achievement. Job satisfaction has been an interesting issue for psychologists to explore. A relationship between job satisfaction and job performance as "holy grail" in psychology industries. Studies on the relationship were done by some researchers including Shore and Martin (1989), Riketta (2008) who found that job satisfaction is strong enough to influence employees' performance. Perera *at al.* (2014) also stated that job satisfaction has a positive influence toward job performance.

A project manager handles quite strategic roles as the catalyzer and determinant in the exploration of project resources among central offices and project staffs. The success of the project also depends on the quality of the communication maintained among stake holders, besides it is also affected by employees' job satisfaction that supports the improvement of their job performance. Based on those explanation, research questions were formulated as follow.

1. Do leadership styles influence employees' job satisfaction?
2. Does organizational communication influence employees' job satisfaction?
3. Do leadership styles influence the performance of a company in handling construction jobs?
4. Does organizational communication influence the performance of a company in handling construction jobs?
5. Does job satisfaction influence the performance of a company in handling construction jobs?
6. Is job satisfaction a mediating variable between the influence of leadership styles on the performance of a company in handling construction jobs?
7. Is job satisfaction a mediating variable between the influences of organizational communication on the performance of a company in handling construction jobs?

REVIEW OF THE RELATED THEORIES

Simanjuntak (2005) stated that performance is the achievement of doing certain tasks. Simanjuntak also regarded individual job performance as an achievement to the target given to him/her in a certain period of time. Performance is also the result of doing certain jobs based on certain standards set by the company. Sedarmayanti (2007) mentioned some factors that influence employees' job performance which are; 1) attitude and mentality (motivation, discipline, ethics), 2) education, 3) skills, 4) leadership management, 5) level of

earning, 6) salary and health, 7) insurance, 8) work environment, 9) facilities, 10) technology, and 11) career path. Construction jobs require lots of people, lengthy process, various steps, and supervision from public sector as well as non-government sector to bring success to a project (Takim and Akintoye, 2002). Measurement on the performance of certain construction project helps a manager to provide continuum feedback during the operational activities (Lehtonen, 2001). Documentation and recording of any data related to the work will also provide great reference in anticipating future problems, claim, maintenance, and renovation of the building (Thomas *et al.*, 2002).

Leadership is defined by some experts such as Bennis (1989) who stated that leadership is a process to influence employees to act and behave in certain ways as expected by a leader. Fiedler (1967) defined leadership as an attempt to direct or coordinate certain tasks for members of a group. Merton (1969) mentioned that leadership is a process to influence certain group of people in an organized way in order to achieve certain goals. Leadership can also be seen within the context of a group or organization as mentioned (Bennis, 1989), Fiedler (1967) and Merton (1969) that leadership is a process to influence other people either individually or as a group to be directed and organized in certain ways in order to achieve certain goals. Stogdill (Dunford, 1995) mentioned some physical characteristics and mental characteristics of a leader including; age, appearance, fluency in speaking, smartness, energetic manner, dominance, having high confidence, extroverted, high motivation and competence in implementing effective leadership. Lewin, Lippitt and White (1939) in the 1930s conducted a study on the level of freedom which resulted to new terminologies on leadership such as autocratic, democratic and laissez-faire. Transformational leadership is an expansion of the transactional leadership in which the transformational leadership is not only limited to exchanges and agreement. Hoy and Miskel (2008) stated that transformational leaders should be proactively enhancing people's awareness on the importance of inspirational collective interests and leaders are expected to always provide helps for employees to achieve maximum results. Furthermore, Gibson *et al.* (2000) explained that transactional leadership is able to adjust to various goals, directions and missions for practical reasons. On the other hand, transformational leadership is also powerful in creating major changes in an individual as well as in an organization regarding to the procedure in doing jobs and human resources management to achieve certain missions. Hillebrandt (2000) highlighted that good leadership is necessary to implement in any sector from the industrial sector up to construction projects. Technically, construction jobs are quite complex since the jobs demand a good combination of various specific skills in which lots of people with different background from different organizations and culture. Therefore, it is necessary to have a leader who is able to collaborate those aspects to achieve the goals as planned.

Communication is a process that connects individuals and groups within an organization or society by creating, sending and using information to make coordination among members of an organization (Ruben and Stewart, 2006). Communication is a process in which a peson is interactively creating, maintaining and managing certain meaningful message (Conrad and Poole, 2005). Communication is also an interaction maintained among individuals or groups in which information is delivered to receivers to be understood. In addition, communication is also able to create, maintain and organize certain messages within a society. Organizational communication is an exchange of information within a group which members share interdependent relationship to face certain situations (Goldhaber, 1986). Communication is an activity that connects individuals or groups of people in an organization (Lubis, 2008). Basically, organizational communication is a communication maintained in an organization by exchanging messages among individuals or groups in order to grow similar perspective in performing their jobs. Within construction job context, Yang *et al.* (2007), Watson and Gallagher (2005) effective communication is quite important to maintain good teamwork and coordination among workers and it can also be used to motivate workers to perform their jobs well as stated in the contract. Failure of construction industries is strongly influenced by ineffective communication (Wikforss and Alexander,

2007). One of factors that trigger ineffective communication is the fact that construction projects are temporary projects with time limitation.

Kreitner and Kinicki (2001) defined job satisfaction as an effectiveness or emotional responses toward various aspects of a job. Meanwhile, Davis and Newstrom (2000) described job satisfaction as a set of employees' personal feelings related to how enjoyable the jobs seem to them. According to Robbins (2001), job satisfaction refers to the general behavior shown by a person about her/his job that reflects the appropriateness between what is earned and what is believed to be earned. Job satisfaction is a key factor in doing construction jobs since it is the connector between the managerial staffs and employees which is important for project supervisors to determine the wages for employees (Uwakweh, 2005). Measurement on job satisfaction of construction sector adopts the theory of job satisfaction in which job satisfaction is seen as the suitability between what is expected and what is experienced while performing certain jobs (Locke, 1969). Job satisfaction also refers to the positive or negative feelings of an employee toward his/her job (Odom *et al.,* 1990).

CONCEPTUAL FRAMEWORK OF THE STUDY

Leadership is a competence to influence a group of people to achieve certain predetermined goals (Robbins and Judge, 2009). Leadership is also a skill owned by a leader to inspire and motivate members of an organization to achieve organizational goals. Meanwhile, Elenkov (2002) and Vecchio *et al.* (2010) stated that leadership has certain influences toward job performance and job satisfaction, Kincaid and Schramm (1987) explained that communication is a process of sharing information among people to obtain other information. Organizational communication reflects the effective communicative behavior in an organization (Yu and Miller, 2003).

Job satisfaction refers to a positive feeling over the evaluation of the jobs that have been done (Robbins and Judge, 2009). Job satisfaction is able to improve one's job performance which later will also enhance the organizational performance. Communication also has a significant influence toward the job satisfaction since good communication improves employees' job satisfaction. Vinnicombe (1984) showed that effective communication maintained within an organization may stimulate improvement on employees' job satisfaction.
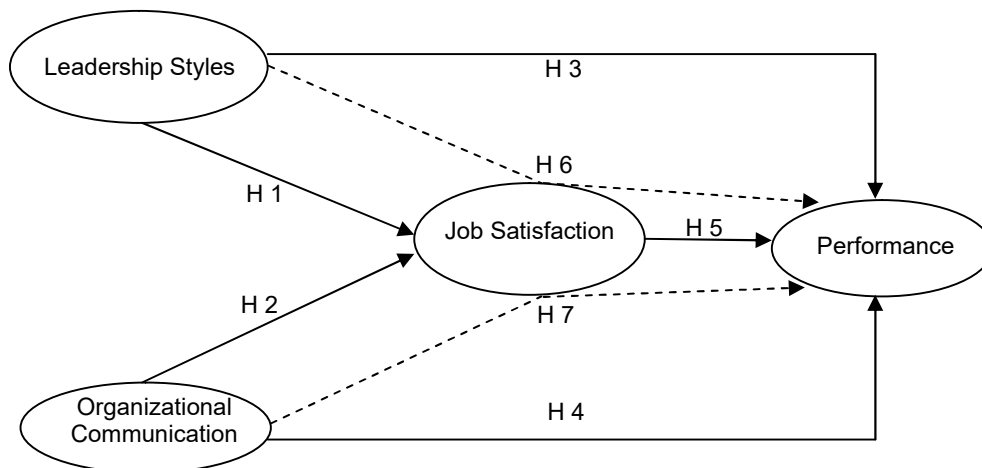
Figure 1 – The Conceptual Framework

Leadership styles influence employees' job satisfaction. Leadership is seen as way to run the function of a leadership and how a leader behave toward the employes (Mullins, 2000). Leadership has a function to guide the employees to behave in certain ways to achieve job satisfaction and organizational commitments. Hence, jobs will be finished optimally (Lok and Crawford, 2004; Chang and Lee, 2007). Leadership styles and

organizational culture have significant influence toward employees' job satisfaction (Lund, 2003; Yiing and Ahmad, 2009). Therefore, the first hypothesis of the study was formulated as follows.

H_1: Suitable leadership style improves employees' job satisfaction.

Organizational communication influences employees' job satisfaction. Communication includes any information transfer technique from peoples' mind and behavior shown to other people. Communication represents people's mind which can be used to influence others' minds (Moghimi and Firozabad, 2013). Anderson and Martin (1995) stated that even though internal communication provides members with important information related to the organization and the jobs, individuals usually demand more information and do communication to fulfill interpersonal needs which make them feel that they are part of the organization. Farahbod *et al.* (2013) mentioned that communication is able to improve employees' satisfaction. Effective internal communication stimulates improvement on job satisfaction and provides the organization with better competitiveness and competence (Gray and Laidlaw, 2004). Based on this reason, the hypothesis of this study was formulated as follows.

H_2: Better organizational communication improves employees' job satisfaction.

Leadership styles influence job performance. Leadership is the most important factor within the management of a construction company since leadership is beyond just managing the project but it is also an art to influence others' behaviors to achieve certain goals (Bhangale and Devalkar, 2013). Leadership and team effectiveness are closely correlated to the effectiveness of a construction company for suitable leadership is able to support the success of the construction project (Naoum, 2001). Yang *et al.* (2011) mentioned that the strength of the influence of leadership style toward the success of the project depends on the characteristic of the industrial sectors and types of the projects. Leadership plays an important role in the construction companies to improve better performance. Therefore, the hypothesis of the study was formulated as follows.

H_3: Leadership styles improve job performance of construction companies.

Organizational communication influences job performance. Communication and information hold important roles for the team effectiveness (Yang *et al.* 2011) since communication distributes effective information for the members of the team. Haas and Hansen (2007) explained that within a complex condition and interrelated tasks, communication and information sharing among members of a team is very much crucial to maintain the whole organizational productivity of a company. Communication is a two-way interaction which balances the organizational targets and stakeholders' expectations to provide excellent intern and extern organizational effectiveness (Collier *et al.*, 2004). Effective communication maintained in a project solves problems in a team which also shows that communication is able to improve job performance. Hence, the hypothesis of this study was formulated as follows.

H_4: Better organizational communication improves job performance of a construction company.

Employees' job satisfaction influences job performance. Job satisfaction is one's evaluation toward fairness in doing certain job, making the satisfaction does not only support better performance, but it also get them feel high organizational citizenship behavior (Organ, 1988). A newest meta-analysis obtained from 16 studies show that performance and behavior have significant influence on job satisfaction (Riketta, 2008). Frino (2010) stated that job satisfaction has certain influences toward the job performance of professional salesmen. Yang (2012) found that job satisfaction positively influenced the job performance. Meanwhile, in a study on the characteristics of personality and the correlation between job achievement and job satisfaction showed that job satisfaction has certain influence toward job performance. Based on those statements and the results of previous studies, the hypothesis of this study was formulated as follows.

H_5: Higher job satisfaction improves job performance.

Job satisfaction is a mediating variable between the influence of leadership styles toward job performance. Results of the research conducted by Voon *et al.* (2011), Braun *et*

al. (2013), Sabir *et al.* (2012) indicate that leadership styles influence job satisfaction. Meanwhile, a research that attempted at connecting the job satisfaction and job performance were conducted by Riketta (2008), Perera *at al.* (2014), Yang (2012) which results show that job satisfaction influence job performance. The results of those previous studies showed that job satisfaction might be the mediating variable between leadership styles and job performance. Keller (2006) stated that leadership is able to influence the teamwork with the support of good competence, intern satisfaction and organizational formalization which show that leadership might influence job performance through the role of other variable. Therefore, the hypothesis of this study was formulated as follows.

H_6: Employees' job satisfaction is a mediating variable of the influence of leadership styles on job performance.

Job satisfaction is a mediating variable between the influence of organizational communication toward job performance. Job satisfaction is one's evaluation toward fairness in doing certain job, making the satisfaction does not only support better performance, but it also get them feel high organizational citizenship behavior (Organ, 1988). Social satisfaction and instrumental satisfaction influence the performance of a team (Nerkar *et al.*, 1996*).* Job satisfaction shares a positive influence toward employees' performance (Van Scotter, 2000). Job satisfaction positively influences job performance (Yang, 2012). Reviews on the relationship between job satisfaction and job performance show that employees' job satisfaction influences job performance. Earley and Mosakowski (2000) stated that communication builds up strong organizational culture that improves job performance and team effectiveness, showing that communication enhances job performance through organizational culture. Effective intern communication stimulates higher job satisfaction which also support better competitiveness and competences of an organization (Gray and Laidlaw, 2004). Therefore, the hypothesis of this study was formulated as follows.

H_7: Job satisfaction is a mediating variable between the influence of organizational communication toward job performance.

METHODS OF RESEARCH

This study employed a positivistic approach which was used to test the theory, describe the experiences and observation and to do measurement and tests (O'Leary, 2000). Meanwhile, Hirschheim (1985) stated that positivistic approach is used to explain and predict social domain by seeking for causal relationship among the elements. This study is a survey research conducted by analyzing the information obtained from individual samples to be drawn into conclusions that reflects bigger population (Kelley *et al.*, 2003). Research setting in which this study was conducted reflects the scope of the study. This study was conducted at PT. Mega Persada Indonesia, PT. Jaga Citra Inti and PT. Jaya Teknik Indonesia which are reputable mechanical and electrical construction companies in Indonesia. The determination of population was the first step to choose the respondents. After the population had been determined, samples were chosen to reflect the population. The population of this study are all of senior staffs under project leaders involving 151 respondents that consisted of 71 respondents from PT. Mega Persada Indonesia, 40 respondents from PT. Jaya Teknik Indonesia, and 151 respondents from PT. Jaga Citra Inti. Quota sampling technique was used to determine the samples which allowed the researcher to take certain employees from certain level who understood the whole job of the companies including the financial aspect, quality, and time management. This study employed the Generalized Structured Component Analysis (GSCA) to analyze the data.

RESULTS AND DISCUSSION

The result of the data analysis shows that the coefficient value of leadership styles (X1) toward job satisfaction (Y1) was found at 0.002 with a critical ratio of 0.02. This result shows that the leadership styles (X1) does not have any significant influence toward job satisfaction (Y1). Therefore, hypothesis 1 which states that suitable leadership styles improve

employees' job satisfaction is rejected. Leadership styles of project managers do not support job satisfaction. The strongest indicator that builds up leadership styles is the supportive leadership in which project managers should actively motivate the employees. Project managers of this study were not yet able to optimally implement the supportive leadership. This result goes contradictory to the result of the study conducted by Voon *et al.* (2011) which stated that leadership styles consisting of transformational and transactional leadership had significant influence toward job satisfaction. Leadership styles consists of directive leadership, participative leadership and supportive leadership influenced the job satisfaction. The gap of these studies indicates that different leadership styles give different results. Besides, different research objects also give different results. Different job environment and different employees' characteristics also give different results.

The coefficient value of the organizational communication and employees' job satisfaction was found at 0.576 with critical ratio of 6.65*. Those values show that organizational communication influence employees' job satisfaction. Based on the result of the data analysis, the hypothesis 2 is accepted meaning that the higher the organizational communication, the higher the job satisfaction. The result of the analysis also show that organizational communication done by project managers have been able to give positive influence toward employees' job satisfaction. Basically, organizational communication is a process of building good relationship and teamwork among members of an organization. Good organizational communication is able to build favorable relationship and good teamwork that motivate the employees to do their job well and feel satisfied in performing their jobs. It is stated by Trombetta and Rogers (1988) that well-maintained communication in an organization is able to stimulate job satisfactory among employees. Construction jobs require a simultaneous process from planning, designing, financial management, process management up to the finishing step which demand good quality and systematic organizational communication to deliver messages across members. Communication within the project management has a key role to maintain good relationship among members and to stimulate the good understanding and teamwork (Uher and Devenport, 2009). Communication within a construction project also holds a strategic role to build conducive work situation that lets everyone work based on the predetermined plan. Good communication that builds conducive work environment also creates comfortable situation for the employees to work and to feel satisfied with their jobs.

The coefficient value of the influence of leadership styles toward the job performance of construction companies was found at 0.003 with a critical ratio of 0.38. This result shows that leadership styles do not have any significant influence toward the job performance of construction companies. Based on the result of the data analysis, the hypothesis 3 which states that suitable leadership styles will be able to improve the job performance is rejected. This study shows that leadership styles which consists of directive leadership, supportive leadership, participative leadership and target-oriented leadership do not bring any influence toward the job performance since construction projects run well without those aspects. Limsila and Ogunlana (2008) found a correlation between leadership styles and job achievement. There is a correlation between leadership styles and job performance. Those results are different from the result of this study which might be caused by the use of different concepts of leadership styles and different research settings.

The coefficient value of the relationship between organizational communication toward the job performance of construction companies was found at 0.295 with critical ration of 2.85*. This result shows that there is a significant influence of the organizational communication toward job performance. Based on this result, the hypothesis 5 which states that better organizational communication implemented by project managers is able to give significant influence to the job performance is accepted. This result indicates that better organizational communication stimulates better job performance. The item of organizational communication that has the strongest influence is the communication with the employees, in which leaders are expected to guide the employees to do their job well. The result of this study supports the result of the previous study conducted by Yang *et al.* (2007) that good coordination is able to build good teamwork which stimulates better job performance. Watson

and Gallagher (2005) stated that basically, construction job requires good communication for good coordination, changes and motivation to achieve the targets of the project. Organizational communication has a positive relationship with organizational commitment and job performance.

The coefficient value of the relationship between job satisfaction toward job performance of construction companies was found at 0.425 with critical ratio of 5.69*. This result shows that job satisfaction has a significant influence toward job performance of construction companies. Based on this result, the hypothesis 5 is accepted. Hence, job satisfaction felt by project employees is able to stimulate better job performance. The most frequent item of job satisfaction perceived by employees is the fairness, in which employees feel that they belong to the team and are fairly treated. This result supports the result of previous study conducted by Nerkar *et al.* (1996) that job satisfaction socially and instrumentally influences job performance. Yang *et al.* (2012) mentioned that job satisfaction supports job performance. Previous studies were not conducted to industrial companies yet the results of those studies are similar. This study shows that job satisfaction influences job performance.

The result of Sobel (1982) test shows p-value of the influence of leadership styles toward job satisfaction was found at 0.981005. The p-value of 0.981005 is greater than 0.05, meaning that job satisfaction is not the mediating variable of the influence of leadership styles toward job performance of the construction companies. Therefore, hypothesis 6 which states that job satisfaction is a mediating variable of the leadership styles toward job performance is rejected. Therefore, leadership styles that consist of directive leadership, supportive leadership, participatory leadership and target-oriented leadership are not yet able to meet the expectation of the employees and are not yet able to stimulate better job satisfaction. Leadership styles implemented by project managers in the form of directive leadership, supportive leadership, participatory leadership and target-oriented leadership are not suitable to be implemented in managing construction jobs and are not yet able to give positive influence toward job satisfaction and job performance. The result of this study does not support the one found by Barbuto (2005) who confirmed that motivation is a mediating variable between leadership styles and job performance. Whilst, in this study, job satisfaction was set as the mediating variable, yet the result of the data analysis shows that job satisfaction does not actively work as the mediating variable of the leadership styles in improving better job performance.

The result of Sobel (1982) test administered to find the influence of organizational communication toward job satisfaction and the test on the correlation path between job satisfaction toward job performance showed p-value of 0.000017 which is lesser than 0.05. Hence, job satisfaction is confirmed as the mediating variable of the influence of organizational communication toward the job performance of construction companies. Based on those results, the hypothesis 7 which states that employees' job satisfaction is a mediating variable of the influence of organizational communication toward job performance is accepted. The strongest item of the organizational communication which influences the performance is the supervision communication which refers to the information that is passed to the employees that helps them doing their jobs well. The delivery of information that lets employees do their job well also creates favorable work environment and prevents employees from making mistakes or errors. Good job done by the employees also gives them comfortable feeling that leads to job satisfaction toward their own work. Good relationship among employees in an organization also stimulates job satisfaction and better commitment (Muller and Turner, 2009). Ducker (1970) stated that good communication maintained among employees avoids problems and supports the success of the project. Bass (1985) explained that job satisfaction strongly and consistently influences job performance. Based on the opinion stated by Muller and Turner (2009), Ducker (1970) and Bass (1985) show that theoretically, communication gives both direct and indirect influences toward job performance. The result of this study also shows that organizational communication influences job satisfaction and job performance.

CONCLUSION

Based on the Path Goal Theory, leadership styles which have been implemented by project managers do not have any influence toward the job performance due to different characteristics of the respondents. This study involved senior staffs who are experienced in doing construction jobs for around 6-20 years and they have good knowledge on the quality performance, time allocation and funding of the companies. Therefore, leadership styles consisting of directive leadership, supportive leadership, participatory leadership and target-oriented leadership was not strong enough to stimulate better job satisfaction and better job performance.

Based on the Path Goal Theory, leadership styles do not have any influence on employees' job satisfaction because in this research, job satisfaction felt by the experienced employees has more influence on transactional aspects such as bonus, reward, prosperity supplement, and promotion since transactional aspects are more concrete. Thus, it is necessary to conduct further research on the transactional leadership style.

Organizational communication which have been implemented by project managers have been confirmed to have positive influence on the improvement of the job performance. Organizational communication used in this study refers to individual feedback, supervision communication, vertical communication, horizontal communication, the quality of communication media, communication climate and reporting.

Job satisfaction appears as a mediating variable between the influence of organizational communication and the job performance. The result of this study shows that job satisfaction directly and indirectly influences job performance. Job satisfaction item that strongly creates extern satisfaction is the satisfaction that appears out of the policies and treatments given by the companies. Job satisfaction felt by employees drives the employees to do their jobs well and to produce better job performance.

Employees' job satisfaction does not appear as the mediating variable on the influence of leadership styles toward job performance because the result of this study does not indicate the existence of any influence of job satisfaction on job performance. Therefore, job satisfaction is not the mediating variable between leadership styles and job performance.

On the other hand, job satisfaction appears as the mediating variable between the influence of organizational communication toward job performance. Job satisfaction becomes the mediating variable because organizational communication performed in the companies has been able to drive the employees to do better jobs. This well-maintained organizational communication has been able to stimulate job satisfaction which later also stimulates better job performance.

SUGGESTIONS

Project managers are suggested to always improve their leadership capacity to give strong influence on job satisfaction and job performance. Organizational communication implemented by project managers should also be improved especially the reporting step. Project managers should also be equipped with adequate skill in writing project report which contains rich information for the companies for the anticipation of future problems. It is also necessary to improve job performance especially the time efficiency because construction projects usually could not meet the deadline. Construction companies are also expected to organize feasible schedule of the project timeline, human resources, facilities, and possible problems that might appear in the project. The three construction companies that participated in this study are also suggested to take benefits from the result of this dissertation by implementing leadership style which focuses on the betterment of organizational communication and job satisfaction that will also give positive influences on the project performance, funding, quality, time management and the safety aspects of the construction projects.

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THE EFFECT OF CONTROL ENVIRONMENT, RISK ASSESSMENT, CONTROL ACTIVITIES, INFORMATION AND COMMUNICATION, AND MONITORING TOWARD FRAUD PREVENTION IN THE LOCAL GOVERNMENT OF PALU

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ABSTRACT

This study has several objectives. The first is to examine the overall effect of Control Environment, Risk Assessment, Control Activities, Information and Communication, and Monitoring toward fraud prevention in the local government of Palu. The second is to examine the partial effect of Control Environment, Risk Assessment, Control Activities, Information and Communication, and Monitoring toward fraud prevention in the local government of Palu. The result of statistical test using multiple regression analysis with the help of SPSS 16.0 program shows these followings. First, Control Environment, Risk Assessment, Control Activities, Information and Communication, and Monitoring show overall significant effect toward fraud prevention in the local government of Palu. Second, Control Environment has no significant effect toward fraud prevention in the local government of Palu. Third, Risk Assessment has significant effect toward fraud prevention in the local government of Palu. Fourth, Control Activities have no significant effect toward fraud prevention in the local government of Palu. Fifth, Information and Communication has no significant effect toward fraud prevention in the local government of Palu. Sixth, Monitoring has significant effect toward fraud prevention in the local government of Palu.

KEY WORDS

Control environment, information, communication, fraud, local government.

Management of local government budget has not provided an overview of transparent, independent, accountable, and fair management to achieve financial performance in accordance with the vision and mission of the government. This is due to the inadequacy of organizational instruments to create good management and no high commitment from budget managers. As a result, there are various irregularities, misappropriation, and corruption. Fraud becomes something commonplace in government agencies.

Fraud is a crime of information manipulation with the aim of making the most profit ever. Usually the crime committed is to manipulate financial information. Fraud can happen anywhere, even in organizations that already have a good control system. There is no guarantee that such organization is free from the possibility of Fraud. Fraud can bring financial loss, reputation damage, legal problems, until the bankruptcy of the company.

The government has adopted a program to eliminate fraud. This is indicated by the increasing role of the Corruption Eradication Commission (KPK), the prosecution, the police, or the Court for Corruption Crimes (Tipikor Court); yet, this has not turned into a commitment to be consistently run. Fraud can inflict an unimaginable catastrophe regardless of size or type of the organization; it can happen in all places and levels, from the administrative level to the leadership level, and thus all government organizations can become victims of fraud.

Gary W. Adams *et al.* (in Purba, 2015) defines fraud as "The use of a person's position to enrich himself or herself through intentional misuse or deviation from the resources or assets of the company or organization".

Another definition given by three of the world's leading auditing organizations (IIA, AICPA, and ACFE1) emphasizes that fraud victims can be individuals, not just corporations or organizations. *Managing the Business Risk of Fraud: a Practical Guide* (2010), the three organizations define fraud as "any deliberate or delinquent action planned to deceive others to the detriment of the victim and / or benefit the perpetrator."

Based on inspectorate examination on all SKPD (Government agencies) in Palu, from the last 5 years data, many number of losses incurred, which certainly gives negative impact to the management of local finance. Data on the loss of the government of Palu from 2010 to 2014, in 2013 the amount of losses was IDR 280,338,572 and the total liability of deposits amounting to IDR 40,791,759, which had to be IDR 321,130,331. The data shows cases of fraud in the government agencies of Palu. The fact should awaken all parties, especially financial managers in each SKPD, to build commitment to the implementation of good financial governance consistently and widespread in all layers; without awareness and commitment, it will result in bad financial performance in government institutions.

The role of government in tackling fraud on August 28, 2008 was carried out through the renewal of organizational management in government agencies with the promulgation of Government Regulation Number 60 of 2008 on Government Internal Control System (SPIP) which is a derivative of the Law Number 1 of 2004 on State Treasury, as the act indicates the need for SPIP to be further regulated in a government regulation.

The Government Internal Control System (SPIP) comprises assessment of control environment, risk assessment, control activities, information and communication, and monitoring. SPIP is a system of internal control held comprehensively in the environment of central government and local government, in which the internal control system is an integral process on the actions and activities undertaken continuously by the leaders and all levels of employees to provide reasonable assurance on the achievement of organizational goals through effective and efficient activities, reliability of financial reporting, security of state assets, and compliance with laws and regulations.

AICPA Professional Standards, as cited by Konrath in Agoes (2012) identifies five internal control components: control environment, risk assessment, information and communication, control activities, and monitoring. The first component, the control environment, is the foundation of the other four components.

Based on the above description, the authors find it important to conduct research under the heading "The Effect of Control Environment, Risk Assessment, Control Activities, Information and Communication and Monitoring toward Fraud Prevention in the Local Government of Palu".

The objectives of the study are as follows: to examine the overall effect of control environment, risk assessment, control activities, information and communication, and monitoring toward fraud prevention in the local government of Palu; and to examine the partial effect of control environment, risk assessment, control activities, information and communication, and monitoring toward fraud prevention in the local government of Palu.

METHODS OF RESEARCH

The method used was verificative research with quantitative approach. Verificative research is basically to test the theory by testing the hypothesis. Hypothesis testing is done by using statistical calculation, which is used to test the effect of variables. The research is done at Local Government agencies (SKPD) of Palu with the consideration that all SKPDs are authorized in managing the budget and audited every year. Research population was all agencies of local government of Palu, which become the object of inspection from the Inspectorate of Palu and are under the Organization of Administration of Palu, as many as 87 SKPDs. The research instrument was Likert scale. In Likert scale, respondents would be given a question with some alternatives considered by respondents most appropriate. The research instrument (questionnaire) must first be tested for its accuracy and reliability. The method used to analyze the data in this study is Multiple Linear Regression. The analysis requires that the data used in the calculation be at least an interval-scale data.

RESULTS AND DISCUSSION

The control environment consists of eight indicators, namely the enforcement of integrity and ethical values, commitment to competence, conducive leadership,

organizational structure, delegation of authority and responsibility, policies and practices of human resources development, realization on the role of effective internal control officers, and good relationship with relevant government agencies.

The indicators of enforcement of integrity and ethical values based on the answers of the majority of respondents indicate that conducive management in realizing the integrity and ethical values has been implemented very well by SKPDs. This is done so the code of ethics and enforcement mechanisms are implemented in accordance with applicable provisions. Then, it can be concluded that SKPD Palu has applied the indicators in the control environment.

Risk assessment consists of five indicators, namely goal setting of agencies as a whole, goal setting at activity level, risk identification, risk analysis, and managing risk during change.

Risk assessment is used to assess the government's internal control system. The majority of respondents illustrates that in general the local government of Palu has implemented risk assessment adequately. In other words, the internal control system in Palu generally has been able to analyze, manage, and provide an assessment of the risks faced by government agencies, both from external and internal parties.

Control activities consist of the general application of policies and procedures, reviews on the performance of relevant government agencies, human resource development, control over the management of information systems, physical control over assets, stipulation and review of indicators and performance measures, segregation of functions, authorization of transactions and important events, accurate and timely recording of transactions and events, restrictions on access to resources and records, accountability to resources and records, as well as good documentation of internal control systems.

For the internal control of the government, the majority of respondents state that in general, the control activities within the Palu government have been applied adequately, effectively, and efficiently in achieving organizational goals.

Information and communication consists of information, communication, as well as forms and means of communication.

For the internal control of the government, the majority of respondents state that the government of Palu has applied the right elements of information and good communication to support the implementation of Government Internal Control System.

Monitoring consists of continuous monitoring, separate evaluation, and completion of the audit. Monitoring activities have been running well to support the implementation of Government Internal Control System.

To do fraud, the perpetrator must have the opportunity to implement and conceal the action, and the rationalization that the actions are not criminal activity. Fraud based on the responses of respondents is illustrated as follows:

The majority of respondents agreed upon the prevention of fraud on SKPD of Palu as a whole by using the afore-mentioned three indicators. The total mean was 4.18 meaning that the assessment of the overall indicators is in the category of good. This means the local government of Palu has made efforts in prevention of fraud.

Based on the results of multiple linear regression analysis using SPSS for Wind Release 16.0 software, the results of 87 SKPD (respondents) on the influence of the two independent variables (Control Environment, Risk Assessment, Control Activities, Information and Communication, and Monitoring) on fraud prevention are presented in Table 7.

The obtained regression mode from Table 7 is as follows:

$$Y = 9.723 + 0.183X_1 + 0.430X_2 + 0.030X_3 - 0.022X_4 + 0.928X_5$$

Simultaneously control environment, risk assessment, control activities, information and communication, and monitoring significantly influence fraud prevention in the loal government of Palu based on F-Test results.

Table 1 – Frequency Distribution on Respondents' Answers about Control Environment

No	Items	Alternatives										N	Total Score	Average Score per Item
		5		4		3		2		1				
		F	%	F	%	F	%	F	%	F	%			
Indiators on enforcement of integrity and ethical values														
1	Speed in responding to problems	33	37.93	51	58.62	2	2.30	0	-	1	1.15	87	376	4.32
2	Application of good ethics	23	26.44	62	71.26	2	2.30	0	-	0	-	87	369	4.24
3	Sanctions	40	45.98	44	50.57	2	2.30	1	1.15	0	-	87	384	4.41
4	Realistic goal setting	22	25.29	60	68.97	3	3.45	2	2.30	0	-	87	363	4.17
	Mean		33.91		62.36		2.59		0.86		0.29		373	4.29
Indiators on commitment to competence														
5	Job analysis and supervision	31	35.63	53	60.92	1	1.15	2	2.30	0	-	87	374	4.30
6	Expertise	35	40.23	45	51.72	4	4.60	2	2.30	1	1.15	87	372	4.28
7	Employee training	16	18.39	64	73.56	5	5.75	1	1.15	1	1.15	87	354	4.07
8	Performance improvement guidance	27	31.03	58	66.67	1	1.15	1	1.15	0	-	87	372	4.28
	Mean		31.32		63.22		2.53		1.72		0.57		368.00	4.23
Indiators on conducive leadership														
9	Consideration of risks in decision-making	39	44.83	46	52.87	2	2.30		-		-	87	385	4.43
10	Responsive to financial reporting	45	51.72	42	48.28		-		-		-	87	393	4.52
11	Budgeting based on reasonable price	8	9.20	37	42.53	33	37.93	5	5.75	4	4.60	87	301	3.46
	Mean		35.25		47.89		13.41		1.92		1.53		359.67	4.13
Indiators on organizational strucure														
12	Organizational structure according to the nature of activity	17	19.54	57	65.52	11	12.64	2	2.30		-	87	350	4.02
13	The existence of an organization chart	23	26.44	62	71.26	2	2.30		-		-	87	369	4.24
14	Determination of the appropriate number of employees	20	22.99	55	63.22	8	9.20	1	1.15	3	3.45	87	349	4.01
	Mean		22.99		66.67		8.05		1.15		1.15		356.00	4.09
Indicators of delegation of authority and responsibility														
15	The right authority	36	41.38	48	55.17	2	2.30		-	1	1.15	87	379	4.36
16	Resolving the problem according to responsibilities	28	32.18	55	63.22	3	3.45	1	1.15		-	87	371	4.26
17	Supervision of the leaders	12	13.79	65	74.71	7	8.05	3	3.45		-	87	347	3.99
	Mean		29.12		64.37		4.60		1.53		0.38		365.67	4.20
Indicators of policies and practices of human resources development														
18	Placement of employees according to standards and criteria	23	26.44	58	66.67	3	3.45	2	2.30	1	1.15	87	361	4.15
19	Sanctions on violation of the code of ethics	32	36.78	48	55.17	6	6.90	1	1.15		-	87	372	4.28
20	Employee training	15	17.24	65	74.71	5	5.75	2	2.30		-	87	354	4.07
	Mean		26.82		65.52		5.36		1.92		0.38		362.33	4.16
Indicators of realization on the role of effective internal control officers														
21	Supervision of the government's internal control apparatus	22	25.29	58	66.67	5	5.75	2	2.30		-	87	361	4.15
22	The existence of supervisory reports	31	35.63	53	60.92	2	2.30	1	1.15		-	87	375	4.31
23	Mechanism of organizing tasks and functions	30	34.48	53	60.92	3	3.45	1	1.15		-	87	373	4.29
	Mean		31.80		62.84		3.83		1.53		-		369.67	4.25
Indicators of good relationship with relevant government agencies														
24	Improving the quality of governance in the implementation of tasks and functions	31	35.63	50	57.47	3	3.45	3	3.45		-	87	370	4.25
25	The existence of a good working relationship	27	31.03	55	63.22	3	3.26	2	2.17		-	87	368	4.23
	Mean		33.33		60.34		3.35		2.81		-		369.00	4.24
	Mean on the Variable of Control Activities		30.57		61.65		5.46		1.68		0.54		365.42	4.20

Table 2 – Frequency Distribution on Respondents' Answers about Risk Assessment

No	Items	Alternatives										N	Total Score	Averag Score Per Item
		5		4		3		2		1				
		F	%	F	%	F	%	F	%	F	%			
Indicators of goal setting of agencies as a whole														
1	Goal setting based on regulation	33	37.93	49	56.32	4	4.60	0	-	1	1.15	87	374	4.30
2	Employees know the purpose of the agency	35	40.23	46	52.87	6	6.90	0	-	0	-	87	377	4.33
3	Strategic plan and risk assessment according to goals	26	29.89	58	66.67	1	1.15	2	2.30	0	-	87	369	4.24
	Mean		36.02		58.62		4.21		0.77		0.38		373.3	4.29
Indicators of goal setting at activity level														
4	The purpose of the activity is always reviewed	20	22.99	61	70.11	5	5.75	1	1.15	0	-	87	361	4.15
5	The purpose of each activity is not conflicting one another	24	27.59	61	70.11	2	2.30		-		-	87	370	4.25
6	Leaders are involved in setting the objectives of the activity	33	37.93	49	56.32	4	4.60	1	1.15	0	-	87	375	4.31
	Mean		29.50		65.52		4.21		0.77		-		368.67	4.24
Indicators of risk identification														
7	Risk identification of audit results	27	31.03	52	59.77	7	8.05	1	1.15		-	87	366	4.21
8	Risk analysis	20	22.99	65	74.71	2	2.30		-		-	87	366	4.21
9	Risk considerations	10	11.49	52	59.77	23	26.44	2	2.30		-	87	331	3.80
	Mean		21.84		64.75		12.26		1.15		-		354.33	4.07
Indicators of risk analysis														
10	Determine the impact of risk, the existence of controls to reduce risk	18	20.69	64	73.56	5	5.75		-		-	87	361	4.15
11	Carefully determine the level of risk	29	33.33	56	64.37	2	2.30		-		-	87	375	4.31
12	Controls to reduce risk	22	25.29	55	63.22	7	8.05	2	2.30	1	1.15	87	356	4.09
	Mean		26.44		67.05		5.36		0.77		0.38		364.00	4.18
Indicators of managing risk during change														
13	Considerations and actions of the impact of risk	16	18.39	62	71.26	7	8.05	2	2.30		-	87	353	4.06
14	Consideration of the risk of new employee placement	18	20.69	50	57.47	16	18.39	3	3.45		-	87	344	3.95
15	Risk analysis of activities implemented	13	14.94	61	70.11	9	10.34	4	4.60		-	87	344	3.95
	Mean		18.01		66.28		12.26		3.45		-		347.00	3.99
	Mean on the Variable of Control Activities		26.36		64.44		7.66		1.38		0.15		361.47	4.15

Source: Primary Data Analysed, 2016.

Table 3 – Frequency Distribution on Respondents' Answers about Control Activities

No	Items	Alternatives										N	Total Score	Average Score per Item
		5		4		3		2		1				
		F	%	F	%	F	%	F	%	F	%			
	Indicators of the general application of policies and procedures													
1	Identification of control activities	14	16.09	66	75.86	3	3.45	4	4.60	0	-	87	351	4.03
2	Problems are handled in a timely manner	16	18.39	61	70.11	6	6.90	4	4.60	0	-	87	350	4.02
3	Evaluation of control activities	22	25.29	59	67.82	5	5.75	1	1.15	0	-	87	363	4.17
	Mean		19.92		71.26		5.36	5	3.45		-		354.7	4.08
	Indicators of reviews on the performance of relevant government agencies													
4	Leaders are involved in the preparation of Renstra and Renja	49	56.32	38	43.68		-		-	0	-	87	397	4.56
5	Review on performance reports	33	37.93	49	56.32	4	4.60	1	1.15		-	87	375	4.31
6	Reconciliation and checking the accuracy of information	26	29.89	54	62.07	5	5.75	2	2.30	0	-	87	365	4.20
	Mean		41.38		54.02		3.45		1.15		-		379.00	4.36
	Indicators of human resource development													
7	Employee understanding of vision and mission	34	39.08	47	54.02	6	6.90		-		-	87	358	4.11
8	Training and employee responsibilities	20	22.99	52	59.77	10	11.49	4	4.60	1	1.15	87	347	3.99
9	Continuous supervision	29	33.33	53	60.92	1	1.15	4	4.60		-	87	368	4.23
	Mean		31.80		58.24		6.51		3.07		0.38		357.67	4.11
	Indicators of control over the management of information systems													
10	Control over information systems	23	26.44	61	70.11	2	2.30	1	1.15		-	87	367	4.22
11	Monitoring access to information systems	20	22.99	58	66.67	6	6.90	3	3.45		-	87	356	4.09
12	Data improvement and reporting	32	36.78	48	55.17	3	3.45	4	4.60		-	87	369	4.24
	Mean		28.74		63.98		4.21		3.07		-		364.00	4.18
	Indicators of physical control over assets													
13	Policies and procedures of physical security	21	24.14	58	66.67	6	6.90	2	2.30		-	87	359	4.13
14	Assets checked and compared to control records	33	37.93	54	62.07		-		-		-	87	381	4.38
15	Equipment kept in a safe place	29	33.33	57	65.52	1	1.15		-		-	87	376	4.32
	Mean		31.80		64.75		2.68		0.77		-		372.00	4.28
	Indicators of stipulation and review of indicators and performance measures													
16	Size and performance indicators are set in government agencies	27	31.03	51	58.62	7	8.05	2	2.30		-	87	364	4.18
17	Evaluation of performance appraisal measurement	27	31.03	57	65.52	3	3.45		-		-	87	372	4.28
18	Performance data is analyzed and compared	20	22.99	61	70.11	5	5.43	1	1.15		-	87	361	4.15
	Mean		28.35		64.75		5.64		1.15		-		365.67	4.20
	Indicators of segregation of functions													
19	All major aspects of the transaction are not controlled by one person	22	25.29	50	57.47	11	12.64	4	4.60		-	87	351	4.03
20	The bank balance is reconciled by the treasurer only	15	17.24	33	37.93	21	24.14	13	14.94	5	5.75	87	301	3.46
21	Leaders reduce opportunities for collusion	22	25.29	50	57.47	11	12.64	2	2.30	2	2.30	87	349	4.01
	Mean		22.61		50.96		16.48		7.28		2.68		333.67	3.84
	Indicators of authorization of transactions and important events													
22	Only valid transactions and events can be processed	21	24.14	54	62.07	7	8.05	5	5.75		-	87	352	4.05
23	Authorization requirements are in accordance with legislation	18	20.69	62	71.26	6	6.90	1	1.15		-	87	358	4.11
	Mean		22.41		66.67		7.47		3.45		-		355.00	4.08
	Indicators of accurate and timely recording of transactions and events													
24	Transactions are classified appropriately	29	33.33	54	62.07	2	2.30	2	2.30		-	87	371	4.26
25	Proper classification and recording	20	21.74	62	71.26	4	4.60		-	1	1.15	87	361	4.15
	Mean		27.54		66.67		3.45		1.15		0.57		366.00	4.21

Continue of Table 3

		5 F	5 %	4 F	4 %	3 F	3 %	2 F	2 %	1 F	1 %	N	Total	Avg
Indicators of restrictions on access to resources and records														
26	Restrictions on access to resources and records	8	9.20	56	64.37	15	17.24	8	9.20		-	87	325	3.74
27	Access restrictions for storage are reviewed and maintained	12	13.79	63	72.41	9	10.34	3	3.45		-	87	345	3.97
28	Consideration of appropriate access restriction level	11	12.64	62	71.26	12	13.79	2	2.30		-	87	343	3.94
	Mean		11.88		69.35		13.79		4.98		-		337.67	3.88
Indicators of accountability to resources and records														
29	Establishment of access liability	18	20.69	64	73.56	5	5.75		-		-	87	361	4.15
30	Comparison of resources with accountability recording	16	18.39	68	78.16	3	3.45		-		-	87	361	4.15
31	Responsibility for resource accountability	24	27.59	61	70.11	2	2.30		-		-	87	370	4.25
	Mean		22.22		73.95		3.83		-		-		364.00	4.18
Indicators of good documentation of internal control systems														
32	The existence of documentation of internal control system	17	19.54	69	79.31	1	1.15		-		-	87	364	4.18
33	The existence of complete and accurate documentation	25	28.74	61	70.11	1	1.15		-		-	87	372	4.28
34	All documents are well maintained	30	34.48	56	64.37	1	1.15		-		-	87	377	4.33
	Mean		27.59		71.26		1.15		-		-		371.00	4.26
Mean on the Variable of Control Activities			26.35		64.66		6.17		2.46		0.30		360.03	4.14

Source: Primary Data Analysed, 2016.

Table 4 – Frequency Distribution on Respondents' Answers about Information and Communication

No	Items	Alternatves										N	Total Score	Average Score Per Item
		5		4		3		2		1				
		F	%	F	%	F	%	F	%	F	%			
Indicators of information														
1	The presence of internal and external information	25	28.74	55	63.22	7	8.05	0	-	0	-	87	366	4.21
2	Timely information	21	24.14	60	68.97	4	4.60	2	2.30	0	-	87	361	4.15
3	Adequate financial and budget information	26	29.89	56	64.37	5	5.75	0	-	0	-	87	369	4.24
	Mean		27.59		65.52		6.13		0.77		-		365.3	4.20
Indicators of communication														
4	The establishment of effective internal communication	39	44.83	46	52.87	2	2.30		-	0	-	87	385	4.43
5	Information has been submitted to all divisions	23	26.44	59	67.82	3	3.45	2	2.30		-	87	364	4.18
6	Suggestions are considered and acted upon	21	24.14	62	71.26	1	1.15	3	3.45	0	-	87	362	4.16
	Mean		31.80		63.98		2.30		1.92		-		370.33	4.26
Indicators on the forms and means of communication														
7	The forms and means of communication are effective	17	19.54	64	73.56	3	3.45	3	3.45		-	87	356	4.09
8	Identifying the development of information needs	14	16.09	67	77.01	4	4.60	2	2.30		-	87	354	4.07
9	Leaders always monitor the quality of information	19	21.84	61	70.11	3	3.45	4	4.60		-	87	356	4.09
	Mean		19.16		73.56		3.83		3.45		-		355.33	4.08
	Mean on the Variable of Control Activities		26.18		67.69		4.09		2.04		0.00		363.67	4.18

Source: Primary Data Analysed, 2016.

Table 5 – Frequency Distribution on Respondents' Answers about Monitoring

No	Items	Alternatives										N	Total Score	Average Score Per Item
		5		4		3		2		1				
		F	%	F	%	F	%	F	%	F	%			
Indiator of continuus monitoring														
1	There is a strategy to evaluate control activities	17	19.54	65	74.71	2	2.30	3	3.45	0	-	87	357	4.10
2	Accuracy and responsibility on financial statements	34	39.08	49	56.32	2	2.30	2	2.30	0	-	87	376	4.32
3	Relevant information is used by the leaders to address the problem	12	13.79	71	81.61	2	2.30	2	2.30	0	-	87	354	4.07
	Mean		24.14		70.88		2.30		2.68		-		362.3	4.16
Indicators of separate evaluation														
4	A separate evaluation team develops an evaluation plan	11	12.64	65	74.71	9	10.34	2	2.30	0	-	87	346	3.98
5	A separate evaluation team understands the vision, mission and objectives of government agencies	15	17.24	64	73.56	6	6.90	2	2.30		-	87	353	4.06
6	Weaknesses found immediately communicated	26	29.89	58	66.67	3	3.45		-	0	-	87	371	4.26
	Mean		19.92		71.65		6.90		1.53		-		356.67	4.10
Indicators of completion of the audit														
7	Review and evaluate audit results	34	39.08	53	60.92		-		-		-	87	382	4.39
8	Leaders and auditors monitor audit results	24	27.59	63	72.41		-		-		-	87	372	4.28
9	Certain transaction or event issues are corrected immediately	35	40.23	52	59.77		-		-		-	87	383	4.40
	Mean		35.63		64.37		-		-		-		379.00	4.36
Mean on the Variable of Control Activities			26.56		68.97		3.07		1.40		0.00		366.00	4.21

Source: Primary Data Analysed, 2016.

Table 6 – Frequency Distribution Respondents' Answers on Fraud

No	Items	Alternatives										N	Total Score	Average Score Per Item
		5		4		3		2		1				
		F	%	F	%	F	%	F	%	F	%			
Indicators of making effective control activities														
1	Review on employee performance	17	19.54	59	67.82	9	10.34	1	1.15	1	1.15	87	351	4.03
2	Review on the achievement of budget realization	23	26.44	60	68.97	2	2.30	1	1.15	1	1.15	87	364	4.18
3	Control over application used	16	18.39	66	75.86	4	4.60	0	-	1	1.15	87	357	4.10
4	Physical security of assets	15	17.24	65	74.71	5	5.75	1	1.15	1	1.15	87	353	4.06
5	Imposition of job responsibilities	6	6.90	44	50.57	25	28.74	10	11.49	2	2.30	87	303	3.48
	Mean		17.70		67.59		10.34		2.99		1.38		345.6	3.97
Indicators of improving organizational culture														
6	Supervision to the party performing transactions	28	32.18	56	64.37	1	1.15	2	2.30	0	-	87	371	4.26
7	Openness in the decision-making process	32	36.78	49	56.32	5	5.75	1	1.15		-	87	373	4.29
8	Effective monitoring on the performance accountability	26	29.89	58	66.67	3	3.45	0	-	0	-	87	371	4.26
9	Compliance with applicable laws and regulations	35	40.23	50	57.47	2	2.30	0	-	0	-	87	381	4.38
10	Uphold morality, honesty and individual responsibility	46	52.87	37	42.53	4	4.60		-	0	-	87	390	4.48
11	Competence and professionalism	49	56.32	35	40.23	1	1.15	2	2.30	0	-	87	392	4.51
12	Commitment to always improve performance	51	58.62	33	37.93	1	1.15	1	1.15	1	1.15	87	393	4.52
	Mean		43.84		52.22		2.79		0.99		0.16		381.57	4.39
Indicators of effective internal audit functions														
13	Implementation of the audit	37	42.53	49	56.32	1	1.15		-		-	87	384	4.41
14	Studying internal audit reports	26	29.89	59	67.82	2	2.30		-		-	87	372	4.28
15	Respond quickly and decisively to improvement suggestions	30	34.48	56	64.37	1	1.15		-		-	87	377	4.33
16	The existence of strict sanctions on fraud	43	49.43	39	44.83	3	3.45	2	2.30		-	87	384	4.41
17	Rewards to outstanding employees	33	37.93	49	56.32	4	4.60		-	1	1.15	87	374	4.30
18	Assistance to employees who get into trouble	12	13.79	55	63.22	15	17.24	4	4.60	1	1.15	87	334	3.84
19	The existence of clear information on categories of gifts, bribery, and official	20	22.99	53	60.92	10	11.49	1	1.15	3	3.45	87	347	3.99
20	The existence of certain sources to detect fraud	18	20.69	57	65.52	8	9.20	1	1.15	3	3.45	87	347	3.99
21	The existence of channels to report the occurrence of fraud	20	22.99	60	68.97	5	5.75	2	2.30		-	87	359	4.13
	Mean		30.52		60.92		6.26		1.28		1.02		364.22	4.19
	Mean on the Variable of Control Activities		30.69		60.24		6.46		1.75		0.86		363.80	4.18

Source: Primary Data Analysed, 2016.

Table 7 – Recapitulation of Multiple Regression Analysis Result

Dependent Variable (Y) = Fraud Prevention			
Variable	Coefficient of Regression	t	sig.
Constanta	9.723	1.826	0.071
Control Environemnt (X1)	0.183	1.848	0.068
Risk Assessment (X2)	0.430	2.025	0.046
Control Activities (X3)	0.030	0.307	0.760
Information and Communication (X4)	-0.022	-0.079	0.938
Monitoring (X5)	0.928	3.553	0.001
R = 0.825			
R square (R2) = 0.681			
Ajusted R Square = 0.661			
F Count = 34.563			
Sig F = 0.000			

Source: Regression Results.

This is in accordance with the results of research by Meliany and Hernawati (2013) which state that the effectiveness of internal control significantly influences the tendency of fraud. The leaders of government agencies should ensure that internal control functions are running as expected. To that end, the leaders of government agencies need to perform all aspects or elements in the government's internal control system, i.e. the control environment, risk assessment, control activities, information and communication, and monitoring. Thus, simultaneously internal control influences fraud prevention.

Partial test is intended to see the influence of each independent variable to the dependent variable. The results are as follows. Control environment partially and significantly influences fraud prevention. Risk assessment partially and significantly influences fraud prevention. Control Activities partially and significantly influences fraud prevention. Information and communication partially and significantly influences fraud prevention. Monitoting partially and significantly influences fraud prevention. Control environment, risk assessment, control activities, information and communication, and monitoring have significant effect on fraud prevention Iin the local government of Palu.

Furthermore, from the analysis, it can be interpreted that every improvement of control environment, risk assessment, control activities, information and communication, and monitoring will give improvement to fraud prevention of. This is also supported by an interview with Mr. Ayub Sukresno (Accountability Auditor for Local Government) on October 21, 2016 at the office of BPKP (Supervisory Agency for Finance and Development). He stated that the internal control system of the government regulates things thoroughly, but the internal control system of the city government has not been fully applied. This is evidenced by the assessment of BPKP that the city government of Palu is still at level 1, whereas the target of BPKP itself for a city government is at level 3 for good internal control. Level 1 means that there is infrastructure problem.

The local government has not yet built infrastructure. Infrastructure here refers to the regulation—in which each local government must have rules of ethics or employee ethics. However, so far the local government of Palu only refers to Government Regulation Number 58, which should have been changed into operational standard of behavior. Most municipal governments in Indonesia still have not implemented this as well. In addition to the existing infrastructure, socialization is still lacking so the application of SPIP is not maximized.

Risk assessment is a management activity supported by employees who understand about risk management activities. Elements of risk assessment have been done well by the government of Palu. This is supported by interview with Mr. Arifin Haerolla, SH, M.Si (an auxiliary inspector of Regional 1) on October 18, 2016 at the inspectorate office of Palu. He declares that fraud can be detected by a good working system and mechanisms, if each employee performs the duties properly. Employees must be able to control and assess the risks of work and control the risks based on the tasks at various stages of work; this way, we know whether the work is done in accordance with the procedures or regulations, and error will be easier to detect as to know fraud.

Financial reporting in the city government of Palu is still not well managed, as stated by Mr. Arifin Haerolla, SH, M.Si (an auxiliary inspector of Regional 1) on October 18, 2016 at the inspectorate office of Palu; he asserts that this happesn due to the problem of assets. Annual asset purchases increase but year-end financial reporting is often missing, due to lack of good system governing the management of assets, whereas assets are important in the preparation of financial statements.

Elements of monitoring have been done well by the city government of Palu as stated by Mr. Arifin Haerolla, SH, M.Si (an auxiliary inspector of Regional 1) on October 18, 2016 at the inspectorate office of Palu. He confirms that after the examination, the inspectorate always do the controlling steps. As an example, when there are findings on mistakes by certain SKPD, then the inspectorate provides 60 days to correct the mistake, yet, if no feedback from the SKPD concerned during the 60 days given, the the inspectorate will come again to remind. Usually, most SKPDs directly make improvements.

Monitoring is required by the leaders as it is a tool to assure the effectiveness of the internal control system. This way, they can continuous its implementation if it is proven to be effective, and at the same time, they can identify changes that occur. Implementation of monitoring on the city government of Palu has an effect on fraud prevention.

CONCLUSION

Based on the afore-mentioned results, the following conclusions can now be drawn related to fraud prevention in the city government of Palu, as follows:

Control Environment, Risk Assessment, Control Activities, Information and Communication, and Monitoring show overall significant effect toward fraud prevention in the local government of Palu;

Control Environment has no significant effect toward fraud prevention in the local government of Palu. Risk Assessment has significant effect toward fraud prevention in the local government of Palu. Control Activities have no significant effect toward fraud prevention in the local government of Palu. Information and Communication has no significant effect toward fraud prevention in the local government of Palu. Monitoring has significant effect toward fraud prevention in the local government of Palu.

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THE INFLUENCE OF SERVICE QUALITY ON CUSTOMER TRUST AND COMMITMENT AND ITS EFFECT UPON CUSTOMER OF SAVING SERVICE LOYALTY AT BPD SULTRA MAIN BRANCH

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ABSTRACT

This study aims to examine and analyze: (1) The influence of service quality on customer trust at BPD Sultra Main Branch; (2) The influence of service quality on customer commitment at BPD Sultra Main Branch; (3) The influence of trust on customer loyalty at BPD Sultra main Branch; and (4) The influence of commitment on customer loyalty at BPD Sultra Main Branch. This study used 121 samples of saving service costumers at BPD Sultra Main Branch. Data analysis methods were descriptive statistics and inferential statistics, and analysis tool used was Structural Equation Modelling (SEM) and AMOS program package version16.0. The results showed that: (1) the service quality has positive influence over the customer trust, (2) the service quality has positive influence over the customer commitment, (3) the trust has positive influence over the customer loyalty, and (4) the customer commitment has positive influence over the customer loyalty.

Nowadays, global competition is inevitable phenomenon in the business world. It is marked by fast changes in communication industry, information, and technology. The same goes for a banking sector.

The effect of competition at Indonesian banking industry was that in 1997-2000 there were tens of banks liquidated and the rest were merged since the continuously loss experienced by several banks either stated or private-owned lender. Customer trust towards national banking drastically decreases and causes the number of customers withdraw their funds from those banks. This incident shows that in managing bank it should be executed professionally by considering the problem faced by banking sector, i.e., (1) Bank has to pursue growth and expansion, (2) Bank is demanded to give an accurate and high service, (3) technological advancement, (4) funds structural change, and (5) competition.

Such complexity of the problems in the banking world rise to challenge for banking growth such as management guidance, the quality of service and knowledge about the marketing of banking services. Determination of service strategy and bank performance is extremely important to be paid attention. When customer trusts with performance offered by bank, then he/she will pay it with perform transaction repeatedly.

A high level of bank competition lets the customers free to decide, so that bank has to be willing to give the most appropriate service like the customer wants. Additionally, today's customer demands are various at which supported by higher educational background and easiness to get information, thus his/her demand and flexibility becomes high too. Pace, safety, convenience and friendliness in service are more required by customers to decide an option of banking service aside from interest rate, price rate and affordable cost of service. For that reason, bank competing each other tries to improve its service quality in order to fulfill customers demand.

The same goes for BPD Sultra Main Branch which has to compete with other banks operating in Kendari area. According to the Banks Performance Rank issued by Bank Indonesia Kendari Representative Office in December 2010, the rank of BPD Sultra upon commercial banks in Kendari is in the second position of 15 commercial banks based on the number of loan to deposit (DPK) coming from saving, credit transfers, and deposits. From the

DPK BPD Sultra above, amount of DPK from BPD Main Branch contributes 41.08% of the amount of the whole DPK. This means that a half of DPK at BPD Sultra is owned by BPD Sultra Main Branch. However, DPK got during 3 years (2009-2011), shows that growth of saving funds is still categorized to be small compared to deposits and credit transfer.

As the biggest branch office and supported by facilities and more complete personnel, BPD Sultra Main Branch should be able to get higher DPK from community. Creation of good service can be damaged by bad service delivery or marketing system. Since the negative publication of the service, BPD Sultra Main Branch tries to clear things away in order to improve the service so it can enhance customer trust and commitment that in the end will improve customer loyalty to bank.

But then the influence of service quality on trust and commitment and its effect on customer loyalty is sometimes different. Several previous studies shows gap in the result. Agung (2006) found that service quality has significant influence over the loyalty, while Parawansa (2012) discovered that it has not direct significant effect upon the quality but being mediated by trust, satisfaction and commitment. Furthermore, Ndubisi (2006) found that trust and commitment has significant influence to increase customer loyalty, and Handayani (2008) discovered that trust did not increase loyalty significantly. In other words, even though customer trusts to company, it does not mean that he/she is loyal too.

According to the explanation above, thus this study tries to learn the influence of service quality, customer trust, customer commitment and its effect on customer loyalty.

CONCEPTUAL FRAME AND HYPOTHESIS

Service quality is critical to hold customer to make him stay. Bank has to try it best to create and improve its customer loyalty by providing quality service. The service quality consists of completeness and physical appearance of service at bank (tangibles), fast and accurate process of service (reliability), the way bank officer serves customer is responsive, polite, and friendly (responsiveness), ensuring the confidentiality of customer data, problem solving as sworn, and the sincere attention (empathy) shown by bank officer to customer's complaint. The whole form of this service is meant to fulfill needs, desires and wishes of customer.

The customer faith that bank able to meet their need, desire and wish raises the sense of belief to bank. Trust does not just come but it has to be cultivated in a long term and in every event at which the customer uses the bank service. Bank has to make customer sure that product or service offered is fit to the need and wishes of customer, and bank has good reputation to keep data secret and is consistent in giving and maintaining service quality provided.

When customer trusts in bank performance and reputation grows, the opportunity to get customer using banking service is higher. Customers will more choose to save their funds at a bank which has big benefit and good reputation which will protect them from risk. This trust factor becomes a fundamental thing which has to be paid attention by bank since this kind of business is a trusty business. Once bank is able to gain customer trust, then at that time it gets his/her loyalty. In line with the trust that is grown continuously by bank, later on it will shape strong commitment from customers to maintain good relationship with bank. As a result, trust is critical to be considered since it becomes an element giving positive influence towards customer commitment. Customer trust is shown by attitude or behavior that is related to bank. A committed customer will always have and build invaluable relationship in the exchange he/she does. It happens since customer feels a big benefit in that exchange so they will always be there in the cooperation relationship. The existence of customer in the partner exchange is proven with their identity using product and service offered by bank. In addition, the loyal customer will kindly tell their positive experience related to the product and service that has been accepted to the other sides. In a long term it will increase bank reputation.

Having a loyal customer is a dream of every bank. The key to get is through fulfilling desires and wishes. The more banks can fulfill the customer desires or even over his/her

expectation, the more customers does not want to move to another bank and s/he will be more committed to use bank's service at which it shows customer loyalty to bank. For that reason, the improvement of service quality at BPS Sultra Main Branch brings positive influence.

Starting from the problem and frame of mind, then the hypothesis proposed is as follow:

1. There is an influence of service quality on customer trust at BPD Sultra main branch.
2. There is service quality influence on customer commitment at BPD Sultra main branch.
3. There is customer trust influence on customer loyalty at BPD Sultra main branch.
4. There is an influence of customer commitment on customer loyalty at BPD Sultra main branch.

METHODS OF RESEARCH

According to the problem and goal which want to reach, then this was an explanatory research that explained causal relationship of service quality influence on customer loyalty through trust and commitment by conducting a hypothesis test.

This research was conducted at BPD Sultra Main Branch during two months. Population of this research was all of customers of saving service amounting to 6.195. It was divided into 4 clusters which is appropriate to type of saving service at BPD Sultra Main Branch, i.e., Tabungan Simpeda (non-saving service for civil servant salary), Tabungan Tapelra, Tabungan Tahara and TabunganKu. The number of sample of this study was calculated based on the formula of Husein (2005):

$$ n = \frac{N}{1 + N\,(e)^2} $$

Where: n = the number of sample; N = the number of population; e = relaxation percentage of inaccuracy (precision) due to fault.

With a precision level of 9% and considering that the number can meet the criterion in the application of Structural Equation Modeling (SEM) in which the respondent must be between 100-200 (Hair *et al.* in Ferdinand, 2006), thus the number of sample used was 121 customers of saving service.

Variable of this research was consisted of exogenous/independent variable, is variable of service quality stated by X_1; intervening Endogenous variable, is variable of trust stated by Y_1 and commitment variable stated by Y_2; endogenous/Dependent variable, is a loyalty variable stated by Y_3.

Data Types and Sources used in this research were primary data was acquired directly from respondent, and secondary data was acquired from internal data resources such as general description of bank, the number of employees and structure of an organization, journals and books related to the research object.

Data collection method used in this study was through spreading questionnaire to respondents; interview, was directly performed to bank officer and customer.

Data measurement used likert scale which measured dependent and independent variable. Those five likert scale are Strongly Agree (score 5), Agree (score 4), Neutral (score 3), Disagree (score 2), Strongly disagree (score 1).

Definition of Variable Operational. Based on the theoretical study, then made an operational definition of the variable referred in this study:

1. Service quality is a customer assessment upon BPD Sultra Main Branch based on the dimension of tangible, reliability, responsiveness, assurance and empathy.
   a. Tangibles based on the customer assessment upon physical appearance of office facilities and bank officers providing coziness to customers is measured using indicators:

- Cleanliness of office room;
- Availability of parking area;
- Queue number availability;
- Bank officer appearance is neat.

b. Reliability based on the customer assessment on bank officer ability and reliability in providing service is measured using indicators:
- Ability to understand customer needs;
- Reliability to handle customer complaints;
- Accuracy to process transaction.

c. Responsiveness based on the customer assessment on bank officer friendliness and speed is measured using indicators:
- Bank officer friendliness;
- Bank officer courtesy;
- Speed of service.

d. Assurance based on the customer response on the guarantee of professionalism, data secret, and problem solving of complain is measured using indicators:
- Guarantee of bank officer professionalism attitude;
- Guarantee of customer data secret;
- Guarantee of problem solving.

e. Empathy based on the customer assessment on the way of bank officer communicates, pays attention, and listens to customer complaint is measured using indicators:
- Bank officer way to communicate;
- Bank officer attention to customers;
- Bank officer willingness to listen customer complaint.

2. Customer trust is a customer measurement on BPD Sultra Main Branch based on the dimension of shared value, communication and opportunistic behavior.

a. Shared value at which customer believes to product, system, and technological ability used by bank is measured using indicators:
- Believe to the benefit of product;
- Believe to the banking system security;
- Believe to the banking technology capability.

b. Communication happens when customer believes that bank is opened in providing information, it is measured using indicators:
- Believe to bank officer knowledge on the product;
- Believe to the bank officer knowledge to explain banking products;
- Believe that bank officer will speak with understandable word choice.

c. Opportunistic Behavior is when customer believes to bank reputation and are protected by regulation, it is measured using indicators:
- Believe that bank has good reputation in providing service;
- Believe that Bank has good reputation in solving the problem arises;
- Believe on the Banking laws that protect customer interest.

3. Customer commitment is maintaining cooperation relationship between customer and BPD Sultra Main Branch continuously on the basis of mutual trust and benefits gained. Variable of commitment in this study used three indicators, they are:
- Wish to remain have relationship;
- Desire to cultivate relationship;
- Belief in the relationship stability.

4. Customer loyalty is customer assessment on BPD Sultra Main Branch according to the dimension of trust, psychological commitment, switching cost, word of mouth, and cooperation.

a. Trust is customer faith on BPD Sultra Main Branch measured by using indicators:
- Believe in bank management;

- Believe in the consistency of banking service;
- Believe in the trust fulfillment.

b. Psychological commitment is the feeling of emotional connection, the sense of belonging and the willingness to remain a service user, it is measured using indicators:
- The sense of having emotional connection upon bank as a regional bank;
- The sense of belonging of the sustainability of regional bank;
- A willingness to use another service in the future.

c. Switching cost is customer assessment on charge and difficulty experienced when using another bank service, it is measured using indicators:
- Maintenance fee of another bank is higher;
- Maintenance fee of another service at another bank in higher;
- Registration process at another bank is longer.

d. Word of mouth is customer willingness to recommend, persuade, and inform positive thing about BPD Sultra to others. The indicators are:
- Ready to recommend BPD Sultra to others;
- Ready to persuade others to become customer of BPD Sultra;
- Ready to inform positive thing about BPD Sultra to others.

e. Cooperation is a customer willingness to cooperate with BPDS Sultra, the indicators are:
- Having willingness to give suggestion and idea to enforce banking service;
- Ready to participate in the activity of social service performed by bank;
- Ready to participate to promote bank.

Instrument Validity and Reliability Test. Instrument validity examination was performed by intercorrelation test and if the probability value of r < 0.05 then the item concerned is valid. While instrument reliability test was performed through considering alpha cronbach coefficient and if α > 0.06 then the research instrument was valid. Questionnaire was randomly spread to the candidate of respondents amounting to 30% until 50% of the total samples used in this research, thus the researcher spread questionnaire to 36 respondents. Result of instrument validity and reliability test was valid and reliable.

The method used to answer hypothesis was Structural Equation Model through the help of Software Amos version 16.0.

After conducting confirmatory test and model fit test, then the next stage is direct and indirect effect test. Direct effect test was carried out through comparing Critical Ratio fee and Standardized Regression Weight, and direct effect between compensation variable and promotion upon work spirit and employee performance. If the value of Critical Ratio is 2.0 at the level of mistake α = 5 %, then indirect effect test sees beta coefficient value or Standardized Indirect Effect compared to Standardized Total effect, and significance value of indirect effect got from multiplying direct effect significance value by indirect effect significance value.

Research Hypothesis Test. Hypothesis test was conducted by comparing probability significant value of a causality relationship with α = 0.05. If the value of probability significance of a causality relationship is α=0.05, then the hypothesis proposed is accepted. Conversely, If the value of probability significance of a causality relationship is α=0.05, then the hypothesis proposed cannot be accepted.

RESULTS AND DISCUSSION

According to the factor confirmatory analysis test, loading factor value is presented in Table 1. Analysis of direct effect between construct of a model can be compared to evaluate relation of each construct upon the direct effect that the test results are presented in Table 2.

Service quality referred in this study is customer assessment on Bank based on the dimension of tangible, reliability, responsiveness, assurance and empathy, in this case is something can cultivate customer trust.

According to the CFA test result, the highest loading factor of service quality (X) variable is reliability (X_2) and the highest loading factor of reliability (X_2) is indicator of bank officer ability to understand customer need ($X_{2.1}$) by 0.724. While the highest loading factor of trust (Y_1) is communication ($Y_{1.2}$) and the highest loading factor of communication is in the indicator of customer trust of bank officer knowledge on banking products ($Y_{1.2.1}$) by 0.800.

The connection between reliability (X_2) and communication ($Y_{1.2}$) is: when bank officer is able to understand what customer need, being reliable to handle customer complain and meticulous to process transaction, then it will grow customer trust on bank officer. Customer will believe that what bank officer says right, customer can ask for information all the time and bank officer will be opened to answer clearly so that will be easy to be understood by customer. For that reason, employee reliability of BPS Sultra Main Branch when serving customer will grow customer trust on communication aspect performed by bank officer.

Table 1 – Test Result of Confirmatory Factor Analysis Test

Variable	Loading Factor (λ) The Highest		Loading Factor (Λ) The Lowest	
Service Quality	reliablity	0,987	tangible	0,685
Trust	communication	0,962	shared value	0,561
Commitment	Faith of relationship stability	0,863	Desire to maintain relationship	0,806
Loyalty	Psychological Commitment	0,858	switching cost	0,658

Table 2 – Test Result

Independent Variable	Dependent Variable	Coefficient Effect of Path Direct	(P Value)	Description
Service Quality	Trust	0,899	0,019	Sig
Service Quality	Commitment	0,737	0,003	Sig
Trust	Loyalty	0,481	0,029	Sig
Commitment	Loyalty	0,448	0,008	Sig

The connection between bank officer ability to understand what customer wants ($X_{2.1}$) upon customer trust of bank officer knowledge related to the banking product ($Y_{1.2.1}$) is: when bank officer helps customer to choose product fit to his/her need, then customer will believe that bank officer has knowledge on product offered such as the superiority of a product, requirement needed, and how the process and procedure of registration. Thus, employee ability of BPD Sultra Main Branch in understanding customer need makes customer trusts that bank officer has big knowledge on banking products.

According to the descriptive analysis result, the highest score for answer of service quality (X) variable is at empathy (X_5) dimension by 4.12. While the highest answer score of trust (Y1) variable is at shared value ($Y_{1.1}$) dimension. The connection between empathy (X_5) and shared value ($Y_{1.1}$) is: when bank officer pays attention customer, being able to build good communication by giving short description in clearly and completely, shows how to use technological-based facilities (i.e., ATM using, PIN replacement, SMS banking, etc.), having willingness to listen and help to solve customer problem, so that customer will believe to the shared value. For that reason, empathy shown by employee of BPD Sultra main branch makes customer believes to the shared value of BPD Sultra main branch.

Empirical data shows that the average respondent's answer to each item statement used to measure each indicator of service quality variables dimention is majority agree. This means that based on experiences which have been felt by respondents so far they agree that the quality of services provided by BPD Sultra Main Branch is already quite good so it has been able to foster a sense of trust to BPD Sultra Main Branch.

This research result is supported by idea of Cronin *et al.* (1992); Morgan and Hunt (1994); Foster and Codogan (2000), Parawansa (2012); and Agung (2006) who stated that service quality has positive and significant influence on trust variable.

The Influence of Service Quality on Commitment. According to the CFA test result, the highest loading factor of service quality (X) is reliability (X_2) and the highest loading factor of reliability (X_2) is indicator of bank officer ability to understand customer need ($X_{2.1}$) by 0.724.

While the highest loading factor of commitment (Y_2) variable is indicator of trust to keep maintaining relationship ($Y_{2.3}$) by 0.863.

The connection between bank officer ability to understand customer need ($X_{2.1}$) upon indicator of trust to keep maintaining relationship ($Y_{.2.3}$) is when bank officer able to help customer to choose product fit to his/her want, then customer will be remain sure to maintain relationship stability. Thus, employee ability of BPD Sultra Main Branch in understanding customer need makes him sure to remain establishes cooperation relationship with BPD Sultra Main Branch.

Based on the descriptive analysis, the highest answer score of service quality (X) variable is at empathy (X_5) dimension by 4.12. While the highest answer score of commitment variable (Y_2) is 3.85.

The connection between empathy (X_5) upon connection is: when bank officer cares to customer, able to establish good communication by explaining a product clearly and completely, showing the way to use technological-based facilities (i.e., ATM use, PIN replacement, SMS banking, etc.), able to listen and help solve customer problem, so that customer who feel that his/her interest has been fulfilled does not want to move to another bank. This means that customer has intention and will to cultivate cooperation relationship with bank. Thus, empathy shown by employees of BPD Sultra main branch makes customer want to have commitment to keep maintaining relationship with bank.

From the description above, it appears that the service quality variable has a positive and significant influence over the customer commitment variable at the BPD Sultra Main Branch. Empirical data shows the average respondent's answer for each item of the commitment variable statement is in positive / good area, which means that based on the experience which has been felt by respondents so far they agree that the quality of services provided by BPD Sultra Main Branch is already quite good so it has been able to cultivate the commitment of customers at BPD Sultra Main Branch.

This research result is supported by the findings of Indarto (2006), Agung (2006) and Parawansa (2012) who stated that service quality has positive and significant influence over the commitment variable.

The Influence of Trust on Loyalty. Trust referred in this research is assessment of customer of saving service upon BPD Sultra Main Branch based on the dimension of shared value, communication and opportunistic behavior, in this term is bringing influence to customer loyalty.

According to the confirmatory factor, the highest loading factor of trust variable (Y_1) is communication dimension ($Y_{1.2}$) and the highest loading factor of communication dimension is indicator of customer trust of bank officer knowledge While the highest loading factor of the loyalty variable (Y_3) is the dimension of psychological commitment ($Y_{3.2}$) and the highest loading factor of the psychological commitment dimension is indicator of the sense of belonging to the development of the bank ($Y_{3.1.1}$) with a value of 0.794.

The link between the dimensions of *communication* ($Y_{1.2}$) to the *psychological commitment* ($Y_{3.2}$) dimension is: when the bank officer communicates with the customer, In addition to providing information about bank products, bank officials also educate customers about the role of BPD Sultra as a financial institution owned by local governments to foster emotional bonds of belonging feelings to the regional assets. Thus, the form of communication made by employees of BPD Sultra Main Branch play a role in fostering psychological feelings to commit to the bank by looking at BPD Sultra as a valuable asset belonging to the region.

The connection between indicator of customer trust to bank officer knowledge of banking product ($Y_{1.2.1}$) and responsibility feeling on the development of regional bank ($Y_{3.1.1}$) is: bank management chooses to place employees who have sufficient level of knowledge and able to communicate well with customers so that that generally selected employees who come from local tribes. Bank officer knowledge around banking products and services as well as regional knowledge is expected to create a psychological bond to customers to come to love and feel responsible for the development of BPD Sultra as part of the region. Thus, the existence of employees of BPD Sultra Main Branch with adequate level of knowledge about

banking and regional can evoke emotional customers to feel responsible for the development of BPD Sultra Main Branch as part of the asset area that should be maintained.

Empirical data shows the average of respondents' answers to each item statement of the trust variable is in the positive / good area. Customers have confidence in BPD Sultra Main Branch which is shown by customers believe in the benefits of savings products used, banking systems run by is secure which means customers believe that their money is safe, and customers believe in the banking technology capabilities used by BPD Sultra Main Branch.

The results of this study are supported by the findings of Ndubisi (2006), Sulistiarini (2007) and Parawansa (2012) which stated that trust has a positive and significant influence over the loyalty variable.

The Influence of Commitment Upon Loyality. Customer commitment in this research is continuously maintaining customer relationship with service provider, that is, BPD Sultra Main Branch, based on mutual trust and benefit obtained.

Based on the result of confirmatory factor, the highest loading factor of the commitment variable (Y_2) is an indicator of faith to keep maintaining relationship ($Y_{2.3}$) by 0.863. While the highest loading factor of the loyalty variable (Y_3) is the dimension of psychological commitment ($_{Y3.}$2) and the highest loading factor of psychological commitment dimension is indicator of feeling responsible to the development of bank ($Y_{3.1.1}$) by 0.794.

The linkage between indicator of faith to keep establishing relationship ($Y_{2.3}$) and the sense of responsible for the development of bank ($Y_{3.1.1}$) is: when customer has faith to keep establishing relationship with bank since BPD Sultra is the paying bank of his/her salary and as a place where s/he can borrows funds, then customer has a sense of belonging to the sustainability of BPD Sultra for his/her benefit. Customer wants the existence of BPD Sultra Main Branch is maintained. So that the customer's belief that the partnership relationship will remain as well as make the customer takes responsibility for the existence and development of the bank in order to meet the interests of its own customers.

Based on the results of descriptive analysis, the highest score of the commitment variable (Y_2) is in the faith indicator of relationship stability ($Y_{2.3}$) by 3.96 and the highest response score of the loyalty variable (Y_3) is at an indicator of trust in management ($Y_{3.1.1}$) by 4.06.

The relationship between an indicator of faith for relationship stability ($Y_{2.3}$) and the indicator of trust in management ($Y_{3.1.1}$) is: when the customer is confident with the partnership relationship that has been established with the bank, continue to use bank services which show customers also believe in the performance of bank management. So that the more confident customers to establish partnership relationship with BPD Sultra Main Branch, the more customers believe in the management of BPD Sultra Main Branch.

From the description above, it appears that the commitment variable has a positive and significant influence over the customer loyalty variables on BPD Sultra Main Branch. At which the increase of customer commitment on BPD Sultra Main Branch more cultivate customer loyalty on BPD Sultra Main Branch. This means that any change of commitment increase is in the same positive direction with the increase of customer loyalty.

Empirical data shows the average respondent's answer for each item statement of commitment and loyalty variable is in positive / good area. This means that based on customer commitment, respondents have shown their loyalty to BPD Sultra Main Branch.

The results of this study are supported by the theory of Morgan and Hunt (1994) which states that trust and commitment are key constructs relevant for any type related exchange. Ndubisi (2006), Agung (2006) and Parawansa (2012) which states that commitment has a positive and significant influence over the loyalty variable.

CONSCLUSION

Service quality has positive and significant influence to the customer trust, it means that the better the service provided, the higher the trust of customer to bank. Service quality improvement will increase customer trust to BPD Sultra Main Branch.

Service quality has positive and significant influence over the customer commitment which means the better the service provided, the higher the commitment to establish cooperation relationship with bank. The change of improving service quality will enhance customer trust to BPS Sultra Main Branch

Customer trust has positive and significant influence over the customer loyalty, it means that the more trust the customer to the service provided by bank, the more loyal the customer. The change of improving service quality will increase customer loyalty over the BPD Sultra Main Branch

Customer commitment has positive and significant influence over the customer loyalty, it means that the more commitment customer to bank, the more loyal the customer. The change of customer commitment improvement will increase customer loyalty upon BPD Sultra Main Branch.

SUGGESTIONS

From the conclusion explained above, then the suggestions which can be given are as follows:

For BPS Sultra Management:

In order to increase customer trust to the bank services, it is necessary to develop more diverse product services such as electricity / water / telephone payment services, internet banking, debit card products and accelerate the implementation of Electronic Employee Cards (KPE) of civil servants. In addition, giveaway program will give an added value at customer's point of view. For that reason, the various services at bank along with giveaways program will make customer becomes the user of bank service in a long term;

Customer commitment needs to improve by intimacy approach, both kinship and personal. BPD Sultra's employee mostly coming from the local area is an important complimentary factor in establishing effective communication so cooperation relationship between customer and bank goes smothly and long lasting;

Providing training to improve service quality is not only limited to the officer at customer service and teller, but also involves security guard and cleaning service. So that the improvement happens at all area. Good service in the customer's point of view will improve bank positive value that results in costumer recommend it to others.

For The Future Researchers:

If using the same variable with this research, it is suggested to examine the direct effect between service quality variable upon customer loyalty as well as to study the indirect relationship of service quality variable upon loyalty through trust and customer commitment;

To consider adding other variables such as satisfaction variables to measure loyalty levels;

Extending research object to all customers of service users, not only customers of saving service, so that the illustration of the quality level of services is obtained thoroughly to all parts of services in the bank.

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THE INFLUENCE OF BUSINESS LOCATION ON COMPETITIVE ENVIRONMENT, COMPETITIVE STRATEGY, AND RURAL BANKS PERFORMANCE ON THE EXAMPLE OF BANK PERKREDITAN RAKYAT

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ABSTRACT

This study aims to examine the influence of business location on competitive environment, competitive strategy, and BPR Performance. The respondents were 153 from 325 conventional BPRs in East Java Province-Indonesia. The data was analyzed using GSCA model. Analysis result shows that location has influence over the competitive environment and competitive strategy, but not for performance. Competitive environment has influence over the competitive strategy, but not for performance, conversely competitive strategy has positive influence over the performance.

KEY WORDS

Business, location, competitive environment, performance.

For service business like bank, having strategic location is critical to find customer. Even though the use of e-banking becomes popular recently, but bank location is always an important factor for customer to choose bank (Robbins, 2006). In urban areas, BPR is located at high-traffic areas, traditional markets, and densely populated areas. While in countryside, BPR is commonly sat in sub district capital or at market and shopping areas as economic hub. The more strategic location had, the bigger the benefit got.

Site selection has implication of competitive environment faced and performance as well. Different location has different competitive environment. Location placed next to market enables bank to provide better service to customer who in the end will increase his/her loyalty (Kumar and Suresh, 2008). A favorable area also gives cost advantages which are hard to imitate by a potential newcomer (Stahl and Grigsby, 1992). There are many companies that precisely choose location next to competitor to attract much more customers (Kumar and Suresh, 2008). Location also influences performance. According to Buffa and Sharin (1999), uniform price creates different cost. If the input cost does not depend on location, different location creates different income. Fahmi (2013) stated that the right place did not only determine income, but also could reduce costs, gave influence on profit and business continuity. Location has not only short-term but also long-term strategic value.

BPR location becomes an important factor to learn now in line with the number of commercial bank and microfinance institution (LKM) getting high which also serves micro and small business segment. Strategic locations that were monopolized by BPR have been developed to become a location filled with various financial institutions offering allied product. In order to overcome this obstacle, BPR can optimize the local potential as effective competitive equipment to improve performance. Competitive strategic arrangement by including location variable makes formula of competitive strategy more comprehensive due to involving several factors that influence their success. This way is expected to get better performance. This idea is also supported by Aaker's (1988) concept stating that location has influence over the competitive strategy. Cost strategy can be reached through several ways such as location. Sanchez and Heene (2004) also stated that cost leadership strategy or differentiation strategy is influenced by location.

Several studies analyzing relations between location, competitive environment, competitive strategy, and performance have been done a lot, but the one that especially analyzes relations between location and strategy does not find yet. The study conducted by Hannan and Prager (2008) and Geyfman and Scott (2010) concluded that location is correlated with competitive environment. Myers and Kenneth's (2003) study found that location influences bank financial. The study carried out by Kim et al. (2004), Li and Li (2008), and Parnell et al. (2012) concluded that competitive environment influences effectiveness of competitive strategy used. Competitive environment also has influence over the performance. A study by Schafer et al. (2005), Sabihaini (2011), and Shaher et al. (2011) stated that bank performance is influenced by its environment. The study carried out by Eraslan (2008), Li and Li (2008), and Parnell et al. (2012) concluded that type of competitive strategy is correlated with performance.

This study aims to test the influence of location upon competitive environment, competitive strategy, and BPR performance. Problem statements are: (1) Does location have significant influence over the competitive environment, competitive strategy, and performance?; (2) Does competitive environment have significant influence over the competitive strategy and performance?; (3) Does competitive strategy have significant influence over the performance?

LITERATURE REVIEW

Location is a place where bank operates its activity, including: head office, branch office, sub-branch office, cash office, and until outlet. Decision to choose a particular location is included that bank tends to focus on profit and income, things related to demography (age, income, population/distribution area), competition, traffic light pattern, customer access, and coziness (Stevenson and Chuong, 2014). Location becomes one of the defining factors of the success rate for sale of service. Bank location tends to approach customer, another bank, and closed to trade service. The existence of bank in a strategic location will much help bank's effort to find customer. The importance rate of location for bank depends on the type and level of customer interaction with bank, i.e.: (1) whether customer comes to bank service provider, (2) whether bank service provider visits customer, or (3) business transaction of bank service is performed through the help of electrical equipment. For the first type, location is critical for the success of transaction since customer has to get access easiness, conversely on the second and third type; location is less relevant (Sumarni, 2002). Location has influence over the competitive environment. Different location creates different competitive environment faced by company (Stahl and Grigsby, 1992). In countryside, consumer still depends on the physical network of branch office as the main distribution channel to get banking service. The lows population growth and saving encourages the stagnation of the barriers to entry, the high loyalty level of customer, thus countryside area is also served by a couples of banks with higher market concentration level (Harvey and Myers, 2008). On the contrary, in rural areas, market is less concentrated since the level of competition is high. Rural society that relies on online system through the use of internet banking is predicted will reduce barriers to entry and increase competition (Sjoberg, 2007).

Location can be part of competitive strategy for company. Decision about location is extremely related to the company strategy (Stevenson and Chuong, 2014). A company like bank considers location as part of strategy and finds a location that will help it to improve market. The right business location causes company to have strategic superiority upon its competitors through low operational cost or better differentiation position. Ownership for strategic location encourages competitors to allocate much more fund or force them to leave the location (Aaker, 1998). Low cost strategy demands a location next to market to reduce transportation cost. Market development strategy demands a location closed to a heavy traffic. A strategy emphasizing on customer coziness requires location owned by him where he/she can perform transaction with his/her business (Stevenson and Chuong, 2014). Location also has influence over the performance in term of: competitive superiority, operational cost, the number of customer, profit and income, customer coziness (Stevenson

and Chuong, 2014), transportation cost and service quality (Kumar and Suresh, 2008). According to Lee (1985) and Pastor (1998) in Weon et al. (2010) different location creates different performance. In countryside, performance growth is correlated with location growth (Amelia and Afriyenny, 2011). In countryside, bank having several branch offices has higher Return on Equity (ROE) than in rural area, but it also has higher fund cost, lower non-interest income, higher cost of Human Resource upon average income, lower and assets quality (Myers and Kenneth, 2003).

Competitive environment is industrial environment where company competes. It has strong influence in determining the existence of potential strategy (Porter, 1998). Intensity of competition in industry depends upon 6 main strengths: potential new comer, suppliers, buyers, replacement products, competitors, and stakeholders like government (Wheelen and Hunger, 2012). New comer brings new capacity and increases competition. A strong supplier can influence competitive intensity in industry. Consumer concentration will also increase bargaining power. Replacement product which has better quality or produced by high profits industry causes price decrease. There is rivalry among costumers due to pressure or opportunity to improve position can influence industry stability. The government strength can also influence industry through arranged regulation. Environment complexity happened due to the change of customer taste, level of competition, behavior change of fund supplier, and technological advancement has significant influence over the specialty and increases diversification (Sabihaini, 2011). Diversification strategy is performed to help the bank to be more able to stand for to face crisis. Competitive environment also influences level of performance of company achievement since personal or collective influences from the whole strength in the industrial environment. Collective though from those 6 strengths determines the potential of level of Return on Investment. The tougher the strength of each model, the more limited the company capability to increase price and get higher profit (Wheelen and Hunger, 2012). Beneficial industrial environment will increase return on investment (Higgins, 1984). The high barriers to entry will limit competition and increase profits; conversely threat of new comer will limit profits in industry (Stahl and Grigsby, 1992). The highs strength of supplier will encourage input price pressuring company's profit in industry. A strong buyer may ask for low price and high service level which decreases company's profit. Replacement product may be limits price which can be fixed by company so limiting profits. Competition between companies can influence profits. Price competition limits price and sales profit, conversely non-price competition may be also decreases profits since the increase of service and advertisement cost (Sanchez and Heene, 2004). Government regulation on the increase of capital creates efficiency (Kamau, 2011). The more the regulation issued by Central Bank, the lower the performance of the bank (Sabihaini, 2011). In relation with the competition at microfinance institution, Schafer et al. (2005) found that competition is negatively correlated with profitability.

Competitive strategy is a strategy in the level of business that focuses on the increase of product competitive position and company service in the industry or particular market segment served (Wheelen and Hunger, 2012). Good strategy should complete 3 criterions: fit to the company culture, completed with resources, and supported by company stakeholders (Faulkner and Bowman, 1997). In order to outperform another company of this industry, a company can use the strategy of low cost and differentiation (Porter, 1980 in Wheelen and Hunger, 2012). Low cost strategy is ability to design, create, and market allied product through an efficient way than competitor. Differentiation is ability to provide a unique and superior value to buyer from an aspect of quality, special features, or after-sales service. Low cost strategy becomes less effective if there is imitation from competitor, technological finding, or consumer preferences shifting. Conversely, differentiation strategy is less effective if there is imitation of competitor, technological change, or an amount of different price (David, 2006). There is a relation between competitive strategy and performance, but kind of strategy that results best performance still being pros and cons. Low cost strategy enables company to get profitability above average of the industry and the improvement of market share (Porter, 1980; Caves and Ghemawat, 1992). Differentiation strategy gets opportunity to result higher profits than low cost strategy since creating better barriers to entry (Caves

and Ghemawat, 1992). A lot of experiences in business sector show the highest level of profitability found in a business using low cost-differentiation combined strategy (Pearce and Robinson, 2013), conversely a company which "trapped between "has lower profitability and just moderate market segment (Stahl and Grigsby, 1992).

Performance is achievement reached by an organization in a particular period (Becker, 1996), that reflects an achievement of purposes that has been arranged (Gibson et al., 1987) Company performance covers financial performance, business performance, and organizational performance. Financial performance is related to asset, selling receipts, and profitability. Business performance is related to market such as market segment, development, diversification, and product development. Organizational performance is related to the customer satisfaction, product quality, and social responsibility (Venkatraman and Ramanujam, 1986). Profitability performance is most widely used to assess performance because it is a reflection of various aspects of existing performance, and is the simplest but comprehensive way to know the total of performance of the company given the profit is a reflection of the end result of all activities undertaken. Profitability ratio is an assessment of company's capability to gain profits within a certain period expressed as a percentage of assets and capital. Profitability assessment includes ROA (net profit before tax/total assets) and ROE (net profit after tax/own capital) (Sinkey, 1986). ROA reflects the ability of management to generate profits from all assets owned, while ROE describes the ability of management in utilizing their own capital to generate profits for the owner.

CONCEPTUAL FRAMEWORK AND HYPOTHESES

Company performance is influenced by the competitive environment encountered and strategies employed. Changes in the competitive environment lead to changes in performance. On the other hand, the difference in strategy carried out also leads to differences in performance. In order to obtain the best performance, there needs to be a match between the strategies that is run with the environment at hand. For service companies such as banks, location is strategic factor that can influence performance. Site selection is controlled but the impact it generates may be uncontrollable due to the influence of environmental dynamics. Therefore, location determination can be part of a competitive strategy to improve performance.

This research model is built from several models of previous research findings: Li and Li (2008), Geyfman and Scott (2010), Shaher et al. (2011), and Parnell et al. (2012) and theoretical studies as described in section two. The research hypotheses are:

H1: Location has significant influence over the Competitive Environment;
H2: Location has significant effect on Competitive Strategy;
H3 : Location has significant influence over the Performance;
H4: Competitive Environment has significant influence over the Competitive Strategy;
H5: Competitive Environment has significant influence over the Performance;
H6: Competitive Strategy has significant influence over the Performance.

Acceptance/rejection of the hypothesis is based on the critical ratio value (CR) of 1.96 to 1.96 with a significance level of 0.05. If the value of CR/Sig is > 1.96 then Ho is rejected and Ha is accepted. If the value of CR/Sig is < 1.96 then Ho is accepted and Ha is rejected.

METHODS OF RESEARCH

This research employed quantitative approach and positivist paradigm (Creswell, 2009; Martono, 2010). This study was undertaken in East Java Province, the region with the largest number of BPRs in Indonesia so reflecting the high level of competition in this industry. Total population = 325 Conventional BPR. The number of sample is 177 banks; it was fixed based on the Slovin formula (Umar, 2010). The sampling technique used was proportional random sampling area. Sample criteria are BPR that has been operating for at least 3 years and is registered as members of the Association of Rural Banks (Perbarindo). Research respondents included: Commissioners, Directors, Managers, and Branch Heads. The data

was collected through spreading questionnaire sent by post. Measurement of variables used a Likert scale of 5 gradations (1 = very low, 5 = very high), except for performance variables using numerical scales in percent units. Exogenous variable was location (X), while endogenous included: competitive environment (Y1), competitive strategy (Y2), and performance (Y3).

Definition of concept and operationalization of research variables are as follows:

1. Location (X) is the place where the bank office is established, either the head office, the branch office, the sub-branch office, or the cash office. Location measurement is reflective by using 5 indicators of Kumar and Suresh (2008) namely, accessibility by private vehicle (X1), availability of transportation facility (X2), distance between location and customer (X3), distance from economic hub such as; markets, and commercial areas (X4), and distance to competitors (X5).

2. Competitive Environment (Y1) is an external environment encountered by banks that is reflected in the extent of threat levels per *stakeholders.* The measurement of competitive environment is reflective by using 6 Porter and Freeman (2007:33) indicators: threats of newcomer (Y11), bargaining power of supplier (Y12), customer bargaining power (Y13), threats of Microfinance Institution (Y14) Other BPRs' threats (Y15), and government pressure (Y16).

3. Competitive Strategy (Y2) is a strategy used by banks to generate competitive advantage on the broad market served. Measurement of competitive strategy is reflective by using 8 Porter (1980) indicators: operational cost efficiency level compared to competitors (Y21), internal operating system efficiency level to reduce costs (Y22), economic scale level to achieve cost advantage (Y23), cost leadership position in industry (Y24), product excellence level (Y25), level of product uniqueness compared to competitors (Y26), level of effort in building a reputation that is difficult to imitate by competitors (Y27), and effectiveness level of advertisement / promotion (Y28).

4. Performance (Y3) is the financial performance of the average profitability achieved by banks over the last 3 years (2012-2014). Performance measurements are reflective by using two indicators. Return on Assets/ROA (Y31) and Return on Equity/ROE (Y32).

5. Of the 177 questionnaires sent, 153 were received back and all were completely filled so they could be analyzed. Participation rate of respondents was 86.44%. The data was analyzed using descriptive statistical analysis method (mean score) and inferential statistical analysis of GSCA model (test of measurement model, structural model test, and overall model test). Measurement model test aims to test the validity and reliability of the research instrument. It was performed by evaluating the convergent validity (factor loading value> 0.50), discriminant validity (AVE value> 0.50), and reliability (Cronbach's alpha value> 0.50). The structural model test aims to determine the relations significance among variables, by comparing the value of t-statistics with t-tables (significant if t-statistics> t-tables). The overall model test aims to measure the percentage of the model's ability to explain data variations, by evaluating the value of FIT and Adjusted FIT (FIT value = 0-1, the greater the better).

RESULTS AND DISCUSSION

Based on Appendix 1, the average score of the Location variable (X) = 3.568 means that the average location of the BPR office is at the strategic location, characterized by: the availability of adequate public transport facilities, close to competitors or other BPR offices, close to domicile customers, easy to reach by private vehicle, and close to economic hub.

Average score of Competitive Environment (Y1) is 3.591 meaning that the average level of competitive environment threats faced by BPR is high, reflected by the high bargaining power of commercial banks as the supplier of funds, the high regulatory pressure from the government, the high level of threats of commercial banks New entrants, high threats of other BPRs as competitors, high threats from Microfinance Institutions as competitors, and high bargaining power of customers as consumers.

Average score of the Competitive Strategy (Y2) is 3.478, meaning that the average competitive strategy used by BPR is a combined low cost-differentiation strategy: the high level of the efficiency of the internal operating system to reduce costs, the high level of operational cost efficiency compared to competitors, high rates of economic scale to achieve cost advantage, high levels of product excellence in the eyes of customers, high cost leadership positions in industry, high uniqueness of products over competitors, high levels of effort to build a reputation that is difficult to imitate by competitors, and the level of effectiveness of advertising/promotion which is being.

Average score of performance (Y3) is 14.943, meaning that the average performance of BPR is at moderate level, which is characterized by low ROA level and moderate ROE level.

Based on Appendix 2, all load factor values are > 0.50 and AVE value > 0.50, so it can be concluded that the validity of all indicators against the variable is good. The results of calculations on reliability also shows that all values of Cronbach Reliability or CR > 0.70 so it can be concluded that all indicators have good reliability.

Based on Appendix 2, dominant indicator in establishing location variable (X) is X4 (distance of BPR office with economic hub like market or trade area), with loading factor value by 0.780, the dominant indicator in forming competitive environment variable (Y1) is Y13 (bargaining power of customers as BPR consumers), with the loading factor value by 0.765, the dominant indicator in forming competitive strategy variables (Y2) is Y24 (position of BPR cost leadership rural banks industry), with loading factor value of 0.786, and the dominant indicator in shaping the performance variable (Y3) is Y32 (ROE profitability level of BPR average during the last 3 years), with loading factor value by 0.955.

According to Appendix 3, the influence of Location (X) on the Competition Environment (Y1) generates path coefficient value by 0.976 and the critical value for CR is 282.82 * significant at 95% confidence level (CR / Sig> 1.96). Meaning that location has positive and significant influence over the competitive environment. The more strategic the location of the BPR office, the higher the threats of the competitive environment. So Hypothesis 1 "Location has significant influence over the Competitive Environment" is accepted. This research findings support the concept of Kumar and Suresh (2008) and Stevenson and Chuong (2014), and research findings by Sjoberg (2007), Harvey and Myers (2008), Hannan and Prager (2008), Geyfman and Scott (2010) as well.

The influence of location over the competitive strategy generates path coefficient value by 0.628 and critical value for CR by 7.52* is significant at confidence level of 95% (CR/Sig > 1.96). Meaning that Location has significant and positive influence over the Competitive Strategy. The more strategic the location of the BPR office, the more effective the use of combined competitive strategy. So Hypothesis 2 "Location has significant influence over the Competitive Strategy" is accepted. This research finding proves an empirical evidence on the concept of Aaker (1988); Stahl and Grigsby (1992); Sanchez and Heene (2004); and Stevenson and Chuong (2014).

The Influence of Location on Performance generates coefficient path value by 0.148 and the critical value for CR by 1.39 is not significant at the confidence level of 95% (CR / Sig <1.96). Meaning that location has not significant influence over the performance. So hypothesis 3 "Location has significant influence over the performance" is rejected. This research findings is different with a concept of Buffa and Sharin (1999); Kumar and Suresh (2008); Fahmi (2013), Stevenson and Chuong (2014) and previous research findings of Myers and Kenneth (2003); Geyfman and Scott (2010); and Amelia and Afriyenny (2011). This distinction concludes a big role of competitive strategy employed in achieving performance in rural bank industry.

The Influence of Competitive Environment over the Competitive Strategy generates path coefficient value by 0.357 and critical values for CR by 4.26* is significant at confidence level by 95% (CR/Sig > 1.86). It means that Competitive Environment has Positive and Significant Influence over the Competitive Strategy. The higher threats of competitive environment, the more effective the combined competitive strategy. So hypothesis 4 "Competitive environment has significant influence over the Competitive Strategy" is

accepted. This research findings reinforces a concept by Sanchez and Heene (2004); David (2006); Porter (1998); Whelen and Hunger (2012), and previous research findings of Kim et al. (2004); Li and Li (2008); Sabihaini (2011); and Parner et al. (2012).

The Influence of Competitive Environment over the Performance generates path coefficient value by 0.167 and critical value for CR is 1.79 not significant to confidence level by 95% (CR/SIg < 1.96). It means that Competitive Environment has not significant influence over the performance. The, hypothesis 5 "Competitive Environment has significant influence over the performance" is rejected. This is different with a concept by Higgins (1984); Stahl and Grigsby (1992); Sanchez and Heene (2004); Wheelen and Hunger (2012), and the research findings of Schafer et al. (2005); Sabihaini (2011); Shaher et al. (2011); and Kamau (2011). This concludes that same as location, competitive environment also has not direct influence over the performance, but through variable of competitive strategy. This finding reinforces a conclusion on the big role of competitive strategy at rural banks industry to achieve performance.

The Influence of Competitive Strategy over the performance generates path coefficient value by 0,664 and critical value for Cr is 9.29* significant at confidence level by 95% (CR/Sig > 1.96). Meaning that competitive strategy has positive and significant influence over the performance. The higher the use of combined competitive strategy, the higher the performance of BPR. Then hyphotesis 6 "Competitive strategy has significant influence over the performance" is accepted. This finding reinforces a concept of Porter (1980); Caves and Ghemawat (1992); Stahl and Grigsby (1992); Pearce and Robinson (2013), and research conducted by Eraslan (2008); Li and Li (2008); and Parner et al. (2012).

Based on the appendix 4, FIT value of 0.590 shows that exogenous variable can be explained by model amounting to 59% and the rest of 41% can be explained by another variable out of this research model. Considering FIT values > 50% then it can be concluded that the model is good to explain the phenomenon studied.

BPR industry is a complex business entity which can be studied from various perspectives. This study has several limitations that enable to perform an advanced study:

1. Indicator of location measurement is only limited to the factor of accessibility and distance. The use of different or more different indicators will likely result in different findings. For example: population density, location (rural, urban, and urban), customer characteristics and behavior, and so on.
2. The research model is only able to explain 59% of the variables that influence performance. There are still 41% of other variables that influence the performance of BPR. For example: a large asset and capital, quality of human resources, leadership, organizational structure, or corporate culture.
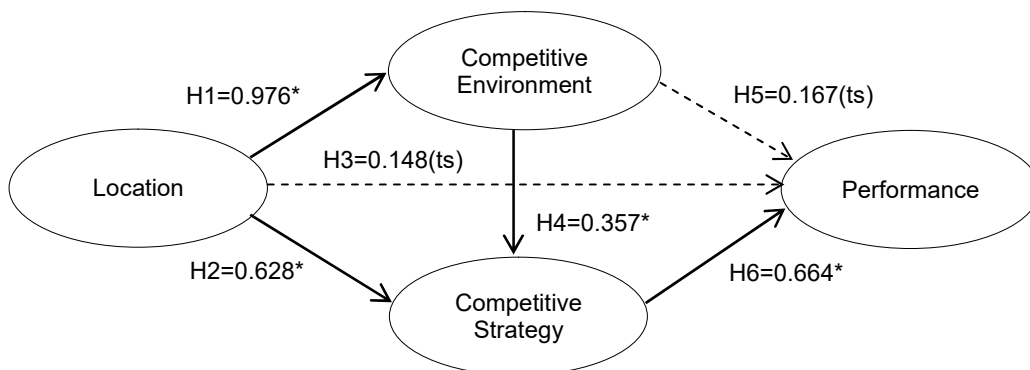
Figure 1 – Research Findings Model

CONCLUSION AND SUGGESTIONS

According to the problem statements, analysis result, and hypothesis test explained above, then the conclusions are as follows:

Location has positive and significant influence over the competitive environment and competitive strategy, but has not significant influence over the performance;

Competitive environment has positive and significant influence over the competitive strategy, but not significant over the performance;

Competitive strategy has positive and significant influence over the performance;

Threat of competitive environment is influenced by location;

Effectiveness of low cost-differentiation strategy combination is much more influenced by location compared to threats of competitive environment;

Competitive strategy plays role as perfect mediator in locations-performance and competitive environment-performance relations. Meaning that both location and competitive environment does not influence performance directly. Location and competitive environment will influence the effectiveness of competitive strategy usage that in the end will influence performance.

Based on the conclusion above, recommendations are pointed to the management, government, and further researchers are as follow:

For BPR management: bringing location closer to the economic hub, improving popularity and reputation through promotion, improving association cooperation to encounter competition, and strengthening the role of research and development division to produce innovative ideas;

For government and Financial Services Authority: Determination of clear market segment to avoid direct competition with another commercial bank which is stronger, improving supervision and control on the impact of globalization and IT use to banking industry, and strengthening Perbarindo institutional for member advancement and community welfare;

For further researchers: developing indicators (location: countryside, urban, rural area; competitive strategy: expansion, consolidation, depreciation; performance: CAMEL, BOPO), developing location or research object (commercial bank, regional development bank, Islamic bank, hotel, hospital, trade sector), or developing variables (management characteristics, customer behavior, economic condition, etc.).

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APPENDIXES

Appendix 1 – Average Score of Variable

Means Scores of Latent Variables	
Location (X)	3.568
Competitive Environment(Y1)	3.591
Competitive Strategy (Y2)	3.478
Performance (Y3)	14.943

Appendix 2 – Measurement Model

Variable	Loading			Weight			SMC		
	Estimate	SE	CR	Estimate	SE	CR	Estimate	SE	CR
Location (X)	AVE = 0.555, Alpha =0.799								
X1	0.749	0.036	20.72[*]	0.278	0.014	20.08[*]	0.562	0.053	10.55[*]
X2	0.770	0.032	23.78[*]	0.277	0.015	18.04[*]	0.593	0.050	11.96[*]
X3	0.705	0.041	17.06[*]	0.251	0.013	19.51[*]	0.497	0.058	8.61[*]
X4	0.780	0.035	22.42[*]	0.269	0.014	19.67[*]	0.609	0.054	11.33[*]
X5	0.717	0.036	20.02[*]	0.267	0.014	19.53[*]	0.514	0.052	9.97[*]
Competitive Environment (Y1)	AVE = 0.526, Alpha =0.819								
Y11	0.731	0.037	19.68[*]	0.216	0.011	18.8[*]	0.535	0.053	10.0[*]
Y12	0.676	0.046	14.54[*]	0.215	0.015	14.68[*]	0.457	0.062	7.34[*]
Y13	0.765	0.034	22.75[*]	0.244	0.013	18.65[*]	0.585	0.052	11.32[*]
Y14	0.762	0.034	22.4[*]	0.241	0.011	22.94[*]	0.581	0.051	11.32[*]
Y15	0.752	0.030	24.85[*]	0.245	0.015	16.49[*]	0.565	0.045	12.44[*]
Y16	0.660	0.053	12.51[*]	0.215	0.014	15.25[*]	0.436	0.069	6.35[*]
Competitive Strategy (Y2)	AVE = 0.537, Alpha =0.876								
Y21	0.752	0.032	23.17[*]	0.181	0.010	18.02[*]	0.566	0.048	11.74[*]
Y22	0.680	0.049	13.77[*]	0.159	0.011	14.18[*]	0.463	0.067	6.9[*]
Y23	0.675	0.053	12.64[*]	0.165	0.010	16.14[*]	0.456	0.071	6.47[*]
Y24	0.786	0.038	20.92[*]	0.175	0.010	18.12[*]	0.618	0.058	10.59[*]
Y25	0.759	0.033	22.65[*]	0.168	0.008	21.56[*]	0.575	0.051	11.33[*]
Y26	0.753	0.040	18.64[*]	0.174	0.008	20.95[*]	0.567	0.060	9.42[*]
Y27	0.727	0.039	18.59[*]	0.170	0.009	19.16[*]	0.529	0.057	9.34[*]
Y28	0.723	0.040	18.29[*]	0.172	0.007	25.62[*]	0.522	0.057	9.15[*]
Kinerja (Y3)	AVE = 0.831, Alpha =0.792								
Y31	0.866	0.013	64.7[*]	0.402	0.011	36.67[*]	0.750	0.023	32.4[*]
Y32	0.955	0.005	190.36[*]	0.682	0.010	67.08[*]	0.913	0.010	95.23[*]

Appendix 3 – Structural Model

Path Coefficients	Estimate	SE	CR
Location (X)->Competitive Environment (Y1)	0.976	0.003	282.82[*]
Location (X)->Competitive Strategy (Y2)	0.628	0.084	7.52[*]
Location (X)->Performance (Y3)	0.148	0.107	1.39
Competitive Environment (Y1)->Competitive Strategy (Y2)	0.357	0.084	4.26[*]
Competitive Environment (Y1)->Perfromance(Y3)	0.167	0.093	1.79
Competitive Strategy (Y2)->Perfromance (Y3)	0.664	0.071	9.29[*]

CR* = significant at .05 level

Appendix 4 – Entire Model

Model Fit	
FIT	0.590
AFIT	0.584

THE EFFECT OF GREEN MARKETING THROUGH CORPORATE SOCIAL RESPONSIBILITY AND BRAND IMAGE ON THE PURCHASE INTENTION OF THE BODY SHOP CUSTOMERS IN MALANG

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ABSTRACT

This study discusses the influence of Green Marketing on Purchase Intention through the variables of Corporate Social Responsibility and Brand Image. Thus, the purpose is to analyze the influence of Green Marketing through Corporate Social Responsibility and Brand Image towards Purchase Intention to The Body Shop customers in Malang by using a survey on 80 respondents to test the research hypothesis and the analysis of the data was carried out by using a partial least square (PLS). The result of the research shows that Green Marketing has a significant effect to Corporate Social Responsibility, that Corporate Social Responsibility has a significant effect on Purchase Intention, that Corporate Social Responsibility has a significant effect on Brand Image, that Green Marketing has a significant effect on Brand Image, that Brand Image has a significant effect on Purchase Intention, that Green Marketing has a significant effect on purchase intention through Corporate Social Responsibility, and that Green Marketing has a significant effect on Purchase Intention through Brand Image. The conclusion of this research is that the effect of Green Marketing in improving Purchase Intention through Corporate Social Responsibility activities is proven to be more effective than the effect of Green Marketing on the improvement of Purchase Intention through Consumer perception of The Body Shop Brand Image.

KEY WORDS

Green marketing, corporate social responsibility, brand image, purchase intention.

Today, people are increasingly aware of the importance of environmental conservation. This is because of the great concern about the possibility of natural disaster that threatens, not only health but also the survival of human and its descendants. Scientists and environmentalists have pointed some evidence concerning that issue, one of which is the phenomenon of the thinner ozone layer which can lead to skin cancer, global climate change, and also global warming. Those reasons, of course, strengthen the worry of the society. Besides that, there is another big problem which is the increasing amount of, mostly, waste that cannot be recycled (Wibowo, 2002).

Marketers' attention on the environment is increasing as environmental issues begin to emerge. This phenomenon is marked by the implementation of international environmental standards or better known as ISO-14000. ISO-14000 is an environmental management system that can provide assurance to producers and consumers that when the system is implemented, the goods produced/consumed either in the form of waste, used products, or even the service has undergone various processes that consider the efforts and rules of environmental management.

The environmental issues which are discussed in developed countries have been developed and started since the 1990s. Currently, consumer buying behavior and habits are directed at the issue of environmental preservation. The polling in the United States has consistently shown that most of the US population reflects themselves as an environmentalist (Shrum, 2005). In 2004, an advertising agency conducted another poll which showed the fact that from 82% respondents, at least 5% of them are willing to pay more for eco-friendly products, the percentage has increased by about 49% compared to previous year. A study by Shrum (2005) also showed the results from the research of Advertising Age magazine that 70% of all respondents stated that their decisions to purchase

a regular brand or product have been influenced by eco-friendly messages on labels, advertising, packaging, and green marketing strategy applied by the company.

Consumer awareness of the environment increasingly raises a change in the pattern of buying behavior. In the selection of products, consumers tend to be more sensitive. They tend to choose environmentally friendly products offered by marketers--the situation that eventually sparked the so-called green consumerism. Green consumerism is a sustainable global consumerism movement which begins with the emergence of consumer awareness towards the environment and its rights to obtain such safe, feasible, and environmentally friendly products.

The desired product is not a product that is literally in green, but a product that can reduce the impact of the potential damage. The research conducted by Ferry (2011) has shown that green consumers have a strong believe towards the current worsening environmental conditions so that it becomes the attention of all people thus it affected the needs and desires in making purchases also the willingness to pay more for products that are environmentally friendly. This factor is known as the severity of environmental problems. The company starts to implement strategies on the application of environmental issues in line with the emergence of public awareness towards environmental concerns, which then called as a green marketing strategy.

The advanced development of cosmetics business provides a great opportunity to companies who want and have not entered the cosmetics industry sector. Indonesian Cosmetics Association (*Persatuan Kosmetik Indonesia* or Petosmi) states that each month the earned cosmetic sales for large-scale companies could reach for about IDR 40 billion (Darmadji, 2008). By that, it can be concluded that the use of cosmetics in Indonesia is quite large and those cosmetics become a must-have item for women in general.

The Body Shop is one of the famous companies engaged in the skincare industry and is a pioneer company in implementing a green marketing strategy. According to Ferrinadewi (2005), cosmetics are unique; besides it acts as basic needs (especially women), this item is also a means for consumers to clarify their identity in the community. In addition to that, cosmetics actually have a risk of usage that needs to be concerned because there is some content of chemicals which do not always give the same effect on every consumer.

Consumers are faced with a wide selection of cosmetics that frequently confuse them to make a decision. Choosing the wrong products can be a fatal to our skin and face even health. The Body Shop offers different things that are products with environmentally friendly materials, natural, and no animal testing. Environmentally friendly is a basic principle of The Body Shop that is owned from the beginning and, from there, came the ideas to recharge, reuse, and recycle something they can reuse. The magnitude of the business role acts as a determinant of the direction of change that is reflected in the emergence of triple bottom lines approach that leads to the success of a business. The approach is derived from the three supporting pillars such as profit, people, and the planet. So, profit is not the only source of energy for a company's survival (Haryadi, 2009).

Without the planet (environmental aspect) and the people (social aspect), a company will find it difficult to stay victorious in the long run. It must be acknowledged that this approach still has to undergo a long journey and in-depth research to become a business ethic in all companies. Therefore, Anita Roddick, the founder of The Body Shop, explains The Body Shop's work to run its business by using the principle of triple bottom lines in which it is an example of business as unusual.

One of the things that trigger the company in implementing green marketing strategy is the motivation of ecological responsibility and environmental damage which often become the spotlight in the mass media (Dhuha, 2013). Green marketing is an aspect of corporate environmental responsibility, as for example, reprocess the exploited mining land which can then become a green area, produce eco-friendly products, use recycled packaging products as well as manage office paper waste in large quantities that can be reused creatively and innovatively. Ecologically, this has a purpose as an effort in the company's concern for environmental responsibility.

Based on the phenomenon which has been mentioned above, green marketing is a strategy done by the company which will create customer's purchase intention based on corporate social responsibility and brand image. Green marketing has a significant effect on corporate social responsibility (Eunju et al., 2013; Punitha and Rasdi, 2013). This means that company's green marketing strategy has a major impact on corporate social responsibility. The company's green marketing is reflected in corporate social responsibility as a way to protect the environment. A green marketing company can also serve as a tool in implementing corporate social responsibility (Punitha and Rasdi, 2013). Huang (2014) in his research mentioned that corporate social responsibility gives a significant effect on purchase intention which means that if consumers have a high perception of corporate social responsibility, consumers will have high purchase intentions.

Corporate social responsibility is an issue that is dynamic, broad, and influence the interests of various parties (Hartono, 2012). That is a business commitment that contributes to sustainable economic development in cooperation with employees, employee families, stakeholders, and the whole community in order to improve the life quality. This is done by implementing and generating business that based on sincere intentions to make a positive contribution to stakeholders.

However, corporate social responsibility activities cannot always get a positive response from the investor's point of view. Corporate social responsibility activities are often not favored by investors, they argue that the company will need a cost to conducting such kind of activities because it can reduce corporate income. It cannot be denied because the company must prepare some funds to conduct corporate social responsibility activities so that the cost incurred by the company will increase. Nevertheless, long-term corporate social responsibility activities undertaken by the company can improve a good image in the eyes of consumers because they receive the direct effects of corporate social responsibility activities so that it can increase the sales and accompanied by the increased corporate income.

Li et al. (2013) believed that corporate social responsibility has a significant effect on brand image. This means that when a company conducts corporate social responsibility activities, the perceptions given by society to the company will have an impact on the brand image. There is a research that says green marketing has a significant influence on the brand image (Lymperopoulos et al., 2012). The research explains that companies that implement green marketing and can meet the needs of their customers' green products are likely to have a good environmental reputation and good performance in line with environmental management and green innovation.

Similarly, Chih-ching et al. (2013) stated that brand image as a set of consumer perceptions toward environmental commitment and environmental awareness that has been done by the company in green marketing activities, thus it can convince customers about the image of a brand. The brand image refers to the brand characteristic features that form the community impression. The brand image reflects the brand's evaluation, strength, and essence so that it is important for the company to maintain its image. Chih-ching et al. (2013) also mentioned in his research that brand image has a significant influence on purchase intention. This means that the higher the image of a brand in consumer's mind, the higher the purchase intention.

There is a renewal in this study that is adding the relationship between corporate social responsibility and purchase intention. The update is based on the research conducted by Semuel and Chandra (2014) and Huang et al. (2014). Huang et al. (2014) wrote that corporate social responsibility has a significant influence on purchase intention which means that when consumers have a high perception of corporate social responsibility then consumers will also have a high purchase intention. While on the other hand, the research conducted by Semuel and Chandra (2014) described that corporate social responsibility has no significant effect on purchase intention.

Various studies presented above can be discussed in current research on the impact of green marketing through corporate social responsibility and brand image towards purchase intention. The research conducted by Eunju et al. (2013) indicates that green marketing

strategy has significant influence to corporate social responsibility, and brand image and corporate reputation have significant influence to purchase intention.

Eunju et al. (2013) proved that consumers feeling towards company's green marketing will enhance corporate social responsibility, brand image, and corporate reputation as the overall identity in relation to environmentally friendly products. In addition, good brand image and corporate reputation will increase the consumer's purchase intention. Understanding the effectiveness of green marketing can help consumers to have a strong belief in the company about environmentally friendly products, and ultimately help to achieve good business performance (Eunju et al., 2013).

This research is a development of some previous research that has been mentioned above, with the title: "*The Effect of Green Marketing Through Corporate Social Responsibility and Brand Image on the Purchase Intention of the Body Shop Customers in Malang*".

Based on the background as stated in the previous section, the formulation of the problems is as follows:

1. Does green marketing have a significant effect on corporate social responsibility?
2. Does corporate social responsibility have a significant effect on purchase intention?
3. Does corporate social responsibility have a significant effect on brand image?
4. Does green marketing have a significant effect on brand image?
5. Does brand image have a significant effect on purchase intention?
6. Does green marketing have a significant effect on purchase intention?
7. Does green marketing have a significant effect on purchase intention through corporate social responsibility?
8. Does green marketing have a significant effect on purchase intention through the brand image?

Research Purpose. In accordance with the formulation of the problem above, the purpose of this research is:

1. To analyze the significant influence of green marketing on corporate social responsibility.
2. To analyze the significant influence between corporate social responsibility towards purchase intention.
3. To analyze the significant influence between corporate social responsibility towards the brand image.
4. To analyze the significant influence of green marketing on brand image.
5. To analyze the significant influence of brand image on purchase intention.
6. To analyze the significant influence of green marketing on purchase intention.
7. To analyze the significant influence of green marketing on purchase intention through corporate social responsibility.
8. To analyze the significant influence of green marketing on purchase intention through brand image.

METHODS OF RESEARCH

This research used a positivism paradigm with the quantitative approach in its implementation. Sugiyono (2013) mentioned that by using a quantitative approach, it will emphasize his analysis on numerical data or numbers processed with statistics. This quantitative approach is made in inferential research (in the purpose of hypothesis testing) and to derive a conclusion to an error probability of the rejection of the null hypothesis. Based on the use of quantitative approach, the significance of the relationship between variables or the significance of group differences in the research model can be obtained.

The research took place at The Body Shop Malang which is located at Olympic Garden Mall (MOG) 2nd floor and Malang Town Square (Matos) 1st floor because both locations are The Body Shop outlet location in Malang. The study was conducted in October 2016.

The population used in this research was the customer of The Body Shop in Malang. If the population comes out in a large number and the researcher has limitations to reach the entire population, the sampling was necessary to be done. In this case, the researcher needs

to do the sampling that will be used in the research (Neolaka, 2014). Therefore, in this study, part of the population was determined by taking samples in order to facilitate the research.

The sample in this study was the customers who came to The Body Shop outlets in Malang. In this research, purposive sampling was used as the sampling technique. Purposive sampling is a sampling of a group on a certain target which then able to meet the criteria and provide information determined by the researcher or selected in accordance with the objectives or developed research problems (Ferdinand, 2014).

Sample criteria that are used in this research were:
1. The respondent must be seventeen years old and older (>17 years). The age is based on the Law No. 23 of 2002 on Child Protection, it is an age that is no longer categorized as children, or in other words, has entered the adult age. This age becomes a potential consumer of The Body Shop products.
2. Have purchase The Body Shop products at least 1 time.
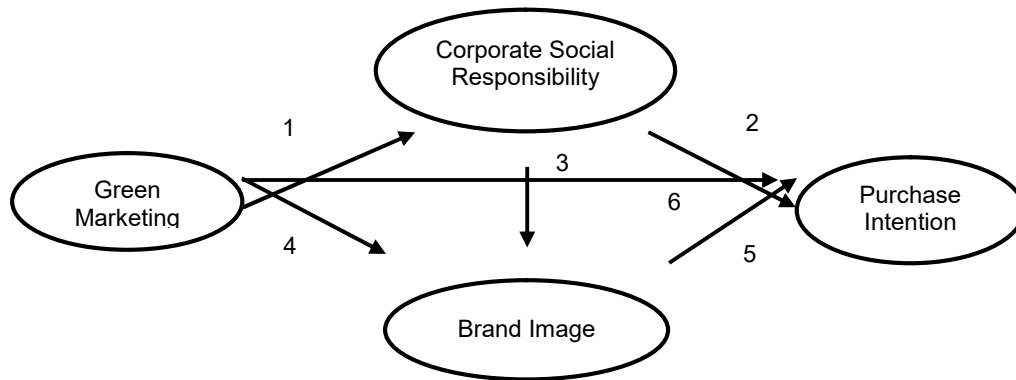
Figure 1 – Conceptual Framework of the Research

Data Collection. Sugiyono (2013) proposed that a primary data is obtained from the first source, either from individuals such as the results of questionnaires or from the interview done by researchers. The collected primary data, specifically, is used to answer the study.

The primary data in this study was obtained by distributing questionnaires on respondents to know the opinions about the influence of green marketing towards purchase intention through corporate social responsibility and brand image. This can be said that the primary data in this research was derived from questionnaires. The collection of the primary data to 80 respondents was distributed directly to the respondents in the sample research.

On the one hand, the collection method used for primary data was a survey method with a questionnaire. This questionnaire was intended only for The Body Shop customers that come to outlets and meet the sample criteria (aged 17 years and older).

The Variable Measurement Techniques in this study was carried out by using questionnaires that contain questions and provide responses by choosing one of the appropriate answers. The quantitative questionnaires were presented by using a litkert scale from 1 to 5, where: 1). Strongly disagree 2). Disagree 3). Neutral 4). Agree and 5). Strongly agree. The analysis of the data was conducted by using Smart-PLS 3.0.

RESULTS AND DISCUSSION

Research Instruments Test. Convergent validity aims to determine the validity of the relationship between indicators with latent variables. Convergent validity is known through loading factor. An instrument is said to meet the convergent validity test if the loading factor value is >0,70 so that the indicator or item is declared valid (Abdillah and Jogiyanto, 2015). It is known that all indicators which measure the variables of green marketing, corporate social responsibility, brand image, and purchase intention are greater than 0,7. Thus, the indicators in this study are valid to measure the variables.

Table 1 – Respondents Characteristics

Characteristics	Frequency (%)
SEX:	
Men	18%
Women	83%
AGE:	
17 – 25 Years	64%
26 – 34 Years	34%
35 – 43 Years	1%
> 43 Years	1%
EDUCATION:	
Senior High School	4%
Diploma	8%
Bachelor Degree (S1)	75%
Post Graduate (S2)	14%
JOB:	
Civil Servant	1%
Private Employee	44%
Housewives	1%
Entrepreneur	28%
College Students	19%
Students	8%

Table 2 – Convergent Validity Test Results

Variable	AVE	Cut Off	Status
Green Marketing	0,676	0,5	Valid
Corporate Social Responsibility	0,693	0,5	Valid
Brand Image	0,654	0,5	Valid
Purchase Intention	0,718	0,5	Valid

Source: Processed primary data (2016).

In the table above, we can see the convergent validity test results. Convergent validity can be seen through the loading factor and can be known through Average Variance Extracted (AVE). An instrument is said to meet the convergent validity test if it has an Average Variance Extracted (AVE) above 0,5.

The calculations that can be used to test the construct reliability are Cronbach alpha and composite reliability. The test criteria state that if the composite reliability is greater than 0,7 and the Cronbach alpha is greater than 0,6, then the construct is declared reliable.

The results of composite reliability and Cronbach alpha can be seen in the following table:

Table 3 – Construct Reliability Test Results

Variable	Composite Reliability	Cronbach's Alpha	Status
Brand Image	0,904	0,867	Reliable
Corporate Social Responsibility	0,900	0,850	Reliable
Green Marketing	0,912	0,880	Reliable
Purchase Intention	0,927	0,901	Reliable

Source: Processed Primary Data (2016).

Partial Least Square (PLS) Analysis. The goodness of fit model is used to know the ability of an endogenous variable to explain the diversity of exogenous variables, or in other words, to know the contribution of exogenous variables to endogenous variables. The goodness of fit model in PLS analysis is done by using s Q-Square predictive relevance (Q2). The goodness of fit model has been summarized in the Table 4.

The significance test is used to test whether the exogenous variables are influenced by endogenous variables. The test criteria state that if the value of T-statistics ≥ T-table (1,96), then there is a significant influence of exogenous variables to endogenous variables. The results of significance test can be known through the Table 5.
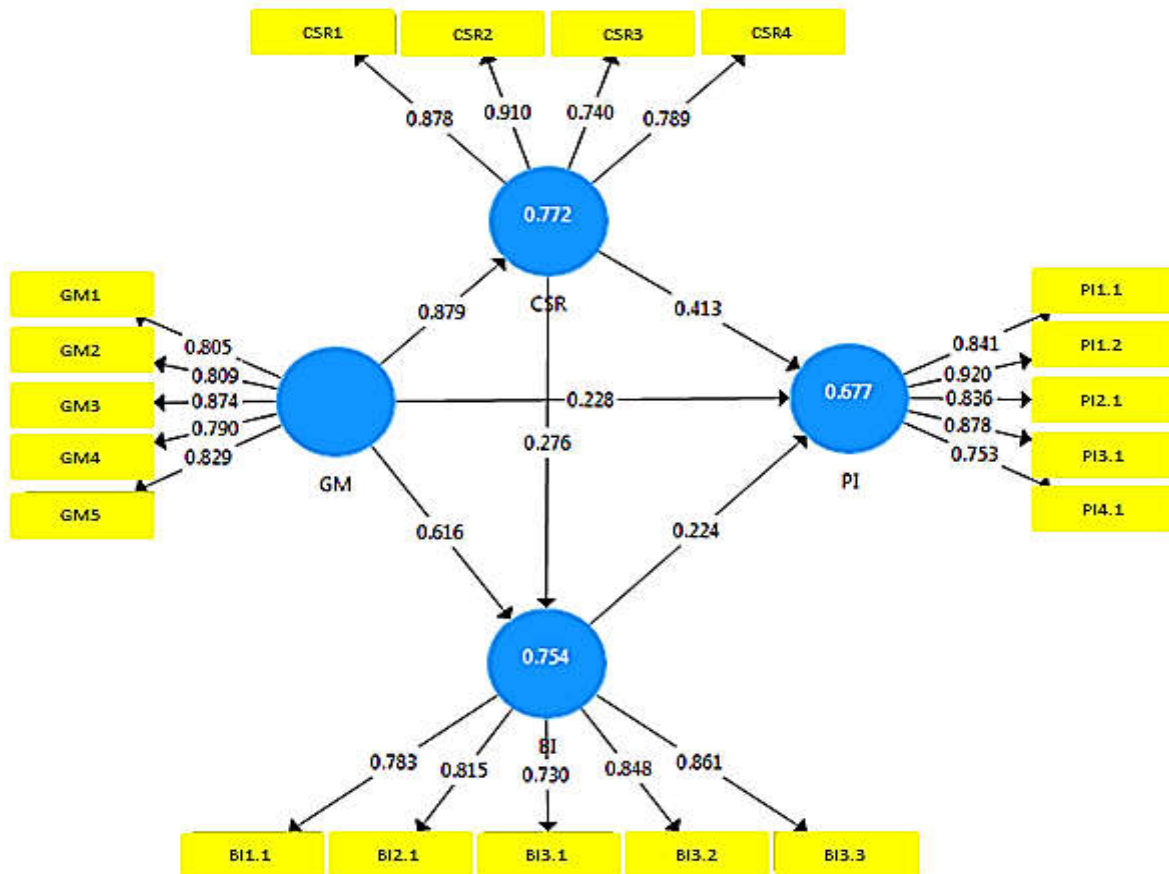
Figure 2 – Line Charts Development

Table 4 – Goodness of Fit Model

Variable	R^2
Brand Image	0,754
Corporate Social Responsibility	0,772
Purchase Intention	0,677
$Q^2 = 1 - [(1 - R_1^2) (1 - R_2^2)(1 - R_3^2)]$ $Q^2 = 1 - [(1 - 0,754) (1 - 0,772) (1 - 0,677)] = 0,906$	

Table 5 – Hypothesis Test Results

Exogenous Variables	Endogenous Variables	Original Sample (O)	t-statistics	t-table	Status
Green Marketing	Corporate Social Responsibility	0,879	38,192	1,96	Significant Influence
Corporate Social Responsibility	Purchase Intention	0,413	3,892	1,96	Significant Influence
Corporate Social Responsibility	Brand Image	0,276	2,790	1,96	Significant Influence
Green Marketing	Brand Image	0,616	6,347	1,96	Significant Influence
Brand Image	Purchase Intention	0,224	0,217	1,96	Significant Influence
Green Marketing	Purchase Intention	0,228	0,205	1,96	Significant Influence

Source: Processed Primary Data (2016).

Table 6 – Mediation Property Test Results

Exogenous Variable	Mediation Variable	Endogenous Variable	Direct	Indirect	Total	VAF
Green Marketing	Corporate Social Responsibility	Purchase Intention	0,228	0,363	0,591	0,614
Green Marketing	Brand Image	Purchase Intention	0,228	0,138	0,366	0,377

Source: Processed Primary Data (2016).

The test of mediation properties is to determine the direct influence of independent variables on the dependent variable. VAF value above 80% indicates the role of VAF as a full mediation, whereas VAF ranging from 20% to 80% are categorized as partial mediation, and if the VAF value is less than 20%, there is no mediation effect (Hair et al. 2013). The test results of Mediation Properties can be seen in Table 6.

CONCLUSION

Based on the problem formulation, the purpose and discussion in this research concerning the Switching Behavior influenced by Customer Satisfaction either directly or indirectly through Service Quality, Financial Considerations, and Convenience variables can be concluded as follows:

The majority of customers agree that the increased green marketing strategy will affect the improvement of corporate social responsibility activities conducted by The Body Shop company. Respondents agreed that the increased strategy of green marketing will enhance corporate social responsibility by The Body Shop. The assessment is based on the selling of The Body Shop eco-friendly products and recyclable packaging products, and the implementation of social activities with environmental themes so that customers can experience corporate social responsibility from The Body Shop.

Based on the results of the respondents' characteristics, it shows that most of The Body Shop customers are women. This is because the segment of The Body Shop products is women due to the products sold are facial beauty product up to body product. Women tend to be picky in determining or purchasing their beauty products. They prefer such kind of safe products and even a few who choose the products because the materials are natural ingredients.

It is proven that increasing sales of the brand in eco-friendly products is appropriate to be implemented by The Body Shop. Thus, the green marketing strategy which should be done is by increasing the sales of environmentally friendly products with environmental messages delivered on almost every product. Customers are concerned about the potential environmental impacts when someone consumes or uses the product. By that, a green marketing strategy in here brings a positive thing to be done.

The appropriate corporate social responsibility for The Body Shop is a contribution to community development. What is meant by contribution in here is that The Body Shop invites the community to take care of the environment? One simple thing that could be done is to invite customers to collect the packaging of The Body Shop ex-products that can be redeemed for certain discounts to buy new products.

In addition to that, The Body Shop also perform other social actions such as: "Choose Positive Energy" in cooperation with Greenpeace to campaign a renewable energy. More than 6 million people signed this petition (in 2000); "Get Lippy: Prevent HIV" in collaboration with MTV International to raise the awareness about HIV and AIDS (in 2008); "Stop The Trafficking of Children & Young People" was the biggest campaign ever conducted (in 2009); "Be An Activist", to celebrate 3 (three) years partnership with UNAIDS (in 2010); and so forth.

The results of the descriptive analysis for the average of corporate social responsibility variables show that corporate social responsibility is able to make the customer feel the impact of corporate social responsibility activities conducted by The Body Shop. The customer feels that the social programs can create a wide scope of positive impacts so that purchasing The Body Shop products would generate its own benefits. The results of the descriptive analysis for the average of corporate social responsibility variables also indicate

that the customer agrees if the improvement of corporate social responsibility activities can influence the increase of customer purchase intention.

The descriptive analysis of respondents shows that the improvement of corporate social responsibility programs will be proportional to the customer perception of The Body Shop brand image. The average value of one of the contributing items to the social environment is spelled out in the corporate social responsibility activities that have been done, one of which was in 2000 with the theme "Choose Positive Energy" in collaboration with Greenpeace to campaign such renewable energy.

All indicators are pointed to corporate social responsibility variables and, averagely, the brand image seems to receive a good assessment from the respondents. Thus, they agree that customers will have a good brand image of The Body Shop in correlation with corporate social responsibility programs. The results of the above explanation proved that the increase in corporate social responsibility can improve the brand image of The Body Shop in the customer's perspective.

The brand image of The Body Shop in the customer's perspective will appear when customers know about the company's positive actions, one of which is a green marketing strategy. Green marketing strategy is shown by one of the indicators that are an eco-friendly distribution which explains that The Body Shop sells environmentally friendly products. This points out that the use of The Body Shop products will not have an impact on environmental degradation.

The most influential brand image, in that case, is about the performance of The Body Shop. The Body Shop is more durable than similar products from other similar companies. Good performance can improve good perception from the customer side in which it makes customers believe that The Body Shop has a good brand image.

Based on the descriptive analysis of the respondents' characteristics above, it shows that the average age of The Body Shop consumers is between 17 to 25 years old. In general, an individual buys cosmetic products to support its appearance. Adolescence and adulthood are seemed to extremely keep their appearance and maintain the image of the products used. The Body Shop sells such kind of environmentally friendly products, recycled packaging materials, and plant-based ingredients so that it would not have an impact on environmental degradation.

Customers require beauty and care products that are safe for the face and body. Because beauty and health is a valuable asset for everyone. Customers require an evidence that cosmetic products and treatments are completely safe. Therefore, the Body Shop has obtained the ISO 14000 environmental certificate. It shows that The Body Shop has an environmental management system that can provide assurance (evidence) to producers and consumers. So, along with the application of the system either the used products or the produced/consumed products (waste and its services) have gone through a process that considers environmental management measures or rules.

Thus, customers will feel safe when consuming The Body Shop products because it has been proven to obtain ISO 14000 so that customers could know that The Body Shop has a good brand image. This thing that will deliver the impact on the enhancement of customer's purchase intention of The Body Shop products. All the indicators that lead to brand image and purchase intention on average will receive a good assessment from the respondents so that they will feel to increase the product sales in accordance with a good brand image that is given by The Body Shop.

It shows that customers remain loyal to buy The Body Shop products even though there are same quality products at other stores. This indicates that customers feel that the image of The Body Shop is able to increase the purchase intention because it has been proven that customers remain loyal to shop at The Body Shop.

The majority of the customers agree that rising green marketing strategies will have an impact on the improvement of various purchase intention activities from The Body Shop company. It is shown from the analysis that the customers agree that an increased green marketing strategy will increase purchase intention.

Moreover, the analysis shows that customers remain loyal to buy The Body Shop products despite the same quality products at other stores. It shows that customers feel that the image of The Body Shop is able to increase customer's purchase intention. It is proven that customers remain loyal to shop at The Body Shop outlets.

Green marketing has an influence on purchase intention through corporate social responsibility as supported by the result of VAF calculation by 0,614. The result is greater than the VAF calculation result in regard to green marketing that has a significant effect on purchase intention through brand image by 0,377. So that the effect of green marketing to increase purchase intention through the activities of corporate social responsibility by The Body Shop is proven to be more effective than the influence of green marketing to increase purchase intention through consumer perception about the brand image of The Body Shop.

Huang et al. (2014) describe corporate social responsibility as a commitment of the company in an effort to meet the moral norms, economic development contributions, as well as an improved life quality for employees and the entire community. Kotler (2007) has suggested some of the reasons about the importance of corporate social responsibility activities. Corporate social responsibility can build brand positioning, increase sales, expand market share, increase employee loyalty, and increase the attractiveness of corporate investors. This can be said that the increased green marketing strategy elaborated through corporate social responsibility activities can increase purchase intention of The Body Shop products.

8. The descriptive analysis results of the respondents' characteristics indicate that the majority of respondents who used The Body Shop products has a bachelor degree. It can be concluded that the average consumer of The Body Shop is a consumer with an undergraduate education level. Consumers with higher education level (undergraduate) tend to choose a product in a rational way by observing the image of the product used/consumed.

Green marketing has an influence on purchase intention through brand image. This is proven by VAF calculation (0,377). The results are known to be smaller than the VAF calculation in regard to green marketing that has a significant effect on purchase intention through corporate social responsibility by 0,614. By that, the effect of green marketing to increase purchase intention through consumer perceptions about the brand image of The Body Shop products can be said to be more effective than the influence of green marketing to increase purchase intention through the activities of corporate social responsibility.

Research Limitations. This study was implemented through several steps that are required in scientific research and through repeated refinement process. However, in this study, there are limitations to the study which could be enhanced in future research. The limitations of this study are the variables which had an influence on purchase intention so that it needs to be reconsidered for the use of other variables such as brand equity and corporate reputation.

Currently, the income levels of the respondents in this study are unknown so that the research finding is not able to describe the characteristics to choose the products based on income. The study was carried out only on those customers who came to The Body Shop outlets in Malang. So, the generalizability of the findings is limited in the area of the research.

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THE IMPLEMENTATION OF A POLICY OF FOREST AND LAND FIRE PREVENTION AND MITIGATION IN CENTRAL KALIMANTAN: STUDY OF CENTRAL KALIMANTAN GOVERNOR REGULATION #49 OF YEAR 2015 ON THE REVOCATION OF GOVERNOR REGULATION #15 OF YEAR 2010 ON LAND AND YARD OPENING GUIDELINES FOR THE COMMUNITY OF CENTRAL KALIMANTAN

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ABSTRACT

The implementation of a policy of forest and land fire prevention and mitigation in Central Kalimantan is based on the decree of Central Kalimantan Governor Number 49 of 2015 on the revocation of Governor Regulation Number 15 of 2010 on land and yard opening guidelines for the people of Central Kalimantan. Central Kalimantan is the third largest province in Indonesia and forest fires have become a routine that can not be stopped in which it happens continuously in every year. Considering this, the researcher wanted to describe and analyze the implementation of forest and land fire prevention and mitigation policy in Central Kalimantan. This research is a descriptive research that is implemented with the qualitative approach and data collection techniques by observation, interview, and documentation. The results of this policy implementation on prevention and mitigation of forest and land fire in Central Kalimantan by using Grindle theory consists of policy content, Central Kalimantan Governor Regulation Number 49 of 2015 on the revocation of Governor Regulation Number 15 of 2010 on guidelines of land and yard clearing for the people of Central Kalimantan which has not been well implemented and the strategic policy context that is only used by policy actors at the time of extinction. This has an impact on the society in which they actually do not agree with this revocation. In this case, the government should have a strategy that can control forest fires.

KEY WORDS

Policy implementation, prevention, mitigation, forest and land fires.

Forests are a very important and useful natural resource for the life of living beings. Indonesia itself has abundant natural resources. According to Indonesia Forest Watch and Global Forest Wast (2001) Indonesia is endowed with the vast and richest tropical forest of its biodiversity in the world. In Indonesia, the dominant policy which leads to deforestation is a large plantation, mining, transmigration, public facilities, and fire. Degradation is caused by the activities which according to the law in Indonesia are categorized as illegal acts. Forest fires have enormous impacts in many aspects not only on the ecology and environmental damage but also the social, cultural, and economic significance.

Central Kalimantan is Indonesia's third largest province with an area of approximately 153,564,5 km^2. Forest fires have become a routine that happens continuously and can not be stopped. For an instance, in 2015 there was a severe forest fire in this province. In 2015, Central Kalimantan Standard Air Pollution Index (ISPU) has reached a dangerous category. After Hadi Prabowo was appointed as the temporary Governor of Central Kalimantan he revoked Governor Regulation Number 15 of 2010 on the amendment of Governor Regulation Number 52 of 2008 concerning Guidelines for Land and Yard Opening for the Community in Central Kalimantan. This happens with the consideration that the land and yard opening in Central Kalimantan is carried out by burning the land almost in every year during the dry season in which this has contributed to the occurrence of smog that delivers a negative impact on the wider community. Governor Regulation Number 49 of 2015 as a replacement of Revocation of Governor Regulation Number 15 of 2010 on the amendment of Governor

Regulation Number 52 of 2008 on Guidelines for Land and Yard Opening for the Community in Central Kalimantan.

The existence of Governor Regulation Number 49 of 2015 on the revocation of Governor Regulation Number 52 of 2008 on Guidelines for Land and Yard Opening for the Community in Central Kalimantan is intended to prevent the forest fire and land fire. However, in 2016, forest fires still occur so that Central Kalimantan Provincial Government established an emergency alert status for forest and land fires at that time. The prohibition of land burning by the government policy has received a serious response from the community, especially farmers. They thought that the government does not consider the fate of the people who only rely on farming.

In this case, the government should pay more attention to the central or regional level together with high commitment through the establishment of several policies in the form of regulations. According to Suharno (2013 p.5), public policy is a response of a political system through the government's power towards the problems of the society. Public policy is the government's decision to solve public problems. Nevertheless, the decision may have implications for action or non-action movement.

The policy must be well-implemented in order to achieve a predetermined goal. Meter and Horn (1975) (in Nawawi 2009 p. 131) said that policy implementation is an action undertaken either by individuals or officials or governments or private entities in which it is directed to achieve the outlined objectives in policy decisions. Some approaches in policy implementation are related to the implementation, resources, environment, and problems in the community. Human resources as implementors have an important role in controlling the implementation of public policy. One of the approaches in this implementation is the policy implementation model that is based on Grindle 1980 (in Nawawi p.141) that the success of public policy implementation is influenced by two variables: the content of the policy as to what the program executes, as the resources involved, as the extent of the desired change and, secondly, the context of implementation of how much power and strategy that the implementor have as well as the level of compliance and response of the implementers.

METHODS OF RESEARCH

This research is a descriptive research with a qualitative approach. Furthermore, the focus of this research are 1) the implementation of policy of prevention and mitigation of forest and land fire in Central Kalimantan in accordance with the regulation of Palangka Raya Governor Number 49 of 2015 about the revocation of governor regulation Number 15 of 2010 of the guidance of land and yard opening for the people of Central Kalimantan by using the model developed by marille S. Grindle which contains: the target group interest, benefit type, degree of desired change, decision-making location, program implementation, and the resources involved. From the context of policy implementation, there are actors strength, interests and strategies, agency characteristics, compliance level, as well as implementation responsiveness. 2) the impact of the policy itself.

The research was conducted in Central Kalimantan, and the site of the research was the Central Kalimantan Disaster Management and Fire Agency. The data used in this study were primary and secondary data with the data sources of informants, places, events, and documents. The data were collected by using interviews, observation, and documents with the research instrument of self-researcher, interview guide, and field notes. The techniques of the data analysis from Miles Huberman and Saldana were also used, which are data condensation, data presentation, conclusion withdrawal and verification.

RESULTS AND DISCUSSION

The implementation of a policy of prevention and mitigation of forest and land fires in Central Kalimantan Number 49 Year 2015 concerning the revocation of Regulation Central Kalimantan Governor Number 15 of 2010 about the guidelines for land and yard opening for

the people of Central Kalimantan by using the model of Grindle (in Nawawi 2009 p. 142) is consisted of policy content and context as follows.

1. The contents of the policy. The interests of the target group are in correlation with the interests that affected the policy implementation. In the Governor Regulation Number 49 of 2015, the revocation of Governor Regulation Number 15 of 2010 on land and yard opening guidelines for the people of Central Kalimantan is one of the regulations that permits the clearing of land by burning. In this case, the government considers that the clearing of land and yard by burning in Central Kalimantan in almost every year during the dry season has contributed to the occurrence of smoke haze which has a negative impact on a wider community. Large forest and land fires also create a heavy smog in Central Kalimantan which in this case the interest of the target community is the community.

And then, there is a type of benefit. This means that a policy should be beneficial to the target group. A useful policy will be easier to be implemented than a less useful policy. According to Suharno (2014 p.22), public policy as a response of a political system through the government's power over the problems of the society. Public policy is basically a government decision to solve public problems. With this Governor Regulation, the policy of prevention and mitigation of forest and land fires in Central Kalimantan in the Governor Regulation Number 49 of 2015 on the revocation of Governor Regulation Number 15 of 2010 concerning the clearing of land and yard for the people of Central Kalimantan has provided benefits for the people of Central Kalimantan. It is also not permissible for people and investors to burn the land and forest. Since the enactment of this regulation, Central Kalimantan has been free from smoke in 2016.

After that, it is followed by the degree of change. The degree of change is closely related to the expected benefits of the policy. In the policy of prevention and mitigation of forest and land fires in Central Kalimantan in the Governor Regulation Number 49 of 2015 on the revocation of Governor Regulation Number 15 of 2010 concerning the clearing of land and yard for the people of Central Kalimantan, the desired change is the absence of smoke in the dry season.

Another point is about the decision making location which means that the greater the decision-making position in the policy, the more difficult the implementation. The location of decision making in this Governor Regulation in here is already correct, the Disaster Management and Fire Agency of Central Kalimantan Province (*Badan Penanggulangan Bencana dan Pemadam Kebakaran* or BPBPK) is directly involved as the implementor, BPBPK is part of the regional apparatus in the field of disaster management under and responsible to the Governor. BPBPK has the task to assist the Governor in organizing, dealing, preventing, preparing, tackling, anticipating, controlling, and evaluating the implementation of disaster management and firefighting.

Besides that, it is important to know the policy implementation. In implementing the policy, there should be supported by a competent and capable policy implemented so that a policy can be implemented properly. The results of interviews in the prevention and handling of forest and land fires has involved various related parties such as The Board of Transportation, Communications, and Information of Central Kalimantan Province, the Disaster Management Agency of Central Kalimantan Province, the Natural Resources Conservation Agency of Central Kalimantan Province, the Plantation Office of Central Kalimantan Province, Climatology, Meteorology, and Geophysical Agency of Palangka Raya, Health Office of Central Kalimantan Province, and Korem 102 Panju Panjung.

Lastly is about the resources involved. Implementing a policy should also be supported by supportive resources. Resources are one of the keys to success in implementing policy implementation. According to Van Meter and Van Horn (in Agustino 2016 p.133), one thing that influences the performance of public policy implementation is the resource. The success of the policy implementation depends on the ability to utilize the available resources. Humans are the most important resource in determining a successful implementation process. In the prevention and mitigation of forest and land fires in Central Kalimantan, human resources are sufficient as stated by the Head of Disaster Management and Fire Agency of Central Kalimantan Province involving Indonesian Military (TNI), National Police (POLRI), Regional

Government, and the community itself. Furthermore, in the data from BPBPK, it is noted that there are 2,471 people who participated in the management of forest and land fires that are in accordance with its duties and functions.

2. The context of the policy. Strengths, interests, and implementation strategies in a policy need to be taken into account as well as the strengths, interests, and strategies used by the actors in order to smooth the course of the policy implementation. The strength of the Disaster Management and Fire Agency of Central Kalimantan has been legally established in accordance with the Central Kalimantan Provincial Regulation Number 10 of 2010 concerning Organization and Working Procedures of Disaster Management Agency of Central Kalimantan Province. To support the mechanism, there is a regulation Number 24 of 2017 on Disaster Management as the institutional basis of the agency. The establishment of the Disaster Management and Fire Agency of Central Kalimantan Province (*Badan Penanggulangan Bencana dan Pemadam Kebakaran* or BPBPK) has been carried out in 12 districts or cities. Also, there is a budget allocation from the regional budget as well as a support from the national budget. The interest that influences this policy is the interest of the community which is the people who live in the community while having interests in the economic field, they suffered economic losses. The strategy of the Disaster Management and Fire Agency of Central Kalimantan Province is still weak because it is only conducted in the event of an extinguishment. In this case, they should have a strategy of prevention, extinguishment, and after the fire.

Secondly is the characteristic of implementation agency. The Disaster Management and Fire Agency of Central Kalimantan Province perform its function to coordinate the disaster management in a planned, integrated, and comprehensive action. As stated by the Head of Control Operation of Disaster Management and Fire Agency of Central Kalimantan Province that BPBPK is only limited to coordination, for example, a coordination meeting that talks about the prevention and mitigation of forest and land fires with related agencies.

Next, we come to the level of compliance and responsiveness of the policy actors. In the process, a compliance and responsiveness of the implementer is an important part that will affect the implementation of a policy. BPBKP in here is the implementor involved in the implementation of forest fire prevention and mitigation in Central Kalimantan. The BPBPK of Central Kalimantan has prepared the control of forest and land fires such as conducting coordination meetings prior to the dry season and taking a preventive action by drafting the Forest and Land Fire Action Plan. Based on the interview with the Head of Prevention and Mitigation of Disaster Management and Fire Agency of Central Kalimantan Province, there are still many obstacles encountered in the implementation of forest and land fire control which is mainly in funds and preparation (very minimal).

The impacts of prevention and mitigation policies on land and forest fires in Central Kalimantan is in accordance with Central Kalimantan Governor Regulation Number 49 of 1955 on the revocation of Governor Regulation Number 15 of 2010 on land and yard opening guidelines for the people of Central Kalimantan are:

1. The impact on society. The revocation of this Governor Regulation has impacted the community. It also can be seen that the withdrawal of the Governor Regulation Number 49 of 2015 on the revocation of Governor Regulation Number 15 of 2010 on land and yard clearing guidelines for the people of Central Kalimantan gives positive and negative impacts to the community. The positive impact is the absence of smog in 2016 that is in contrast with what had happened in 2015 (before the Governor's Revocation), public health in this case also increased in 2016 during the dry season. Meanwhile, the negative impact of this regulation is the people, especially people who live in the regional area can not do its farm while some of them only have a living from the farm.

2. Society change and acceptance. Since the Governor's Regulation, the society has become more vigilant and as for the people in the village, they feel threatened by the Governor's Regulation. They disagree with the existence of this rule. As mentioned by some residents from Rantau Pulut, Seruyan Tengah that the reason why they disagree with this rule is because they can not farm while they only rely on farming. «We can not eat unless we farm» so that they ask for a solution from the government.

CONCLUSION

Based on the policy implementation of forest and land fire prevention and mitigation in Central Kalimantan, it can be concluded that the interest of the community as a target group is very influential. This policy has made the people of Central Kalimantan free from smoke. In Central Borneo, since the enactment of this Governor Regulation, the forest and land fires has decreased. BPBPK as an implementor of this policy has been working with relevant agencies and other human resources in which they have prepared other resources in the form of facilities and infrastructure. With the support of funds from the national and regional budget and the Governor Regulation implementation, public interest in the economic field is affected, the people seem to experience economic losses. Furthermore, the government's interest in here is noted to create a smoke-free Central Kalimantan with the strategy that is only at the time of extinguishment. BPBPK only acts as a coordinator of policy guidelines and disaster management deployment which covers disaster prevention. In regard to the Governor Regulation Number 49 of 2015, some BPBPK employees do not approve the revocation of this Governor Regulation. The impact of this prevention and mitigation for the community is both positive and negative. The public does not approve the revocation of this regulation because it prohibits them from burning land. They consider that if the land is not burned, the rice will not be able to grow.

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DEVELOPMENT PLANNING OF PALM OIL PLANTATION BASED ON SUSTAINABLE DEVELOPMENT IN EAST KOTAWARINGIN DISTRICT

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ABSTRACT

Agriculture is the most dominant sector of Gross Regional Domestic Product (PDRB) of East Kotawaringin District. The sub-sectors with the most contribution in the agricultural sector are the plantation sub-sector, and the most dominant plantation commodities are palm oil plantations. Sustainable Development can be realized if a development has realized sustainability in three aspects, namely: Economic, Social, and Environment. While in fact palm oil plantations only sustainable on the economic aspects alone, while the environmental aspects and social aspects are often set aside. Therefore, a planning strategy is needed to enable the development of palm oil plantations based on Sustainable Development in East Kotawaringin District. The purpose of this thesis research is to explain and analyze: 1) Planning program of East Kotawaringin District Government to overcome the negative impact of palm oil plantation development, 2) Sustainable development effort by third parties on planning of palm oil plantation development in East Kotawaringin District, 3) sustainable development strategy that is suitable to be applied in palm oil plantation development planning in East Kotawaringin District. This research uses qualitative method with descriptive approach. The results showed that the development of palm oil plantations in East Kotawaringin District only sustainable on economic aspects and social aspects only, while for the environment is still not sustainable. To handle this the strategy that should be done is to use three stages of input-process-output. Input is an identification of several planning documents, and a number of public complaints about palm oil plantation issues. Process is an activity of analysis and discussion about the result of identification at input stage. Output is the result of discussion between the government, the company, and the community set forth in a program of palm oil plantation development activities that are Sustainable Development.

KEY WORDS

Planning, sustainable development, palm oil, plantation.

East Kotawaringin District is a district with potential of potential land resources, where the palm oil plantation sector is the largest utilization of space for Large Private Plantations / Large State Companies and Smallholders Estate. The contribution of the agricultural sector in the formation of East Kotawaringin District's PDRB in the last 5 years (2010-2015) averaged 37,07% per year. Of this number, the contribution of plantation's sub-sector occupies the highest position in agricultural sector, with an average of 14,6% per year, while other sectors in the agricultural sector are: Food Crops Sub-sector 6,90%, Sub Sector Fisheries 5,10%, Forestry Sub-sector 6,80%, Livestock Sub-Sector 3,70%.

Rencana Tata Ruang Wilayah Provinsi (RTRWP) stipulated in Central Kalimantan Regional Regulation No. 08 of 2003 which divided the forest area of 10.294.853,52 Ha (67,4%) and non-forest area of 5.061.846,48 Ha (32,96%). However, the fact is that in Central Kalimantan Province there is a very critical land area of 2.383.923 Ha, critical area of 2.100.046 Ha, slightly critical of 2.786.880 ha, thus the total critical land is 7.270.850 Ha.

The immediate impacts felt by East Kotawaringin District in relation to the arrangement, planning and investment process in palm oil plantations that are less concerned about environmental and social factors are the changing of physical condition of geographical, social and environmental order. To go to the sustainable management of palm oil plantations, it is necessary to consider several aspects of policy such as: economic, social,

and environment. The management of sustainable palm oil plantations in East Kotawaringin District can be used as a first step to solve the overall problem of conflict resolution at the field level.

LITERATURE REVIEW

Regional Development Planning. According to the city planner, Conyers and Hill (Hariyono, 2010) mention that planning is an ongoing process that produces decisions, or options about possible alternative resource use, with the aim of achieving a part of the objective of a certain period of time in the future.

Planning typology is divided into four kinds based on theoretical thinking. The four kinds of planning can be explained as follows (Fianstein and Norman, 1991):

1. Traditional planning. In this type of planning the planner sets out the intent and purpose of changing a defective city system.
2. User-Oriented Planning. The concept of planning is to create a plan that aims to accommodate the users of the planning product, in this case the urban community.
3. Advocacy Planning. In this plan contains a program of defense of marginalized communities in the process of urban development, in this case the urban poor.
4. Incremental Planning. On planning that is supportive of a decision-making process on urban issues.

Sustainable Development Concepts. The Sustainable Development concept provides a new discourse on the importance of preserving the natural environment in the future. Sustainable development consists of three main pillars of economic, social, and environment that are interdependent and reinforcing. These three aspects cannot be separated from each other, because they cause-effect relationships. Economic and social relations are expected to create a fair relationship (*equitable*). The relationship between economy and environment is expected to continue (*viable*). While the relationship between social and environmental aims to continue to survive (*bearable*). The three aspects of economic, social and environmental aspects will create sustainable conditions (*sustainable*) (Wijaya, 1991).
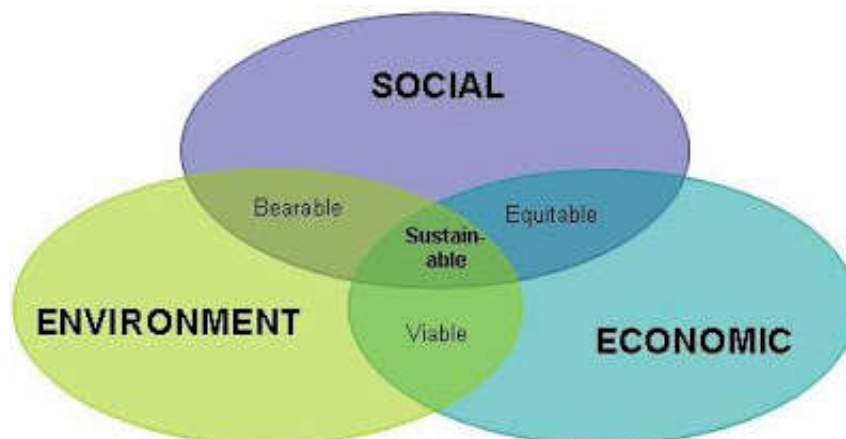
Source: Wijaya. 1991.

Figure 1 – Sustainable Development Aspects

Economic sustainability is defined as a development that is able to produce goods and services continuously to maintain the sustainable government. Environmental sustainability is defined as an environmentally sustainable system must be able to maintain a stable resource, avoiding the exploitation of natural resources and environmental absorption functions. Social sustainability, social sustainability is defined as a system capable of achieving equality, the provision of social services including health, education, gender, and political accountability.

METHODS OF RESEARCH

This research uses qualitative research method with descriptive approach type. The focus of this research is: (1) Planning program for palm oil plantation development from East Kotawaringin District Goverments; (2) Efforts to apply Sustainable Development to palm oil plantation development planning by three parties: government, corporations, and communities; (3) Sustainable Development Strategy in palm oil plantation development planning in East Kotawaringin District.

Research location in East Kotawaringin District, located at Environment Agency, Forestry and Plantation Agency, and Regional Planning and Development Agency. Sources of data from this research are informants, events, and documents. Data collection technique is done through interview, observation, documentation study. Next, data analysis techniques used are spiral data analysis techniques developed by Ian Dey (2005), as follows:
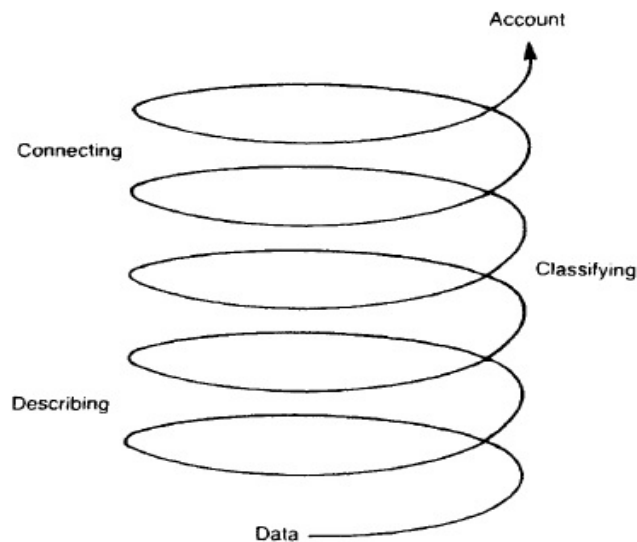
Source: Dey. 2005.

Figure 2 – Data Analysis Techniques: Spiral Model

RESULTS AND DISCUSSION

Planning Programs from the Government in Overcome the Negative Impacts of Palm Oil Plantation Development. Negative environmental impacts such as the function of forest land conversion will be catastrophic environmental damage. Conversion of natural forests is still ongoing until now even more crazy because of lust Central Kalimantan Provincial Government who want to make palm oil as a major source of foreign exchange for the economy in the Province of Central Kalimantan.

Negative impacts from the social side are the occurrence of overlapping conflicts between companies and communities. But the intensity of the conflict from year to year has tended to decrease. The thing that causes the intensity of the conflict to decline is because the company always provides the appropriate empowerment program to the community around the plantation. So that the good or bad public perception in this case is determined by the attitude of the company itself.

To overcome these environmental and social problems, the clearing of land for palm oil plantations should be limited and should be diverted to other commodity functions whose production is not inferior to palm oil commodities, and certainly this commodity is more environmentally friendly. The commodities referred to here are rubber plant which is also a superior commodity of East Kotawaringin District.

In addition the East Kotawaringin District Government has also formulated several programs to overcome the negative impact of palm oil plantation development as set out in

the document of Spatial Plan of East Kotawaringin District, as follows: redistribution of forest area and non forest area; setting the balance of sustainable utilization of space by considering the carrying capacity and capacity of the environment and the sustainability of natural resources; development of agriculture in a broad sense; development of processing industry; space utilization for the sake of achieving economic growth and improving the welfare of the community.

Each Parties Efforts in Realizing Sustainable Development on Development Planning of Palm Oil Plantations. Efforts of East Kotawaringin District Government in realizing sustainable development are as follows: First, East Kotawaringin District has a duty to facilitate a forum of deliberations that discuss the efforts of sustainable development in the development of palm oil plantations. Second, the preparation of co-chairs is done by the Government of East Kotawaringin District by preparing the team to conduct environmental conservation to every palm oil plantation company operating in East Kotawaringin District. Third, East Kotawaringin District Government must apply strict sanctions for plantation companies that do not implement environmental conservation programs, and which do not support the efforts of sustainable development.

Efforts of palm oil plantation companies to realize sustainable development are as follows: First, the maintenance and environment conservation such as maintenance and conservation can be seen through the efforts of land empowerment, crop and environmental treatment, harvesting and production process, up to the provision of plasma plantations for the community around the plantation. Second, the community empowerment program by palm oil plantation companies, one example is the partnership program (plasma). This program is intended to help communities around plantations that own land but do not have the capital to manage the land. Third, is the provision of conservation area. For the provision of this conservation area, the researcher considers that there are still many palm oil plantation companies in East Kotawaringin District that have not yet provided conservation area on their palm oil plantations. This is because there is no special regulation from the government that regulates the sanctions given to companies that are not cooperative.

Efforts of the community in realizing sustainable development are as follows: First, to contribute labor to palm oil plantation companies, so that companies can run the wheels of the economy. Second, provide support for every activities undertaken by palm oil plantation companies. Third, submit a complaint about the problem of palm oil plantations based on three aspects, namely: economic, environmental, and social to East Kotawaringin District Government through the nearest urban village office or sub-district office.

Sustainable Development Strategy in Development Planning Process of Palm Oil Plantation in East Kotawaringin District. Development planning process of palm oil plantation development that leads to the realization of sustainable development can be done through three stages namely: Input, process, and output. This planning process will synchronize between the regulation with the factual conditions that occur in the field. Then the synchronization result between the two matters will be discussed transparently and jointly by East Kotawaringin District Government, palm oil Plantation Company, and community representative.

These input stages are the stages that will see some inputs consisting of some planning documents, and some of the issues about palm oil plantations that have been complained by the community to the government. The planning document from East Kotawaringin District Government that will be seen is RPJMD, RTRW. While the planning documents of the company is RPL, as well as some problems of palm oil plantations that are complained by the community to the government.

Stages of the process are divided into two activities namely the analysis activities, and discussion activities. The first activity is an analysis which is an activity to analyze some planning documents and also root problem analysis to some of the complaints from the community. Then, the second activity carried out at the stage of the process is a discussion which is a synchronization between the results of the analysis of some planning documents and the results of the analysis of the root causes of problems complained by the community.
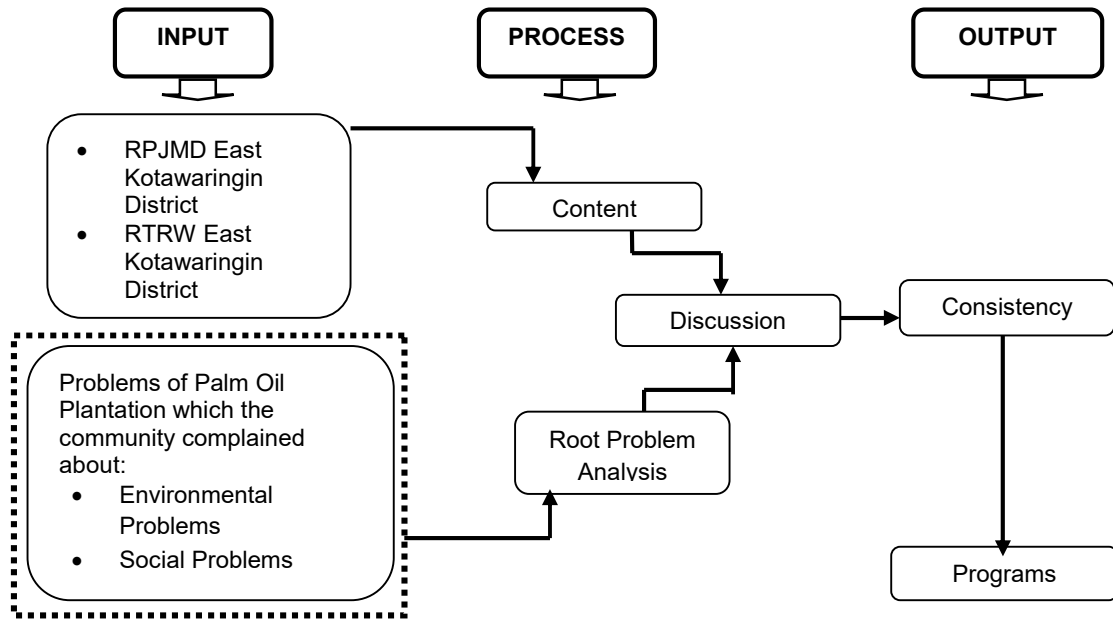
Source: Charts Processed Researcher, 2016.

Figure 3 – Development Planning Strategy of Palm Oil Plantation Based on Sustainable Development

This stage of output is the final stage of all activities undertaken during this planning process. Having been declared consistent with some existing programs in other planning documents relating to palm oil plantations then set a program related to palm oil plantation development. Of course the program to be set must also accommodate some problems that have been complained by the community to the Government of East Kotawaringin District, so the problems are indirectly will come solved by the implementation of the program.

CONCLUSION

Palm oil plantations development in East Kotawaringin District is currently only sustainable on social and economic aspects, while for the environment is not sustainable. The three parties namely: the government, the company, and the community have been able to coordinate together to undertake palm oil plantations development in East Kotawaringin District. But in terms of environmental conservation, the government and the company has not been so optimal in performing its duties. For the company, many still do not obey the government's instruction for the provision of conservation area. As for the government there is still no stipulation of local regulations that regulate specifically the provision of sanctions to palm oil plantation companies that do not make efforts to conserve the environment. Development planning strategy of palm oil plantations to be sustainable must be done through three stages of input-process-output. Input is the basis of the planning, the input consists of some planning documents and complaints by the community. The process is an analysis process and discussion conducted by the three parties namely: the Government of East Kotawaringin District, palm oil plantation companies and the community. Output is analysis result in the form of determination of development programs to realize palm oil plantation based on Sustainable Development.

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THE CASE OF RELATIONSHIP BETWEEN REWARDS AND KNOWLEDGE-SHARING WITH MULTIPLE CULTURE AS MODERATORS

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ABSTRACT
Several studies have explored the relationship between rewards and knowledge-sharing in private and public settings with mixed results. The same case also holds to the relationship between culture and knowledge-sharing. The present paper attempt to seek way out from this dead-end situation by looking people not as individuals who are necessarily being motivated when offered rewards in order to have willingness and intention to share their resources to others but instead as individuals in a continuous subjugating and dominating dynamic process with his/her environment in which culture is a part. He/she can make a step further of dominating or making new culture conceived suitable to make organization he/she manages adaptive and competitive comparative to others. The paper sheds lights on different advance in knowledge-sharing development at public institutions by synthesizing social exchange and structuration theories.

KEY WORDS
Rewards, culture, knowledge-sharing, social exchange, structuration.

In the highly dynamic business environment, organizations must adapt quickly in response to the changing needs of their stakeholders. To handle those overwhelming needs, many organizations hugely invest in knowledge management. Knowledge management (KM) is the process of creating, sharing, using and managing the knowledge and information of an organization (Girard, et al, 2015). It refers to the process of gathering and spotting useful information, transferring it (knowledge transfer or creation), compiling and depositing it (organizational memory), spreading it through the whole organization (knowledge sharing), enabling employees to recall (knowledge retrieval) and exploiting and usefully applying knowledge (knowledge leverage) and making use of it optimally (Demigha, 2015). One of the main activities of KM is "knowledge sharing" from which, organizational member can contribute to knowledge application, innovation, and performance of the organization (Ammar, et al., 2014). It is only possible if there is willingness and intention to share knowledge among all stakeholders involved, particularly skilled staff and leaders.

Even so,most of the studies cite motivation and culture as main drivers of knowledge sharing. Heydari et al., (2011) holds that reward should be put into motivation design for knowledge-sharing to materialize. If finds support from early works such as Osterloh & Frey, (2000) and Bartol dan Locke, (2000) for monetary rewards and Davenport & Prusak, (1998), Hargadon, (1998), Akhan and Rahimi, (2013), and Marti'n-Pe'rez et al., (2012) for non-monetary rewards.

Researches of the relationship between rewards and knowledge-sharing have been mixed. Allameh et al., (2012), for instance, has found that rewards has effect on staff attitude and intention to share knowledge. It is in line withthe studies of Wickramasinghe & Widyaratne, (2012); Witherspoon et al., (2013); Kim & Lee, (2006); and Kang et al., (2008); Al-Alawi et al., (2007); Marti'n-Pe'rez et al., (2012); and Durmusoglu et al., (2014); Lim et al.,

(2004), and Akhan & Rahimi (2013) all of which confirm the capability of reward as a motivation main driver leading to sharing-knowledge attitude.

Others show otherwise. Amayah' study (2013), for instance sets a ground for relation absence between rewards and knowledge-sharing in public sector. The research results of Tohidiniaand Mosakhani, (2010); Kumar & Rose, (2012); Wu & Zhu, (2012); Bock et al., (2005); Lin, (2007) and Bock & Kim, (2002) have the same vein.

As of culture, a recent body of literature has shed light on the role played by organization's culture as one of the best strategies to enhance knowledge management via knowledge sharing. Organizational culture is defined as a set of implied hypotheses accepted by group members that determines the way of behaving and responding to their surroundings. The culture has multiple levels ranging from a visible to an implied and invisible one (Schein, 2004).

Culture is both a key driver and inhibitor of organizational knowledge sharing (O'Dell, & Grayson, 1998. According to Delong & Fahey (2000), there are four reasons why culture is the base of knowledge sharing: culture shapes assumptions about what knowledge is important, culture determines what knowledge belongs to the organization or to the individual, it creates a context for social interaction about knowledge and culture shapes the creation and adoption of new knowledge. In the same direction, Cabrera & Cabrera (2005) suggest that organizational culture influences knowledge sharing in two ways: first, by creating an environment in which there are strong norms regarding the importance of doing this behavior, and second, creating an environment of caring and trust. Besides that, several studies identified "cultural barriers" as one of the key factors influencing the successful implementation of knowledge sharing activities in a firm (Rivera-Vazquez et al., 2009).

Studies supporting the formers include Al Murawwi et al., (2014); Suppiah & Sandhu, (2011); Cavaliere and Lombardi (2015), and Shao et al., (2015), among others. Those supporting the latter are include Kim (2013) and Alrawi et al., (2013).

These contradictory results provide justification base of the present study. It attempts to find ways out for the mixed results for the relationship between rewards and knowledge-sharing, and for that between culture and knowledge-sharing, by designing model analyzing the relationship between rewards representing motivation and knowledge-sharing with (multiple) culture as moderators. To do this, it applies the combination social exchange theory and structuration theory to grasp above issues, especially application of the model in public sector context. The study focuses its application in municipal government of Ternate, in Maluku province.

The bulk of KM research has given much focus on private sector organizations, with relatively little part on the public sector (Syed-Ikhsan & Rowland, 2004). In spite of this however, public landscape is changing as public organizations face increasing pressure to implement reforms and heighten their efficiency and effectiveness (O'Riordan, 2005). There has been effort to apply sector models to the public sector, such as debureaucratisation (Siddiquee, 2010). Given these changing contexts, it is common to find the adoption of management concepts and models applied in private organizations in public sector (Northcott, 2012).

LITERATURE REVIEW

The social exchange theory. It is proposed by Blau in 1964 and is instrumental to grasp individual's behavior in knowledge-sharing. According to this theory, individuals' interactions are much influenced by consideration of costs and benefits. People seek to maximize expected benefits and minimize anticipated costs when deciding to exchange resources with others (Molm, 2001). In maximizing resources, individuals may make relationships with others by sharing their knowledge. Davenport & Prusak, (1998) have cited several benefits that may determine people's behavior in knowledge sharing behavior, covering mutuality, status, career chances, and promotion.

Structuration theory. It is put forward by Giddensas an effort to explain intertwined relationship between social structure and human action as an agency. External structure can

not exist without the existence of action, and vice-versa. Individuals as agents not only reproduce structure, but also have subjective capabilities to produce subjective and objective realities (Giddens, 1984: 49). They not only make structure as medium, but also outcome. Reality of external structure can serve as constraining or even enabling factor to the agent. Action and reaction between structure and actor run continuously, and the process reflects the actor ability or disability, subjugation or domination, and activity and passivity. The relationship is called duality of structure. This theory reflects an effort to make a meeting point between structure and actor.

Pertaining to the issue of culture-knowledge sharing relationship, the theory is conceived as handy in explaining the case where leaders in an organization faced with existing culture working as constraining factor instead of enabling manage to dominate in order to steer organization to achieve intended performance.

METHODS OF RESEARCH

The paper applies literature and descriptive review. By reviewing some relevant literature and theories implied within, it intends to grasp the phenomenon of reformation in governmental institutions in terms of relationships between rewards and knowledge-sharing with (multiple) culture as moderator-(s) in Indonesia, with municipal government as a starting-point. While most studies of relationships between rewards, knowledge-sharing and culture, puts existing culture as a dominating factor, the present study attempts to view the relationships in a rather different angle, by putting human as an active agent who has ability to adapt culture to suit to organizational objectives. In doing so, the interplay between social exchange theory and structuration theory is imperative.

Public organizations has different traits and objectives from those of private business organizations. The former is oriented to the best service provision to society, while the latter is to profit. Even so, there is a minimal development in methods of delivering the service to the hands of society as reflected in a still widespread complaint among people of its quality and efficiency. The fact that governmental institutions have long experiences in providing and delivering service is not compatible to their capability to making optimal use of their supposedly accumulating learning inventory.

Many studies have confirmed that most of public institutions fall victims to bureaucratic malaise and its related culture. Positive turnaround leading to heightened performance should be accompanied with its bureaucration reformation. James Q Wilson, (1989) emphasizes the significance of actors' ability to manage the room for learning process on place and accessible to all stakeholders. Wilson argues that bureaucracy is commonly highly resistant to innovation in circumstance where staff enjoys much preference, financial support, and overwhelming authority. Bureaucratic institutions lean on stability and routine for all their activities. It might be a inhibiting factor on knowledge management and the pursuit of learning organization.

Bureaucratic organizations are encumbered by growingly increased pressure from public of improved service, limited budget and new information technology requiring immediate support from government. One breakthrough solution to overcome all these issues is bureacration reformation in attempt to pursue heightened innovation and performance. It entails an organization-wide shake-up to governance system, especially by accounting for its structure, administration process, and underlying human resources. Knowledge-based bureaucratic operation becomes the only best option to lay sound ground for bureaucratic reformation. It is more so due to the fact that reformation is designed to bring up some new innovations requiring personnel to have relevant knowledge to handle those innovations.

Ternate is one of the biggest cities in North Maluku province possessing dormant potentials to explore. Its leaders have intended to make Ternate as Cultural, Tourism, trading centre, and economic city. Several determining steps have been taken to materialize these objective. The most strategic measure is internal reformation, including system and administration in municipal government. Because of this measure, the municipal government

has been awarded by National Office for Staffing (BKN) for its success in nurturing and developing its staff. Among eight categories covering: staffing planning, service for personnel's rank proposal, service for pension matters, CAT (Computer Asset Test for Recruitment) implementation, performance evaluation implementation, assessment centre, e-PUPN (Electronic Registration Of Civil Servants), and innovative BKD (Regional Office For Staffing), municipal government of Ternate is conspicuous in service personnel's rank proposal, being the only regional government in Maluku province have accepted the reward.

Modern government holds on the principle of "bringing the state closer to the people" as a compelling norm. Thus, shake-up carried out by regional government on the behalf of organization restructuration should have a significant effect on the increased public policy quality. Governmental reorganization should be carried out in a such way that leads to good governance, in terms of accountability, transparence, participation, responsiveness, effectiveness and efficiency. The current trend unveils the fact that most of regional governments in Indonesia still can only achieve managerial reformation at minimally mediocre degree.

One good example is Ternate city. It has so far managed itself as the city of service, trade, culture, tourism and economy. One of the significant measures is to make available communication between government, and its stakeholders including people, businessmen, tourists and others and updated information accessible online to the latters. It can only be materialized by knowledge management of which sharing knowledge is a part. Other measure related to knowledge management is an attempt to develop Ternate as a Smart city within which the framework is put in place enabling online two-directions communication between government and its public important to grasp the emerging issues. The Smart city is also intended to make much more efficient and effective service delivery free of time and space barrier.

A study by a research team of STIA LAN Makassar, (2012) concerning competencies of regional governments' personnel in Indonesia compares 6 regional government including Sorong regency, Bandung city, Mamuju regency, Kendari city, Kupang city, and Ternate city and brings up several findings relating to knowledge management. Among those six regional governments, Ternate gets the highest rank with fair grade in points of delivering and clarifying state-of-art knowledge in the position as experts, helping other people having technical problems, spreading new technology outside organization, publishing paper of new method at professional journals.

Ternate gets the highest rank with fair grade in points of having awareness of new technology, actively developing technology in place and developing curiosity to master new skills and keeping up pace with recent development of a certain knowledge.

Ternate gets the highest rank with fair grade in points of mastering knowledge concerning of the tasks and having technical expertise necessary to contribute or share the knowledge to other people. Ternate gets the second rank after Kupang city in making use of existing culture to uphold the pursuit of organization's goals.

Study of Hamka et al. attempts to measure Ternate city's performance in terms responsibility, transparency, and efficiency reflecting the degree to which the city has gone in knowledge management. The report of the city progress in those three items is also being attempted to be accessible online by public by making available wi-fi infrastructure in several public places though so far only in a limited number. The study puts the city's performance in responsibility item at above average grade, the city's performance in transparency and efficiency at rather lower average grades.

The above analysis unveils that the leaders of Ternate City have not only dismantled overarching bureaucratic culture permeating all sectors in a governmental institution, they also modify and direct it to the attainment of knowledge sharing and best service culture. Knowledge sharing itself is a culture, where sharing what people have on the behalf on organization's objective of delivering services is a norm, is related to service culture. Leaders should direct bureaucratic culture where the perspective that the bureaucrats deserves respect and good services from public is widespread to service culture where the bureaucrats themselves should provide the best services based to knowledge sharing to the

public. The culture refers to complying to the common value and belief in a society or organization voluntarily as the faith to the value and belief make them to do so, and they accept it as taken for granted. At this point, rewards-based motivation plays much less importantly than that in the previous stage where sharing knowledge practice is still in transactional stage. Changing culture to the rewards-based transitory practice or habit is distinct to that to new culture where the intended practice is voluntary in nature. The former has a ground on social exchange theory, while the latter does on structuration theory. On the latter, individuals are not subject to their environment, instead they play dominant role above the environment and direct to the point of their goals. Leaders in an organization should make a culture-wide change, in that all individuals make new practices voluntarily as they submerge in the new value and system that make the practices as the best option to do.

In the case of municipal government of Ternate, the personnel and leaders are at the point of cross-roads between rewards-based and value-driven practices. Points along the way is a struggle of muddling through to the end of the way, along which there is a force of the remaining old culture to retreat. When they arrive at end point, rewards no longer serves as a driver of motivation to do the intended practices, rather as signs of status and appreciation. Municipal government of Ternate still have difficulty in handling culture as it is the most determining factor of the success of organizational reformation. The idea is that organizational reformation without culture changing is only temporary change in color and shape without the true change of the content.

RESULTS AND DISCUSSION

Study of regional government under the theme of knowledge sharing for reformation should pay heed to "human-directed culture" in the analysis of cultural effect as moderator on the relationship between rewards and knowledge sharing. Social exchange theory and structuration theory can account of development of reformation at organizational at different levels. Municipal government of Ternate is at a critical cross-road between "old culture" and "new culture", and the force of getting back to the previous point is always threatening. It can rejuvenate in new forms. Especially when the institution like municipal government of Ternate is challenged to maintain some elements of old culture in order to nurture its original identity. It explain several failures in the attempts of bureaucratic reformations in regional and national levels.

The reformation to good governance requires a full and continuous modification in case of driving-back force. The change should cover all stakeholders involved. Change attempt at governmental organization without the accompanying change of society or other stakeholders will go in vain. The people, parliamentary, businessman and others should act in the same tone until the change reaches its full entrenchment. Succession process can be an abrupt halting point where there still lack of an agreed-upon future direction and culture to live on. Continuity and discontinuity still characterizes Indonesia's changing policies which inhibit fast and significant progress required to win in the global era competition.

CONCLUSION

Municipal government of Ternate is Indonesia in miniature. It is at the brink of success in accomplishing knowledge-based reformation. However the road is a rather long to cross along which there are many points of driving back. The real entrenched change is 'cultural' where people to do the intended practice voluntarily. It finds support from structuration theory. The transient change is in transactional nature, and far much easier to go back the first place condition, as supported by social exchange theory.

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IMPLEMENTATION OF PALANGKA RAYA CITY GOVERNMENT POLICY TO IMPROVE TRADITIONAL RETAIL COMPETITIVENESS: STUDY ON IMPLEMENTATION OF REGIONAL REGULATION OF PALANGKA RAYA CITY #17 YEAR 2014 ON MODERN RETAIL REGULATION

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ABSTRACT

The research conducted is Policy Implementation of Palangka Raya City Government in curbing modern retail. This is in accordance with the applicable laws and regulations of Palangka Raya City. The main focus of this research is the implementation of Palangka Raya City government policy to improve traditional retail competitiveness by controlling the existence of modern retail through Regional Regulation of Palangka Raya City No. 17 2014. This research uses an interactive research with a qualitative descriptive approach. The results of this study indicate that the implementation of the policy has not been in line with expectations. The development of modern retail business still dominates the economy of society. There has been no successful effort to significantly empower traditional traders in an endeavor to enable them competing for potential consumer market in Palangkaraya. Policy violence occurs which involve zone or service hour violation, and partnerships that have not been maximized by modern retailers to traditional retail.

KEY WORDS

Implementation, modern retail, traditional retail, regulations.

Public policy implementation is one of the stages of the public policy process. Public policy implementation is a very crucial stage. A good policy would not be realized to its full potential should the implementation process was not planned properly. On the other hand, good preparation and policy implementation planning would not be able to realize policy objective should said policy is not adequately formulated. Thus policy implementation is a link which correlates policy formulation and outcome.

Grindle (1980) stated that the success of policy implementation is derived from policy content and context. Policy content covers the extent of a target group's interest are contained in the policy and the type of benefits to be received. It also includes the extent of desired changes policy content, including a program or required resources supporting implementation process of ratified policy.

Presidential Regulation No. 112/2007 on the development of Traditional Markets, Shopping Centers, and Modern Stores, has not been able to generate a positive impact on traditional retailers. The development of modern retailers poses a major threat to traditional urban retailing. Although rules on distance, zoning, and boundaries are regulated through Presidential Decree No. 112 of 2007. But in reality, it is not well realized. Even today the existence of traditional retail coincide with modern retail. The government issued another supporting regulation that is Commerce Ministry Regulation no. 53 year 2008 on the guidance of structuring and fostering of traditional markets, shopping centers, and modern stores. This regulation regulates a number of issues such as establishment, zoning, and traditional markets, shopping centers, and modern stores licensing.

Alfamart and Indomaret are dominating retail shops in Indonesia. Based on researchers' observation, Alfamart and Indomaret increasing growth causes the public pay less interest in small, micro, medium enterprises. Alfamart and Indomaret growth can be found up to Regency level. Since mid-2015 Alfamart and Indomaret started their development as a modern retail growing in Palangkaraya community. The number of Alfamart and Indomaret outlets in Palangkaraya City until June 2016 is estimated to have

reached approximately 90 stores throughout the district. The total number of commerce facilities in Palangka Raya City from 2011 to 2015 consists of 24 markets, 4,317 stores, 1,714 kiosks and 1,587 stalls. This is influenced by the rapid progress of trade and promising business opportunities in Palangkaraya.

Palangka Raya Municipal Government should not only pay attention to economic improvement alone. The government should also pay attention citizen's welfare. Nevertheless, Palangkaraya City government makes endeavor to protect traditional retail business actors by issuing Regional Regulation of Palangka Raya City No. 17 of 2014 concerning Modern Store Settings. By issuing Regional Regulation, the city government expects to maintain balance between modern retail growth and traditional retail business actors in order to improve Palangkaraya City economy. Regional Regulation of Palangka Raya City No. 17 year 2014 aided traditional retail business in Palangkaraya City. The implementation was conducted to find out the extent to which the implementation and impacts have been successful for modern and traditional retail.

METHODS OF RESEARCH

Strauss and Corbin (2003) stated that qualitative research is conducted to find, understand, and obtain a clear and deep picture on problems to be studied and researched. Researcher used qualitative research because it is considered able to examine phenomenal and logical issues. It can be used to express and understand something behind unknown phenomena. Therefore during research process, the researcher was able to draw the reality as characteristic, character, nature, model, and description about a condition of certain situation or phenomenon. The focus of this research are: (1) Implementation of Palangka Raya City Government Policy to Improve Traditional Retail Competition Through Regional Regulation of Palangkaraya City Number 17 Year 2014 About Modern Store Settings. (2) Supporting Factors and Inhibiting Factors of Palangka Raya City Government Policy Implementation To Enhance Traditional Retail Competitiveness Through Regional Regulations Palangka Raya City No. 17 Year 2014 About Modern Store Settings. The selected research location is Palangka Raya City which took place at the Industry and Trade Office of Palangkaraya City. Source of data was obtained in the form of primary data and secondary data. Primary data was obtained from interviews with informants, observation, and documentation. Secondary data is obtained from books, planning documents, journals, and scientific articles. The research instrument is the researcher himself and interview. The supporting guidelines consist of notes and tape recorders. In this study, the authors chose to use Miles, Huberman, and Saldana (2014) versions of the qualitative research model. Data analysis consists of four steps: data collection, data presentation, data condensation, and provide conclusions or verification.

LITERATURE REVIEW

In this study, researchers used Grindle (1980) policy implementation theory. Grindle (1980) states that the success of policy implementation depends on policy content and implementation context. The contents of policies which may affect implementation, according to Grindle (1980), include: (1) Interest affected by the program. Understanding target group interest will facilitate the achievement of efficiency and effectiveness of each program implemented; (2) Type of benefits generated. Policies providing collective benefits or to a large number of citizen will be easier to implement because it would obtain support from target groups or communities; (3) Reaching the desired change; Each policy has a target to be achieved. Therefore the desired change of a policy should have a clear scale; (4) The position of the decision maker. The more dispersed the policy makers, it will be the more difficult to implement them. Such cases often occur in policies involving a number of agencies; (5) Program implementer. In carrying out a policy or program, they must be supported by a competent policy implementer for the success of the policy itself. A policy must also be clearly established, and provide a clear description on policy implementer.

(6). Resources provided. The availability of resources needed to implement the policy will, by itself, facilitate its implementation. This resource is in the form of manpower, skill, fund, means, etc. Furthermore, in the Context of Implementation, in which and by whom the policy is implemented will also affect its success rate. No matter how good and easy the policy is and how supportive the target group is, the results of the implementation will depend on the implementer. Implementation context, according to Grindle (1980) that affects implementation is: (1) Power, interests, and strategies of the actors involved. In a policy, it is necessary to consider the power or authority, interests and strategies used by the actors involved to smooth the course of policy implementation; (2) Characteristics of institutions and authorities. A policy is the result of political calculations of interest and competition between groups to obtain limited resources, responses from implementers, responses from elites and responses from communities where everything is interrelated and interacting. Implementing a program may create conflict for those whose interests are affected. The conflict resolution strategy of «who gets what» can be an indirect indication of the characteristics of government or institution implemented the program, both on the partisanship of the executing authorities and leadership style; (3) Compliance and executive response. The implementer must be able to sense needs of the target group in order for the implemented program to be successful and to obtain support from the target group.

RESULTS AND DISCUSSION

Implementation of Palangka Raya City Government Policy to Improve Traditional Retail Competition through Regional Regulation of Palangkaraya City Number 17 Year 2014 about Modern Store Settings. The modern retail liberalization beginning in 1998 has brought foreign entrepreneurs into Indonesia urban centers. This is one reason local modern retailers are gathering in residential areas. Modern retailers expand their business development strategy to sub-district, suburban, and even remote villages. This is conducted as hypermarket and supermarket dominates city centers. In addition, minimarket deliberately approached the end consumer i.e the community. This fact cornered traditional retail in the form of kiosks and shops. Limited capital, human resources, and weak business management skills make their competitiveness worsen and pressured by the modern retail industry.

This phenomenon also occurs in Palangkaraya City. Palangkaraya was selected as research location because the city possesses fast growing economic potential. It is also the capital of Central Kalimantan Province. Palangkaraya possesses 90 modern retail stores such as Hypermart, Alfamart, Indomaret, and Foodmart. The arising issue is the fate of traditional retailers who have been living in Palangka Raya. Would they be able to compete with the presence of modern retail, whereas according to data obtained by researchers the number of traditional retail in Palangka Raya City reaches thousands.

Palangka Raya City Regulation No. 17 of 2014 on establishing modern stores in Palangka Raya City, stated that the requirements of modern retail are as follows:

1. Minimarket should be located 0.5 Km from traditional retail and 0.5 Km from a similar small business located at the edge of collector/artery roads.
2. Supermarkets and department stores should be located at least 1.5 Km from traditional retail located on collector/artery road.
3. Hypermarket should be located at least 2.5 km from traditional retail located at the edge of collector/artery roads.
4. On the edge of a neighborhood street with an area of outlets up to 200 m^2 square, a minimum distance of 0.5 km from traditional retail and similar small businesses.
5. Every manager of a shopping center and a modern store is required to implement a partnership with a small business.
6. The partnership shall be implemented in the form of marketing cooperation, business location provision, product acknowledgment, and carried out under a written agreement on the principle of mutual need, empowering and beneficial.

7. Service time begins at 09:00 to 21:00 pm unless a special permit is issued by acting Mayor.

Based on field data obtained through interviews and observations, Local Government of Palangka Raya City political will has not been clearly exhibited, which is evident based on the following facts:

1. Regulated distance violations committed by modern retailers by setting up their business buildings adjacent to traditional retail. The government does not seem to acknowledge the incident and deliberately allowing this to occur constantly. This indicates that Regional Government has not taken firm action.

2. Violation of operational hours and not implementing partnership despite the fact that the regulation has been running for almost three years. The perpetrators have not received any sanction from the Regional Government.

3. Traditional retailers have decreased their income by 30-50% since the emergence of modern retail near their place of business, this condition exhibits Local Government deliberation to let the condition remain as is.

Based on these data, it indicates that the policy contained in Regulation No. 17 of 2014 has not been implemented properly. This is evident in the facts that policy targets, such as modern retailers, are not adhering modern retail regulation policies imposed by the Palangkaraya City Government since 2014. Therefore other policy objectives regarding traditional retailers are also affected. Traditional retail is facilitated by Regional Regulation, these businesses become cornered as regulation implementation could not be fulfilled by one of the other policy targets. In this case minimarket.

Supporting and Inhibiting Factors Implementation of Palangka Raya City Government Policy To Increase Traditional Retail Competition Through Regional Regulation Palangka Raya City No. 17 of 2014 About Modern Store Regulation. The successful implementation of Palangka Raya City government policy to improve traditional retail competitiveness is supported by economic potential in increasing Regional Income or *Pendapatan Asli Daerah* (PAD) earned from traditional retail businesses. There are citizen who depend their lives on traditional markets, by entrusting their needs fulfillment in it. Traditional market promotes cheaper price and there is existing an emotional relationship between traders and buyers, as traditional markets are identical with bargaining. On the other hand, the inhibiting factors on implementation business partnership between modern retail and traditional retail have not been maximized. There's also inconsistency in implementing zoning policy and service time between modern retail and traditional retail.

CONCLUSION

Based on research result and discussion described in the previous chapter, it could be concluded that Palangkara Raya policy implementation to improve the competitiveness of traditional retail:

The policy of the Municipal Government of Palangkaraya to improve traditional retail competitiveness has not proceeded as expected. Violations on Regional Regulation No. 17 of 2014 still occur. The violation is in the form of zoning and hours of service violation conducted by modern retailers against traditional retail, whereas this regulation has been running for 3 (three) years but has not received strict sanction from the local government.

Traditional retail business is still unable to compete with modern retailers. This is evidenced by a number of complaints from traditional business actors regarding the decline in their income and the emergence of modern retail near its business location. Local government seems to deliberately let the situation remain as is.

Municipal Government of Palangka Raya City policy implementation supporting factor in an endeavor to improve traditional retail competitiveness is economic and social potential. On the other hand, the inhibiting factor is the implementation of business partnership between the two retailers has not been maximized and the inconsistency of zoning implementation and service time between the two retailers.

Furthermore, researchers concluded that traditional retail competitiveness is low. Based on field research result, researchers found one of the important points in supporting the implementation of this policy by strengthening the partnership method. A strong partnership model will support traditional retailers.

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GROWTH AND YIELD CHARACTERISTICS OF THREE SHALLOT VARIETIES AFFECTED BY PHOSPHATE FERTILIZER DOSAGES ON ULTISOL

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ABSTRACT

This research aims to obtain growth and yield characteristics of shallot due to three shallot varieties and phosphate fertilizer dosages on Ultisol. The experiment was conducted from July to September 2015 in Horticulture Main Seed Development Centre in Muaro Jambi district. Randomized block design used was arranged with two factors. The first factor was varieties e.i. Bima Brebes, Bauji, and Bangkok. The second factor was dosages of phosphate fertilizer e.i. 0; 125; 250; 375 kg $P_2O_5\,ha^{-1}$. The growth and yield characteristics of shallot were different for each shallot variety and dosage of phosphate fertilizer. Bangkok variety had the highest Net Assimilation Rate (NAR), Specific Leaf Weight (SLW), bulb to leaf dry weight ratio and bulbs number. Bima Brebes variety had the highest Leaf Area Index (LAI), Crop Growth Rate (CGR), bulbs diameter, and bulbs weight whereas Bauji variety only had the highest Leaf Area Ratio (LAR). Optimum dosage of phosphate was different for each variety. The dosage of 375 kg $P_2O_5\,ha^{-1}$ at Bangkok variety of bulbs weight increased linearly. The highest weight of Bima Brebes bulbs variety was obtained with 21.62 g per hill at an optimum dosage of 246.11 kg $P_2O_5\,ha^{-1}$.

KEY WORDS

Growth and yield, phosphate fertilizer, shallot varieties, ultisol.

Shallot is classified as strategic and prime commodity for Indonesia which continuously gains government attention in order to be developed through the productivity increase and expansion of plant area. This is appropriate with the increase of shallot demand as the result of population growth and shallot used in daily life which cannot be compensated by the other commodities. According to the Agricultural Information System Data Center (2015) showed that the average of shallot consumption in the Indonesian year 2014 was 2.49 kg/capita/year and a projection in 2019, it is going to increase to 2.55/kg/capita/year. During 2010-2014, there was significant fluctuation number of harvest areas and shallot products, and an average of national shallot yield in 2014 just reached 10.22 tons ha^{-1} (General Directorate of Horticulture, 2015) which was not relevant to the description of some shallot varieties whose potential yield more than 13 tons ha^{-1}. Due to the facts, it still requires the best effort to escalate shallot productivity for domestic supply and export.

One of the factors that should be examined in order to enhance yield and productivity of shallot is optimized the utilization of production facilities, such using proper superior varieties. Several superior local varieties have been available and acceptable to be a range of options to reduce reliance on the use of import seeds. However, each shallot variety has distinct ability to adapt as it needs planting test in the other regions. Idhan *et al*. (2015) conducted a research that showed the yield of shallot was far below the national average which was Bauji variety yield as much as 8.5 tons ha^{-1}, Brebes variety 3.5 tons ha^{-1}, and Bangkok variety 4.0 tons ha^{-1}.

Besides the use of appropriate prime varieties, to increase yield shallot has to approach the lack of soil fertility, one of the nutrients that is often to be a limit factor for plant growth is phosphorus (P). P element is provided for the plant in soil as ionic form, almost as

$H_2PO_4^-$ and $HPO_4^=$. P element is widely traded as phosphate fertilizer containing the P_2O_5 compound. P element is essential macronutrient which is required for plant growth and development. It influences the number and quality of yield. P element has a function as an energy resource in ATP formed necessarily for nutrient absorption, photosynthesis and photosynthate translocation of the leaves as sources, as well as biosynthesis other macromolecules that will accumulate as a food reserve and organ structure the new plants. P element can be a crucial part of macromolecule as phospholipid and nucleic acid.

The availability of P element for plants is often limited since the majority of the elements are insoluble form. Rashmi *et al.* (2015) stated that Langmuir and Freundlich's model was acceptable to describe phosphate ion absorption on soil colloid surface where the presence of clay. Al and Fe elements guided the capacity of ion absorption by soil colloid. As on Ultisol, a plenty of P elements bound with Al and Fe elements. The phosphate ion adsorption behavior can be used to measure the effectiveness of the P element needed and to supply optimal P element, to yield maximum plant production require phosphate fertilizer on a higher dosage.

Metabolic processes in the plants, especially anabolism, are influenced by the availability of P element as an energy source in the form of ATP. Hence, P element deficiency has the ability to affect the growth and development of the plant. Nevertheless, each plant response to resilience and mechanism of adaptation are varying, and this can be used as consideration to decide an exact variety of plant that is tolerant to the lack of P element. Simon *et al.* (2014) assumed each onion variety has a different response to different phosphate fertilizer. Navies' variety shows greater growth and yield than Bombe Red variety, and Navies onion variety has the highest bulbs yield with phosphate fertilizer on dosage 46 kg P_2O_5 ha^{-1}.

Shallot also gives reaction to phosphate fertilizer. Sumarni *et al.* (2012) research showed that giving phosphate fertilizer in soil with high P status (>26 ppm P_2O_5) could still increase bulbs yield and Bangkok variety had the highest yield with phosphate fertilizer on dosage 126.5 kg P_2O_5 ha^{-1}. While on P status low (<15 ppm P_2O_5) and medium (16-25 ppm P_2O_5) gave Phosphate fertilizer on dosage 240 kg P_2O_5 ha^{-1} showed a linear increase of bulbs yield.

Attempt to improve yield and production of shallot in Indonesia, advance strategy for shallot in different region or location, especially in acid land, is usually taken along with phosphate fertilizer at uniform dosage or general recommendation dosage. Therefore, it does not provide exact result yet and needs application improvement of phosphate fertilizer. Furthermore, the appropriate phosphate fertilizer dosage for each shallot variety in a specific location has to be examined in order to obtain optimal shallot production. This research aims to obtain growth and yield characteristics of shallot due to three shallot varieties and phosphate fertilizer dosages on Ultisol.

MATERIALS AND METHODS OF RESEARCH

The research was conducted from July to September 2015 in Horticulture Main Seed Development Centre of Muaro Jambi district – Indonesia on Ultisol, pH 4.07, N-total 0.19 (low), available P 3.19 ppm (very low), K_{-exch} 0.32 me 100 g^{-1} (low), Al_{-exch} 1.44, H_{-exch} 0.58. Material used was three varieties shallots which consist in Bima Brebes, Bauji, and Bangkok varieties, dolomite, Urea fertilizer (46%N), TSP (46% P_2O_5), KCl (60% K_2O), chicken manure, Furadan 3GR insecticide/ nematicide (active ingredient: Carbofuran 3%), Dithane M-45 80 WP fungicide (active ingredient: Mancozeb 80%) and Curacron insecticide (active ingredient: Profenofos 500gL^{-1}).

This experiment used Randomized block design arranged in factorial. There were two factors of treatment, the first was shallot varieties, i.e. Bima Brebes, Bauji, Bangkok; and the second was phosphate fertilizer dosages, i.e. 0; 125; 250; 375 kg P2O5 ha^{-1}. Each treatment combination was repeated 3 times.

Shallot bulbs had been stored for 3 months. Before the shallot bulbs were planted, the ¼ bottom edge of it was cut to keep initial growth uniformity. The land was plowed at +30 cm

depth and then given dolomite 1.5 ton ha$^{-1.}$ The plots were built at size 120 cm x 180 cm, distance in a block was 30 cm, between blocks, were 50 cm, and height was 30 cm. Each shallot bulb planting at 15 cm x 20 cm distance, done by embed the bulb flush to the ground and the buds facing up.

Basic fertilizers used were 10 tons ha^{-1} chicken manure and phosphate fertilizer at treatment dosages. These were given seven days before planting, mixed with the soil. Other fertilizers used were 250 kg N ha^{-1} (544 kg Urea ha^{-1}) and 100 kg K_2O ha^{-1} (167 kg KCl ha^{-1}), used at 3, 21 and 35 days after planting (DAP), each used at 1/3 dosage.

Watering was done each day for up to 7 days before harvest. Weeds were controlled manually whereas pathogen was conquered chemically used Furadan 3GR insecticide/ nematicide, Dithane M-45 80 WP fungicide and Curacron insecticide at recommendation dosage.

Observation of growth characteristics performed on Net Assimilation Rate (NAR), Leaf Area Ratio (LAR), Specific Leaf Weight (SLW), Leaf Area Index (LAI), Crop Growth Rate (CGR), and bulb to leaf dry weight ratio with destructive plant sample. It performed at 14, 21, 28, 35 and 42 days after planting (DAP). The growth analyses of NAR, LAR, SLW, SLW, LAI, and CGR were carried out following the formulas of Bugbee (1996):

$$NAR = \frac{(W_2 - W_1)}{(T_2 - T_1)} \times \frac{(\ln\ La_2 - \ln\ La_1)}{(La_2 - La_1)} \qquad LAI = \frac{(La_2 + La_1)}{2} \times \frac{1}{G_A}$$

$$LAR = \frac{(La_2/W_2 + La_1/W_1)}{2} \qquad CGR = \frac{1}{G_A} \times \frac{(W_2 - W_1)}{(T_2 - T_1)}$$

$$SLW = \frac{(Lw_2/La_2 + Lw_1/La_1)}{2}$$

Where: La: leaf area; Lw: leaf weight; G_A: ground area; T: time; W: weight. Whereas observation for shallot yield includes bulbs number per hill, an average diameter of bulbs and bulbs weights per hill. Obtained data analyzed using analysis of variance followed by the Least Significant Difference (LSD) test for single factor and Honestly Significant Difference (HSD) for interaction factor (p 0.05). The optimum dosage of phosphate fertilizer for the yield to produce the highest bulbs weight per hill is determined by regression analysis.

RESULTS AND DISCUSSION

Growth Characteristics. The result showed there was no interaction between varieties and phosphate fertilizer dosages on Net Assimilation Rate (NAR), Leaf Area Ratio (LAR), Specific Leaf Weight (SLW), Leaf Area Index (LAI), and Crop Growth Rate (CGR). The interaction was only for the bulb to leaf dry weight ratio.

This research defined that NAR was influenced by varieties and phosphate dosages. Bangkok variety had the highest NAR, started at 21-28 to 35-42 days after planting whereas Bauji got the lowest NAR, started at 21-28 to 28-35 days after planting. Phosphate fertilizer dosages influenced NAR at aged 21-28 to 28-35 days after planting; the highest NAR was obtained at 250 kg P_2O_5 ha^{-1}, otherwise, NAR decreased at 375 kg P_2O_5 ha^{-1} (Table 1). Hochberg *et al.* (2015) found variety affected photosynthesis rate. In addition, Pandey *et al.* (2015) said NAR was influenced by phosphate application and Li *et al.* (2016) proved that the increase of NAR was able to enhance leaves capacity as a source.

Lower NAR value in early growth was caused by the young leaves not fully developed and not able to do a maximum photosynthetic activity. Furthermore, NAR value was escalated by the increase of plant aged up to 35-42 DAP due to the accretion of leaves growth and bulbs growth as reproductive organs, shown by the accretion of a bulb to leaf dry weight ratio (Table 6). Bulbs formation and growth was a very strong sink that required a plenty of photosynthates and on optimal conditions, photosynthetic activity of the leaves would run on the blistering way. It was also supported by the shallot leaves not overshadow

each other. This caused the solar radiation might affect the entire leaves surface. Sridevi and Chellamuthu (2015) also stated that NAR increased in the early stages of reproductive phase.

Table 1 – Net assimilation rate (NAR) of three shallot varieties with different phosphate dosages

Treatment	NAR (mg cm^{-2} d^{-1})			
	14-21 DAP	21-28 DAP	28-35 DAP	35-42 DAP
Bima Brebes	0.92	1.13 b	1.46 b	1.79 b
Bauji	0.94	0.97 c	1.27 c	1.56 b
Bangkok	1.15	1.77 a	2.28 a	2.72 a
LSD 5%	ns	0.092	0.120	0.241
0 kg ha^{-1} P_2O_5	0.93	1.30 ab	1.68 ab	1.99
125 kg ha^{-1} P_2O_5	0.10	1.31 ab	1.68 ab	2.04
250 kg ha^{-1} P_2O_5	1.15	1.33 a	1.72 a	2.16
375 kg ha^{-1} P_2O_5	0.92	1.22 b	1.58 b	1.90
LSD 5%	ns	0.106	0.139	ns

Note: Numbers followed by different letter at each column are significantly different at p=0.05; ns= not significant.

This research showed LAR was only influenced by varieties. Bauji had the highest LAR whereas Bangkok had the lowest LAR (Table 2), and LAR value showed leaf area increase for each unit of plant dry weight. Fischer *et al.* (2012) explained that variety influenced the ratio of leaves to the other plant organs.

LAR expressed leaves capacity as a source, and lower LAR as Bangkok variety had could reduce photosynthate because of lack leaves area where photosynthesis took place, so photosynthesis effectiveness for each unit of leaf area was shown by high NAR (Table 1) less effective to increase total biomass. Alizadeh *et al.* (2013) found the balance of source-sink would control photosynthesis and yield. In addition, Fischer *et al.* (2012) said lack of leaves area in line was going to cut reproductive growth.

Table 2 – Leaf area ratio (LAR) of three shallot varieties with different phosphate dosages

Treatment	LAR (cm^2 g^{-1})			
	14-21 DAP	21-28 DAP	28-35 DAP	35-42 DAP
Bima Brebes	46.22 b	39.15 b	33.34 b	28.84 b
Bauji	50.81 a	45.81 a	39.19 a	34.96 a
Bangkok	32.07 c	25.86 c	21.73 c	18.48 c
LSD 5%	2.702	2.947	2.580	2.695
0 kg ha^{-1} P_2O_5	42.47	36.62	31.15	27.18
125 kg ha^{-1} P_2O_5	42.67	36.69	31.24	27.34
250 kg ha^{-1} P_2O_5	42.05	35.53	30.20	26.30
375 kg ha^{-1} P_2O_5	44.95	38.92	33.09	28.90
LSD 5%	ns	ns	ns	ns

Note: Numbers followed by different letter at each column are significantly different at p=0.05; ns= not significant.

High LAR in early plant growth was caused by a large number of young leaves and accretion of leaves area, so photosynthesis activity not optimal yet and photosynthate was used more for its own growth of the young leaves. Therefore, an increase of leaves area was higher than photosynthate accumulation for the growth of the whole plant. Moreover, the increase of plant age in line with decrease LAR value because an increase of leaves area rate was lower than accumulation dry material for whole plant's parts. It was supported by NAR value increase at early reproductive phase. Hence, dry plant weight increase was higher than leaves area increase. This phenomenon explains plant age increase, especially at the early reproductive phase, the reproductive organ had stronger sink than the other organs include the leaves.

SLW was only affected by variety, whereas phosphate fertilizer dosage did not impact all stages of plant age. Bangkok variety had the highest SLW followed by Bima Brebes, and Bauji had the lowest (Table 3). SLW represented dry weight increase for each leaf area unit. Pankaj *et al.* (2015) explained different variety demonstrated different dry material

accumulation, Weraduwage *et al.* (2015) said, there was a correlation between leaves area accretion and biomass accretion depend on how photosynthate partition between new leaves part and leaves mass.

Table 3 – Specific leaf weight (SLW) of three shallot varieties with different phosphate dosages

Treatment	SLW (mg cm^{-2})			
	14-21 DAP	21-28 DAP	28-35 DAP	35-42 DAP
Bima Brebes	5.10 a	5.23 a	5.66 a	5.96 b
Bauji	4.98 ab	4.99 b	5.40 b	5.62 c
Bangkok	4.88 b	5.25 a	5.71 a	6.17 a
LSD 5%	0.139	0.157	0.165	0.175
0 kg ha^{-1} P$_2$O$_5$	4.98	5.16	5.59	5.92
125 kg ha^{-1} P$_2$O$_5$	4.98	5.15	5.57	5.90
250 kg ha^{-1} P$_2$O$_5$	5.00	5.18	5.62	5.94
375 kg ha^{-1} P$_2$O$_5$	4.97	5.14	5.57	5.91
LSD 5%	ns	ns	ns	ns

Note: Numbers followed by different letter at each column are significantly different at p=0.05; ns= not significant.

SLW was lower at the early plant growth because the increase of leaves dry weight was followed by leaves height area increase. The Increase of plant age and leaves affected dry material accumulation in leaves, dominated to increase leaves dry weight and therefore increased SLW. Observation showed SLW had a strong correlation with NAR and LAR which influenced bulbs yield. In order to gain bulbs yield height, the balance of growth characteristics was required. SLW increase had a correlation with NAR increase. This was a contrast with LAR decline. Lower vegetative growth made it less optimal to support reproductive growth. Otherwise, very dominant vegetative growth decreased photosynthate partition for reproductive organ. Fischer *et al.* (2012) delineated adequate ratio of leaves for reproductive organs were required in order to obtain high number and quality of yield.

LAI for all shallot ages was affected by varieties and phosphate dosages. Bima Brebes variety had the highest LAI whereas between Bauji and Bangkok varieties did not have any difference. The highest LAI was obtained by 250 kg ha^{-1} P$_2$O$_5$ fertilizer dosage and 0 kg ha^{-1} P$_2$O$_5$ fertilizer dosage gave the lowest (Table 4). Kour and Sharma (2016) found LAI increase correlated to the specific pattern of plant growth; it was the cumulative effect of leaves area increase, as the result of number and growth leaves increase.

Shallot canopy shape was upright and the leaves layout did not overshadow, LAI increase would not decrease NAR as each leaf did not compete against sunlight interception. The balance of NAR, LAR, SLW and LAI simultaneously influenced source capacity that controlled sink. Fischer *et al.* (2012) declared the number and quality of yield required sufficient ratio of leaves to reproductive organs or certain numbers and leaves area. In addition, Li *et al.* (2016) found source capacity had direct effect to yield and higher source capacity gave higher number and quality of yield.

Table 4 – Leaf area index (LAI) of three shallot varieties with different phosphate dosages

Treatment	LAI			
	14-21 DAP	21-28 DAP	28-35 DAP	35-42 DAP
Bima Brebes	0,26 a	0,29 a	0,34 a	0,42 a
Bauji	0,15 c	0,18 b	0,21 b	0,26 b
Bangkok	0,18 b	0,20 b	0,23 b	0,27 b
LSD 5%	0,022	0,029	0,034	0,045
0 kg ha^{-1} P$_2$O$_5$	0,16 b	0,19 b	0,22 b	0,27 c
125 kg ha^{-1} P$_2$O$_5$	0,18 b	0,21 b	0,24 b	0,30 bc
250 kg ha^{-1} P$_2$O$_5$	0,22 a	0,25 a	0,29 a	0,36 a
375 kg ha^{-1} P$_2$O$_5$	0,21 a	0,24 a	0,28 a	0,34 ab
LSD 5%	0,026	0,033	0,038	0,052

Note: Numbers followed by different letter at each column are significantly different at p=0.05.

CGR in entire plant age affected varieties and phosphate fertilizer dosages. Bima Brebes and Bangkok varieties had higher CGR than Bauji. The highest CGR was given by 250 kg P_2O_5 ha^{-1} dosage and 0 kg P_2O_5 ha^{-1} dosage gave the lowest (Table 5). Pandey *et al.* (2015) explained that CGR was influenced by phosphate fertilization and Sopha *et al.* (2015) added that plant growth analysis was acceptable to be used as guidance to diagnose nutrients level and as a tool to recommend shallot fertilization.

Table 5 – Crop growth rate (CGR) of three shallot varieties with different phosphate dosages

Treatment	CGR (mg cm^{-2} d^{-1})			
	14-21 DAP	21-28 DAP	28-35 DAP	35-42 DAP
Bima Brebes	0,23 a	0,33 a	0,50 a	0,74 a
Bauji	0,13 b	0,17 b	0,26 b	0,39 b
Bangkok	0,19 a	0,35 a	0,53 a	0,74 a
LSD 5%	0,054	0,036	0,053	0,095
0 kg ha^{-1} P_2O_5	0,14 b	0,24 c	0,37 c	0,52 c
125 kg ha^{-1} P_2O_5	0,17 ab	0,27 bc	0,41 bc	0,59 bc
250 kg ha^{-1} P_2O_5	0,22 a	0,32 a	0,48 a	0,72 a
375 kg ha^{-1} P_2O_5	0,20 ab	0,30 ab	0,45 ab	0,66 ab
LSD 5%	0,062	0,041	0,061	0,110

Note: Numbers followed by different letter at each column are significantly different at p=0.05.

Plant age increase would be followed by the increase of CGR up to 35-42 DAP. Mojaddam and Noori (2015) explained that CGR boosted slightly at early plant growth and increased significantly at next step. The slow increase of CGR at early plant growth occurred due to a numerous of the vegetative meristem, include the leaves not fully developed. CGR increase was faster after maximum leaves area was reached, that was taken along by the use of efficient sunlight. Khayat *et al.* (2015) explained that CGR increase would be followed by LAI increase and it would reach the maximum value at early reproductive phase.
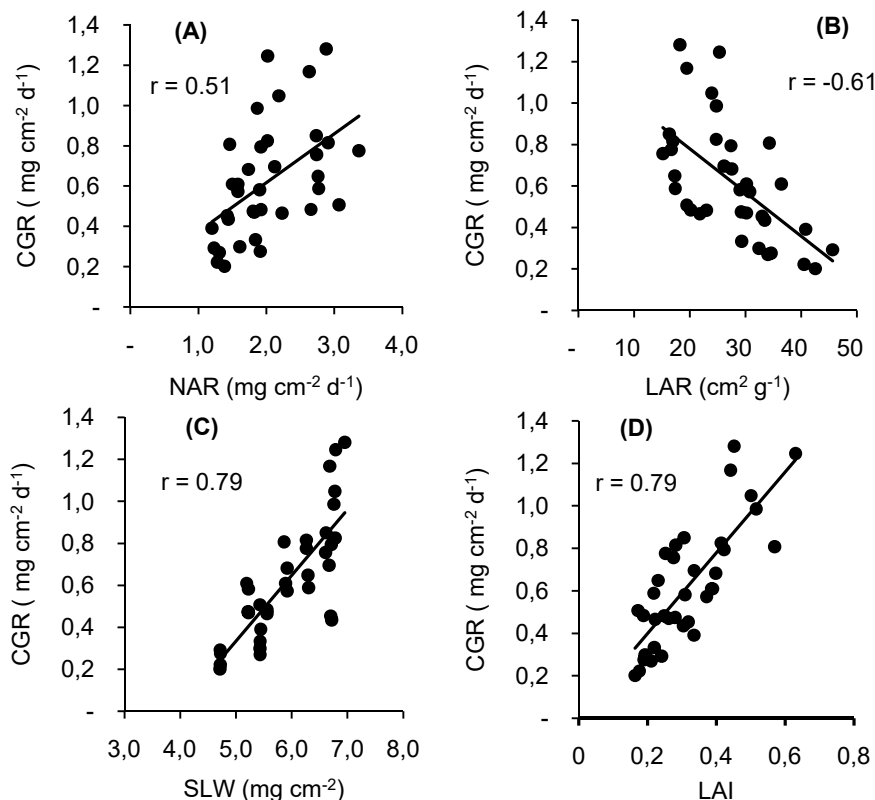
Figure 1 – Correlation of NAR (A), LAR (B), SLW (C), LAI (D) with CGR at 35-42 DAP

Plant growth was determined by photosynthesis effectiveness for a unit leaf area and total leaves area of each plant. Maximum of total photosynthate was resulted by balancing photosynthesis effectiveness for a unit leaf area and total leaves area. This study showed high CGR of Bima Brebes variety was determined by high LAI, there was a positive correlation between CGR with leaf area increase for each plant. In contrary, Bangkok variety, the highest CGR is determined by higher NAR. Kour and Sharma (2016) explained that CGR increase was a result of photosynthesis activities. CGR increase had strong correlation with NAR, SLW and LAI with r = 0.51; r = 0.79 and r = 0.79 respectively for each, whereas CGR increase had negative correlation with LAR (r = -0.61) (Figure 1).

Bangkok variety had a higher bulb to leaf dry weight ratio than Bima Brebes and Bauji. Furthermore, there were no differences between Bima Brebes and Bauji, and among different phosphate fertilizer dosages (Table 6). Ratio increase of bulb to leaf dry weight in ideal plant growth environment can be interpreted as bulbs yield increase. However, in this case, the high ratio of the bulb to leaf dry weight to Bangkok variety's had been limited by lower LAR even high NAR (Table 1 and 2). Hence, narrow leaf area was not optimal to support bulbs yield. Fischer *et al*. (2012) stated that the number and quality of yield required an adequate ratio of leaves and reproductive organ or required certain the number and leaves area.

Table 6 – Bulb to leaf dry weight ratio of three shallot varieties with different phosphate dosages

Variety + P_2O_5	Bulb to leaf dry weight ratio			
	21 DAP	28 DAP	35 DAP	42 DAP
Bima Brebes + 0 kg ha^{-1}	3.56 b	4.08 b	4.41 b	5.12 c
Bima Brebes + 125 kg ha^{-1}	3.84 b	4.40 b	4.75 b	5.58 bc
Bima Brebes + 250 kg ha^{-1}	3.51 b	4.03 b	4.35 b	5.03 c
Bima Brebes + 375 kg ha^{-1}	3.35 b	3.85 b	4.15 b	4.88 c
Bauji + 0 kg ha^{-1}	2.93 b	3.36 b	3.63 b	4.14 c
Bauji + 125 kg ha^{-1}	2.79 b	3.20 b	3.45 b	3.84 c
Bauji + 250 kg ha^{-1}	3.87 b	4.44 b	4.79 b	5.56 bc
Bauji + 375 kg ha^{-1}	2.99 b	3.43 b	3.70 b	4.19 c
Bangkok + 0 kg ha^{-1}	6.26 a	7.19 a	7.76 a	8.54 a
Bangkok + 125 kg ha^{-1}	6.19 a	7.11 a	7.67 a	8.65 a
Bangkok + 250 kg P_2O_5 ha^{-1}	5.72 a	6.57 a	7.09 a	8.13 a
Bangkok + 375 kg P_2O_5 ha^{-1}	5.43 a	6.23 a	6.73 a	7.57 ab
HSD 5%	1.219	1.399	1.501	2.305

Notes: Numbers followed by different letter at each column are significantly different at p=0.05.

Bulbs Yield. Varieties and phosphate fertilizer dosages did not have interaction with the number of bulbs, bulbs diameter, and bulbs weight per hill. They were affected by a single factor. Bangkok had the highest number of bulbs and Bauji had the lowest. Bima Brebes had the highest bulbs diameter and bulbs weight per hill, Bangkok had the lowest bulbs diameter and Bauji had the lowest bulbs weight. Using phosphate fertilizer dosage at 250 kg P_2O_5 ha^{-1} afforded the highest bulbs number, bulbs diameter, and bulbs weight per hill whereas phosphate fertilizer dosage at 0 kg P_2O_5 ha^{-1} gave the lowest (Table 7).

Table 7 – Yield and yield components of three shallot varieties with different phosphate dosages

Treatment	Bulbs number per hill (clove)	Average bulbs diameter (cm)	Bulbs weight per hill (g)
Bima Brebes	4.79 b	8.76 a	19.63 a
Bauji	3.88 c	8.10 b	12.59 c
Bangkok	7.65 a	6.91 c	15.90 b
LSD 5%	0.431	0.328	1.744
0 kg P_2O_5 ha^{-1}	5.01 b	7.38 b	13.69 c
125 kg P_2O_5 ha^{-1}	5.42 ab	7.66 b	15.47 bc
250 kg P_2O_5 ha^{-1}	5.79 a	8.41 a	18.09 a
375 kg P_2O_5 ha^{-1}	5.53 a	8.24 a	16.91 ab
LSD 5%	0.497	0.379	2.014

Note: Numbers followed by different letter at each column are significantly different at p=0.05.
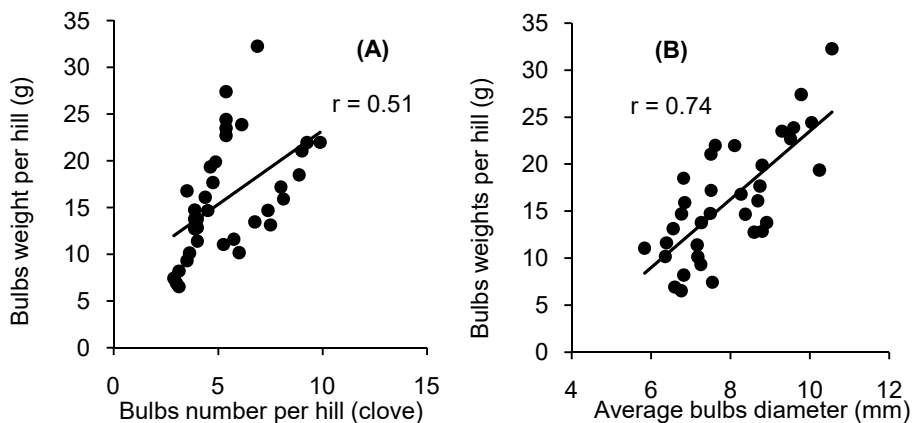
Figure 2 – Correlation of bulbs number (A) and bulbs diameter (B) with bulbs weight per hill

A number of bulbs and diameter of bulbs were components that influenced to bulbs weight per hill, had a strong correlation between them shown with r = 0.51 and r = 0.74 (p<0.01) for each respectively (Figure 2). High bulbs weight of Bima Brebes was influenced by high bulbs diameter. Although Bangkok had the highest number of bulbs; the bulbs weight was lower than Bima Brebes. Low bulbs weight of Bangkok showed high NAR was not followed by LAR and LAI increase. It caused photosynthate for translocation to shallot bulbs not maximum, so bulbs diameter was lower. Li *et al*. (2016) said an increase of NAR and total leaves area would escalate capacity source and bulbs yield. Fischer *et al*. (2012) explained photosynthate translocation from leaves was essential for sink growth and development, number and quality of yield relied on an adequate source and sink relationship. Alizadeh *et al*. (2013) found photosynthesis increase was required by a sink, and sink needs to be accumulated at early reproductive phase. Low bulbs weight per hill Bauji had because of a little number of bulbs, high LAR, and low CGR. It means photosynthate partition of leaves used for leaves area increased more than other organs' growth includes bulbs. Weraduwage *et al*. (2015) added the increase of new leaf part, leaves mass, roots mass, and the reproductive organ was depended on the direction of photosynthate partition.

High bulbs weight per hill that Bima Brebes had and fertilization with phosphate at 250 kg P_2O_5 ha^{-1} dosage were supported by high LAI and CGR. In contrast, low bulbs weight per hill that Bauji had and fertilization with phosphate at 0 kg P_2O_5 ha^{-1} dosage were the results of low LAI and CGR. Khayat *et al*. (2015) explained that high LAI at maximum growth phase had a positive correlation with yield and low LAI could stimulate yield decreased. Pandey *et al*. (2015) found LAI and CGR had a positive correlation with yield. In addition, phosphate fertilization increased biomass and yield while plant which had a lack of phosphate decreased yield.
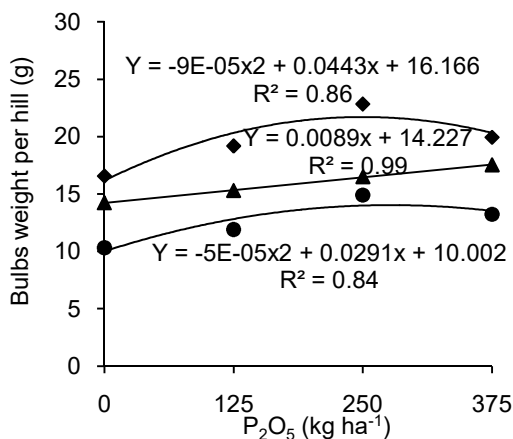
Figure 3 – Relationship of phosphate dosages and bulbs weight per hill
(♦ = Bima Brebes; ● = Bauji; ▲ = Bangkok).

The optimum dosages of phosphate fertilizer required of each variety were different. Bima Brebes required 246.11 kg P_2O_5 ha^{-1} for bulbs weight 21.62 g per hill; Bauji required 291.00 kg P_2O_5 ha^{-1} for bulbs weight 14.24 g per hill. Bangkok showed a linear increase of bulbs weight per hill up to 375 kg P_2O_5 ha^{-1} (Figure 3). In conclusion, Bima Brebes has the highest bulbs weight per hill with the most efficient phosphate fertilizer used. Sopha *et al*. (2015) found the efficiency of fertilizer used was influenced by shallot varieties. Li *et al*. (2016) added nutrient controlled source-sink relationship determined yield.

CONCLUSION

Characteristics of growth and yield affected by shallot varieties and different phosphate dosages. Bangkok variety had the highest NAR, SLW, bulb to leaf dry weight ratio, and bulbs number. Bima Brebes had the highest LAI, CGR, bulbs diameter, and bulbs weight whereas Bauji had the highest LAR. Optimum dosage of phosphate was different for each variety. The dosage of 375 kg P_2O_5 ha^{-1} at Bangkok showed a linear increase of bulbs weight while Bima Brebes reached the highest weight as much as 21.62 g per hill at an optimum dosage of 246.11 kg P_2O_5 ha^{-1}.

ACKNOWLEDGEMENTS

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EFFICIENCY OF PRODUCTION FACTOR OF RED ONION FARMING IN INDONESIA

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ABSTRACT

The agricultural sector is one sector that can support the economy of Indonesia. Horticultural crops such as red onions are agricultural sub-sector hold an important role in economic growth and the needs of Indonesian society. The goal in this research are to analyze the factors that significantly affect the production of red onion, analyze the technical efficiency level of the use of production factors and the factors that have an influence on the technical inefficiency. The results showed that the factors that significantly affect the production of red onion are land, seed, Za fertilizer, SP - 36 fertilizer, Phonska fertilizer and pesticide of furadan. The average level of technical efficiency of the use of production is 0,926, therefore farmers still have a chance to achieve full efficiently by 0,074 or 7.4%. While the factors that have a positive influence on the level of inefficiency are family number and education.

KEY WORDS

Red onion, farming, stochastic frontier, technical efficiency.

The agricultural sector is one sector that can support the economy of Indonesia. It is based on the majority of Indonesia's population are farmers. Horticultural crops such as red onion are agricultural sub-sector hold an important role in economic growth. The productions of these crops have a high economic value and become one of the needs of the community. The rate of population growth and the demand for red onion is increasing, while the red onion production remains relatively fixed. Therefore needed the increasing of red onion production. In increasing red onion production required a technical efficient use of production factors, thereore farmers can achieve optimal production on the use of red onion farming production function.

The objective of the research include: (1) to analyze the factors that significantly affect the production of red onion, (2) to analyze the technical efficiency level of the use of production factors and (3) to analyze the factors that have an influence on the technical inefficiency.

METHODS OF RESEARCH

The research activities is in the village of Banyu Anyar Kidul, District Banyu Anyar, Probolinggo. Research location is done on purpose (purposive). It is based that the village is one of the agriculture central production of red onion. Determination of the respondents in this study was random sampling. Total population red onion farmers in Banyu Anyar village were 250 farmers. The number of respondents were taken in this research is 14% of the total population that are 35 farmers. According Taken in Hidayat (1989) that 10% of the population is considered sufficient units.

The data used in this study are primary data and secondary data. The primary data obtained by interviewing the farmers according to the questionnaire. While the secondary data obtained from government office such as District Office and the Agriculture Department.

The analysis method frontier production function is used to determine the efficiency of the use of production factors on red onion farming. The analytical software used in the study was 4.1 software frontier. The equation formula used in the frontier production function is:

$$LnY = \beta_0 + \beta_1 \ln X_1 + \beta_2 \ln X_2 + \beta_3 \ln X_3 + \beta_4 \ln X_4 + \beta_5 \ln X_5 + \beta_6 \ln X_6 + \beta_7 \ln X_7 + \beta_8 \ln X_8 + \beta_9 \ln X_9 + \beta_{10} \ln X_{10} + \beta_{11} \ln X_{11} + v_i - u_i$$

Where:

Y: Production (Kg)

B_0: Constanta

$β_1$: Elasticity production time-

X_1: Land Area (m^2)

X_2: Seed (Quintal)

X_3: Urea (Kg)

X_4: ZA (Kg)

X_5: SP-36 (Kg)

X_6: KCl (Kg)

X_7: Phonska (Kg)

X_8: Furadan (Lt)

X_9: Ustation (Lt)

X_{10}: Antracol (Lt)

X_{11}: Labor (Work day)

V_i: *a symmetric, normally distributed randim eror*

U_i: *one-side error term* ($U_i ≥ 0$)

In the measurement of the level of technical efficiency mathematically using the following equation:

$$TE_1 = exp\ (-u_i)$$

TE value is between zero to one. A value of 1 indicates full efficiency in the use of production factors. Hypothesis testing is done by the use value Likehood Ratio (LR). The formula equation used is as follows:

$$LR = -2\ [Ln\ (Lr) – Ln\ (Lu)]$$

Where:

LR: *Likelihood Ratio*

Lr: LR values in OLS

Lu: LR values in MLE

To calculate technical inefficiency in this research then using the following formula equation:

$$μ_i=δ_0 + δ_1Z_1 + δ_2Z_2 + δ_3Z_3 + W_{it}$$

Where:

$μ_i$: Technical inefficiency Efect

Z_1: Age

Z_2: Education

$Z_{3·}$: Number of Family

RESULTS AND DISCUSSION

In a research using frontier production function using a software analysis tool frontier 4.1 performed two phases: the first using the OLS and the second stage using the MLE method. Based on this research, the data obtained is presented in Table 1.

According to the table above the value of gamma (γ) of 0.99 or 99% with a 10% significance level . This suggests that the variation in the model error nuisance caused by technical efficiency in the use of the production function red onion farming. In the sigma squared value (σ) is shown at 0.0098, it means that any use of the production function variables there are significant efficiency techniques in the model . LR value test was used to test the hypothesis. Based on the table above the LR test value of 9.8, while the value of 1.642 means the table LR test is greater than the table so that it can be said that any use of

variable inputs in the production process have a level of technical efficiency . Therefore this indicates that each red onion farmers located in the village of Banyu Anyar 100% already full efficiency.

Based on the results of the analysis of stochastic frontier production function, the real impact on red onion production are land area, seed, fertilizer Za, SP - 36, Phonska and Furadan.

Table 1 – Results Analysis of Stochastic Frontier Production Function

Variable	Parameter	Coefficient	Standart Error	t-ratio
Intersep	β_0	0,12	0,74	0,16
Ln X_1 (Land Area)	β_1	0,1	0,07	1,71*
Ln X_2 (Seed)	β_2	0,11	0,09	1,83*
Ln X_3 (Urea)	β_3	-0,11	0,07	-1,59
Ln X_4 (ZA)	β_4	0,02	0,08	1,81*
Ln X_5 (SP-36)	β_5	0,15	0,11	1,75*
Ln X_6 (KCl)	β_6	0,09	0,16	0,58
Ln X_7 (Phonska)	β_7	0,2	0,08	2,49*
Ln X_8 (Furadan)	β_8	0,12	0,04	3,15*
Ln X_9 (Ustation)	β_9	-0,17	0,05	-3,32
Ln X_{10} Dursban)	β_{10}	0,08	0,07	1,17
Ln X_{11} (Labor)	β_{11}	0,43	0,13	0,33
Sigma Squared	σ	0,0098	0,02	5,82
Gamma	γ	0,99		
Log likehood function	54,632815			
LR test of the one sided error	9,8085914			
* Significance Level 10%				
T. Table 10% = 1,690924198				

Here is the interpretation of each variable function red onion production:

Land Area. According to Table 1 above, land area has a coefficient 0.1 or 10%. This indicates that each additional one percent of the land area will increase red onion production by 10 units with other variables held constant. Level of significance in the variable land area can be viewed by using the t value then compared with the value t table. T value in the variable land area is greater than the value t table. It can be seen that t for the variable land area of 1.71 while t table of 1.69 means that the variable can be said to be statistically significant.

Variable land area that has a significant influence and positive, it is based on that the intensiveness of land preparation using natural resources and human resources that are more experienced are factors that can increase the production of red onion.

Seed. Seeds have a positive relationship, it can be seen in the coefficient value is 0.11 or 11%. Therefore the increased use of seed by 1% in the production process will increase production by 11 units with other variables held constant. In statistics can be seen by comparing the value of t arithmetic with t table. If t is greater than the t table means these variables can be said to be significant. Table 1 shows that t the variable seed value greater than t table at a significance level of 10%. Therefore it can be concluded that the variable seed has a significant effect on the level of red onion production .

Red Onion farming activities in the village Banyu this new uses "Bali djo" varieties planted in the dry season and "Beuj" varieties suitable planted in the rainy season. This is an indication that seed in red onion production is influence significantly.

Urea Fertilizer. The coefficient on the variable level of urea fertilizer has a negative value 0.11 or 11%, which means an increase in variable urea at 1% will be decrease red onion production by 11 units, when other variables held constant. The statisitics shows that variable urea fertilizer did not significantly affect the production of red onion. This is indicated by the t value is smaller when compared with a negative value.

Shortage of the use of urea fertilizer which occurs the area could make the decreased production of red onion. Scarcity and high price of urea fertilizer causing farmers reduce the use of dose in red onion production activities. This is the reason why the variable has a negative value and does not significantly affect production.

Za Fertilizer. Based on the table above variables Za fertilizer has a positive relationship with the production of red onion. This variable coefficient value is 0.02 or 2%. Therefore, each additional 1% Za fertilizer will increase production by 2 units of the other variables considered ceterris paribus. Statistical variables Za fertilizer has a significant effect on the production, this can be explained by comparing the value of t greater value t table .

The average dose use of fertilizer Za is 220 kg per ha. This is the recommended dose has been given by the agricultural instructor. This is the reasons, that make this variable real influence and have positive relationships.

SP-36 Fertilizer. The value of SP-36 fertilizer coefficient is 0.15 or 15% means that each additional 1% SP-36 fertilizer can increase red onion production by 15 units, while other factors being equal. Statistically SP-36 fertilizer variables significant at 10% significance level, this is because the value of t is greater than the value t table.

The right using of fertilizer at the recommended dosage according to what has been given by the instructor make SP-36 fertilizer has influence in increasing the production of red onion in the village Banyu Anyar.

KCl Fertilizer. The use of KCl in red onion farming activities showed a positive coefficient is 0.09 or 9%, which means that each additional 1% KCl will increase red onion production by 9 units, while other variables held constant. Meanwhile KCl variable t has a value greater than the value t table therefore make the real impact on the production of red onion.

Phonska Fertilizer. The use of Phonska fertilizer positively effect the significance level of 10%. Phonska fertilizer coefficient values is 0.2 or 20%, which indicates that each additional 1 percent Phonska fertilizer will increase production by 20 units. While it can be seen the t value for Phonska Fertilizer is 2.49 greater than the value t table at a significance level of 10% . This is shows that Phonska fertilizer significantly affected the production of red onion.

Red Onion farming activities need to combine the use of fertilizers with the right dose has been recommended. It is quite an important role in increasing production and health of the plant to produce high quality products.

Furadan Pesticides. The coefficient on the variable pesticide Furadan has a positive value 0.12 or 12%, which means that each additional 1% of Furadan pesticides will increase by 12 units organic rice productions, while other variables held constant. The use of Furadan pesticide really impact on organic rice production. It is based on the value of t is greater than the value t table at a significance level of 10%.

Ustation Pesticides. In Table 1 above shows that ustation pesticides not significantly affect the production of red onion. The coefficient on this variable has a negative value 0.17 or 17%, which means that each additional 1% ustation pesticides, will decrease by 12 units organic red onion productions, while other variables held constant .

The average use of ustation pesticides is 18.5 liters applied to plant onion every 2-3 days. The high implementation of Ustation pesticides can damage plants and animals or god predator for the plant will die. Therefore, excessive use can reduce the production of red onion.

Dursban Pesticides. Dursban pesticide production function has a positive value 0.08 or 8% . This shows that the addition of dursban pesticides 1% will increase 8 units of red onion production, while other variables held constant. According to statistics dursban pesticides variables did not significantly affect the production of red onion. This is shown by the t value smaller than the value t table at a significance level of 10%.

Red Onion farmers need to increase the dose of pesticide use and the right application therefore pest and diseases can be controlled.

Labor. Participation and the use of labor are needed in the production process red onion farming. The labor force usually comes from within and outside the family. Based on the results of stochastic frontier production function analysis showed that the labor coefficient is 0.43 or 43%, its means that for every 1% increase workforce will increase production by 43 unit, while other variables being equal. Meanwhile statistical t value smaller than the value t table. It is clear that labor did not significantly affect the production of red onion.

Red Onion crop on farming activities are highly vulnerable to pests and plant diseases that required a lot of labor and productive labor. A phenomenon that occurs in the area of research is the lack of manpower in the farming activities and the use of labor is less productive, it is causing these variables did not significantly affect the production of red onion. This resulted in the plant maintenance intensiveness is becoming less and will affect the production of red onion.

Table 2 – Distribution Statistics Technical Efficiency Achieved On Organic Rice Farming in Sumber Pasir

No.	Statistics	Efficiency Level
1.	Average	0,926
2.	Minimum	0,713
3.	Maximum	0,99

The average level of technical efficiency of red onion in the village Banyu Anyar at 0.926. This shows that farmers are still having an opportunity to increase red onion production as much as 0,074 or 7.4%.

Factors that affect the level of technical inefficiency use of production factors used by farmers can be seen as follows:

Table 3 – Results of the analysis Level Technical Inefficiency

Variable	Parameter	Coefficient	t-ratio
Intersep	δ_0	0,11	0,35
Z_1 (Number of Family)	δ_1	0,19	0,85
Z_2 (Education)	δ_2	0,22	0,19
Z_3 (Experience)	δ_3	-0,22	-0,49
Z_4 (Age)	δ_4	-0,11	0,26

Based on the table above shows that the number of families postively effects the level of technical inefficiency. The growing number of families in the production of red onion make increasingly inefficient in the use of production inputs. This is because farmers will be more careful in the use of technology, that make farmers avoided of the loss that can effect domestic life. Length of education variable has a positive effect on the level of inefficiency red onion organic farming. While the prctice variable negatively affect the level of technical inefficiency. The longer the experience will increasingly inefficient farmers in their farming activities. While the variable age has a negative effect means that the increasing age will make the increasingly inefficient farmers in farming activities. This is because farmers are more mature in thinking and acting on red onion farming activities

CONCLUSION AND SUGGESTIONS

The Conclusions from this research are variables that significantly affect red onion production are land, seed, Za fertilizer, SP - 36 fertilizer, Phonska fertilizer and Furadan pesticide. The average level of technical efficiency of use of factors of production is 0.926, therefore farmers still have a chance to achieve full efficiently by 0,074 or 7.4% . While the factors that have a positive influence on the level of inefficiency are family number and length of education.

Suggestions in this research are farmers need to intensify and combine the use of production functions that significantly and appropriately apply in plants, therefore the production of red onion can be increase. To achieve full efficiency and control the level of inefficiency in red onion farming field school needs to be done, therefore farmers obtain agricultural activity systems and the cultivation of innovative technologies by agricultural instructor.

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MODIFICATION AND PERFORMANCE EVALUATION OF A WHEAT THRESHER

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ABSTRACT

In this study different parameters affecting the performance of wheat thresher were established. The performance of the thresher was tested at three different speeds of the cylinder (S_1 = 1600 rpm, S_2 = 1700 rpm and S_3= 1800 rpm), three different feed rates of the crop (FR_1 = 200 kg/h, FR_2 = 250 kg/h and FR_3 = 300 kg/h) and three different varieties (V1 = Sahar-2006, V2 = Shafaq-2006 and V3 = Lasani-2008) of the wheat crop. GLM (General Linear Model) software of SAS was used to analyze the collected data for the machine performance. The results showed that cylinder speed, feed rate and the crop variety are the important parameters which affect the performance of the thresher. The best speed for detachment of wheat grains from the ear head is 1800 rpm at a feed rate of 200 kg/h. The best variety of crop which show minimum losses during threshing is V_1 i.e. Sahar (2006).

KEY WORDS

Thresher, grain, performance, losses, cylinder speed, feed rate.

There are about 500 agricultural machinery manufacturing units in Pakistan with capacity of 1.38 million per annum such as cultivators, sugarcane crushers, plant protection equipment, rice husking machine, wheat threshers, drills, harrows, ploughs, chaff cutters, rice hullers and rice polishing machines (Ahmad, 2004). The traditional methods which are used for seed separation from the stalks are uneconomical, laborious and time consuming. Therefore, the development of rice threshers for seed separation from the stalk has an edge over conventional methods (Chaudhry, 1979).

Threshing is one of the essential practices which can affect the quantitative and qualitative losses. A number of different size threshers have been in survival for a long time, but due to high prices of thresher and prime mover have not been adapted to a large level. Among these threshers, some are hand-held threshers and pedal operated ones. Threshing is a major aspect which is usually carried out after harvesting of grain crops (Nkama, 1992).

There are two main types of stationary threshing machines which have been developed. The machine of western design is known as "Through-Flow" thresher, because of passing stalks and ears through it. It contains of a threshing device with a pegs and a cleaning-winnowing method which is based upon shakers, sieves and centrifugal fans. In the 70s IRRI developed an axial flow thresher, which has been commonly made at local level (Sexana et al., 1971).

Threshing is still unnoticeable problem among the post-harvest losses; these losses do not merely generate negative repercussions for the farmers, but also have serious effects on the economy. Mahmoud et al (2007) examined that wheat crop is very sensitive to threshing

operations due to the high percentage of grain that affects the total yield. They also concluded that cylinder peripheral speed, feeding rate and moisture content are main factors affecting the performance of threshing machines. The above mentioned factors directly affected the crop losses, energy requirements, and efficiency, which in return, influenced the total operational cost.

Singh et al (1992), reported that the handling of thresher efficiency, grain damage, losses and capacity has been a major challenge. This is due to the variable operating conditions and machine parameters. The grain characteristics go a great length in determining the general performance of cereal threshers. Various researchers attained success by proper adjustment of these operating conditions.

Threshing of grain crop which requires a set of processing conditions that must be achieved for appropriate threshing action through mechanical or manual operation. Stationary grain crop threshers are the threshers which use the threshing cylinders in a confined position. This type of thresher is of two types based on feeding method of the crop in to the thresher. These two methods are throughput and hold on types.

Manual threshing operation is an inappropriate method of threshing because it reduces the grain output as well as it requires high energy input. In a mechanical process of threshing, the inappropriate conditions of threshing not only affect the grains recovery from the other plant materials but it also results in high grain loss. The grain losses are measured by damage to the grain kernel and loss to the mechanical elements. Threshing is a unit operation which involves the removal of grains from the plant residues. Threshing is the most important process in grain production (Klenin et al., 1986; Olaoye et al., 2004).

Various researchers have determined the proper operating conditions for a mechanical thresher for successful threshing of grains and to minimize losses in a mechanical thresher. The key variables of interest for the researchers are crop parameters, environmental conditions and machine parameters (Olaoye et al., 2004). Olaoye and Oni (2001) investigated the effect of crop parameters on threshing efficiency of thresher in Nigeria. The results showed that mechanical properties of grains, grain size and geometrical dimensions of grains are the important parameters that can increase the separation of grains from the plant residue.

Many researchers have investigated that fan speed, cylinder speed and concave clearance are the key machine parameters that can influence the threshing efficiency of a mechanical thresher (Singh et al., 1981; Joshi et al., 1981; Ghaly, 1985; Behera et al.,1990).

However, in developed areas crop harvesting is usually done by a combine harvester, which harvests, threshes, and winnows the grain while it is still in the field. Despite the severity of post harvest losses, especially in food grains in developing countries like Pakistan, no comprehensive program has been initiated to tackle this problem. Thus tons of grains are lost at the farm level. The agricultural experts, scientists, technologists and policy makers have been engaged in devising ways and strategies for increasing wheat production. Post-harvest losses have been neglected aspect of farm profile in Pakistan, specially qualitative and quantitative losses during threshing process at farm yard. Over 4% of wheat produced in the country is lost due to inefficient farm operations, inappropriate agriculture technologies followed at the farm, village and commercial levels. Mitigation of these losses in the wake of rapidly increasing population would be a big contribution toward achieving the food self-sufficiency. Considering the above points there is a crucial need of small and efficient wheat thresher with maximum threshing and cleaning efficiency along with minimum losses and visible grain damage.

Therefore, this study has been undertaken with the purpose of determining and selecting appropriate threshing speed and feed rate for reducing grain damage and producing better quality of grain in post-harvest operations.

The study has been designed to achieve the following objectives: to improve, modify the Vogal Head Wheat Thresher; to evaluate the effect of threshing cylinder speed on wheat grain breakage and cleaning efficiency; to evaluate the effect of crop feed rate on grain breakage and cleaning efficiency.

MATERIALS AND METHODS OF RESEARCH

This study was planned to evaluate the threshing parameters of Vogal Head Wheat Thresher and for making appropriate modifications to improve its performance in terms of threshing and cleaning efficiency. All tests were performed in University of Agriculture Faisalabad at Farm Machinery workshop. Detailed procedure of entire research work had been described in subsequent paragraphs including instruments used, test conducted and modifications made.

The testing and evaluation is the critical examination of machine. It helps in the design and development of better farm machinery and also controls the quality. Actually, evaluation of any machine details the deficiencies which remain present in the performance, components durability, and safety of the machine (Yasin and Ansari, 1981).

Vogal head plant thresher machine has been purchased by the University of Agriculture Faisalabad from USA. The purpose of this study was to evaluate the performance of Vogal head plant thresher and modify if needed for wheat crop during wheat harvesting season 2012. In order to meet the objectives of present research the work was conducted in Agricultural Engineering work shop. The specifications of thresher have been shown in the Table 1 and view of thresher in Figure 1.

Table 1 – Specifications of Vogal Head Wheat Thresher

Item	Specifications
Name	Vogal Head Wheat Threasher
Type of Thresher	Transverse Flow
Type of Threshing Drum	Spike Tooth
Drum Diameter (cm)	32.5
Drum Length(cm)	55.8
Number of Spikes	75
Number of spike Rows	10
Spike upper width(cm)	3.2
Spike lower width(cm)	1.3
Spike Height(cm)	5.1
Concave Length(cm)	63.5
Engine Type	Self-propelled petrol engine
Over All Dimension	
Length(cm)	274.3
Width(cm)	168
Height(cm)	213.4

The purpose of this study was to evaluate the performance of Vogal head thresher for wheat crop during wheat harvesting season 2012. Detail description of various part of the thresher is described as under with pictorial view.

Feeding Hopper. The function of the feeding unit is to feed the crop into the threshing unit for threshing. Main purpose of the feeding unit is to minimize initial grain losses and grip the crop bundle. It helps to feed the crop at uniform rate for threshing.

Threshing Unit. In this unit threshing of wheat takes place. It consists of threshing cylinder and concave which are used to thresh the wheat. Threshing cylinder consist of 75 spikes arranged in 10 rows. The crop is rubbed by spikes against the concave in such a way that no damage of grains takes place.

Concave sieve. Concave sieve was made of 6*9 mm rectangular MS bars used to separate the threshed material. The major function of sieve was to separate the grain from unwanted foreign material like straw pieces and grains other than wheat grains.

Pully. V-belt type pullies were used to transfer power from engine to all other parts, where it is required to perform the threshing, cleaning and separation actions. It was made of cast steel material. Power was shifted thorough the rubber belts.

Main Frame. It was main structural part of thresher on which all the accessories are attached. This part was strong enough to wear the weight, shocks and working stresses of all

the parts. Two wheels were used to move from place to place it. It was made of MS angle and MS sheet formed channel.
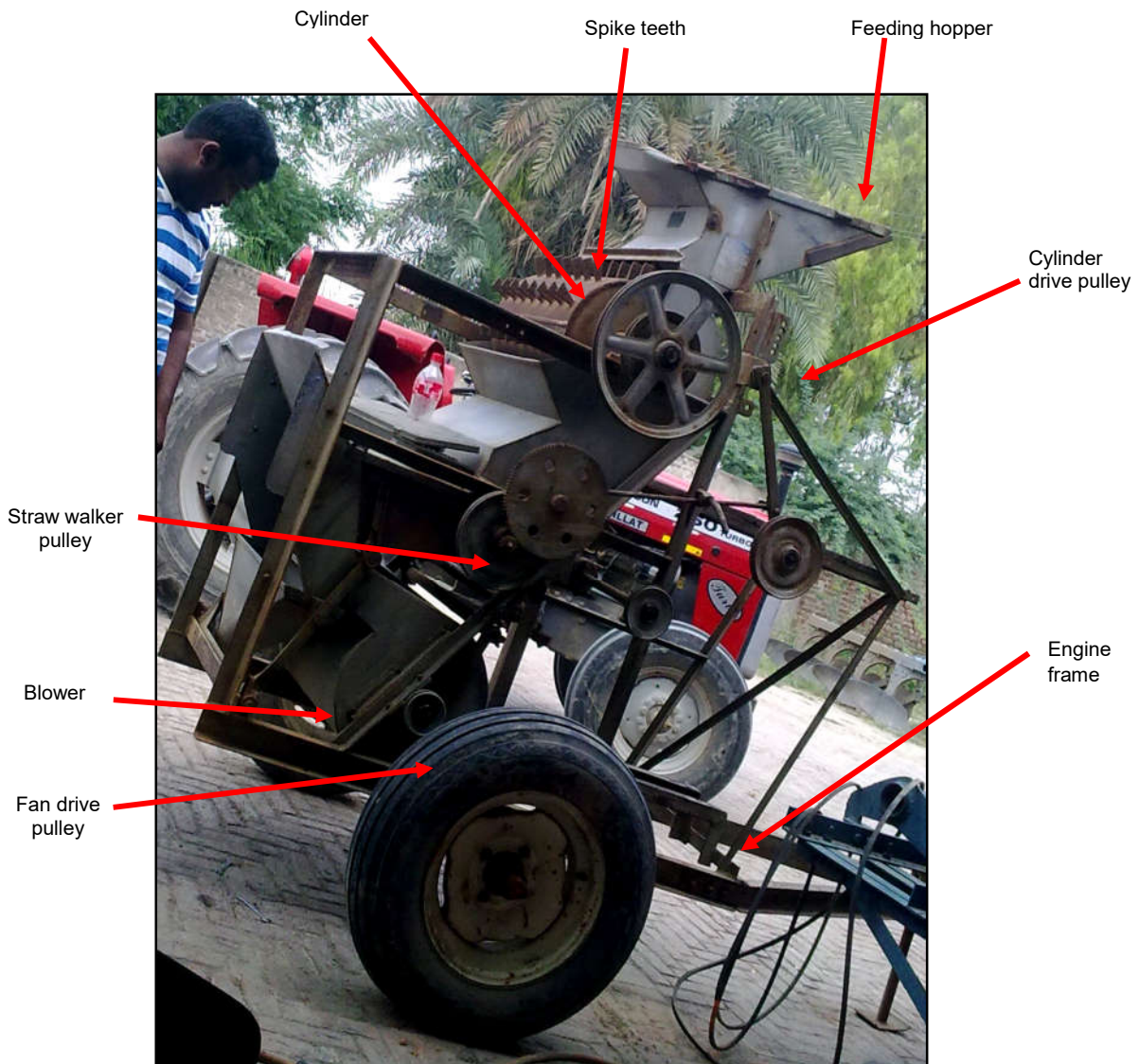
Figure 1 – Vogal Head Wheat Thresher

Cleaning Unit. The purpose of cleaning unit is to remove the straw, weeds and any other foreign material from grains. In this thresher there was no sieve so the grains were not properly cleaned. A sieve was designed in the workshop of agricultural engineering and fixed in front of air blower to enhance the cleaning efficiency of machine. The Sieve has been made of 1.25 mm thick stainless steel sheet of sieve hole 4.5 mm. Average geometric mean diameter of wheat was determined as 3.8 mm by the following procedure explained by (Song and Litchfield 1991). This sieve allows only the gains to pass through it and any foreign material retain on the sieve while the blast of air blows out the finer chaff:

$$Dg = (a*b*c)^{1/3},$$

Where: Dg = Geometric Mean Diameter of seed in mm; a = Length of seed in mm; b = Width of seed in mm; c = Thickness of seed in mm.

Blower. This is an important part of thresher used to separate chaff from grains. The four blades of fan were made of wooden material which did not properly supply the desired air velocity (m/s) for grain straw separation. To overcome this problem earlier wooden blade

were replaced with 3mm mild steel sheet and installed at an angle of 90°. Blower fan air velocity was determined by using air flow measuring apparatus. Improved radial centrifugal fan provided required air velocity (6-11 m/s) separating grain from straw. Air terminal velocity of grain and straw were found 8 m/s and 4 m/s which were measured by using the procedure explained by (Song and Litchfield, 1991).

Table 2 – Modified/Redesigned Parts of Vogal Head Plant Thresher

Sr. No.	Part	Original Specification	Improved Specification	Remarks
1	Sieve	There was no sieve	The sieve has been made of 1.25 mm thick stainless sheet having: Length = 63.5 cm, Width = 25.4 cm, Hole Size = 4.5 mm (dia)	To increase cleaning efficiency and reduce gain losses in straw
2	Blower	The fan fins of blower were made of Wooden Material	Wooden fan fins of blades are replaced with 3 mm mild steel sheet	To supply desired air velocity

Data Collection Procedure. Three crop varieties (V_1 = Sahar-2006, V_2 = Shafaq-2006 and V_3 = Lasani-2008) were selected for threshing by Vogal head thresher after harvesting, the crop was tied in 15 kg bundles and store in the storage of Agricultural Engineering workshop. After pretesting and redesigning the parts of thresher, the thresher was operated at three different speeds (S_1 = 1600 rpm, S_2 = 1700 rpm and S_3 = 1800 rpm) and crop fed at three selective feed rates (FR_1 = 200 kg/h, FR_2 = 250 kg/h and FR_3 = 300 kg/h) the regarding threshing efficiency, grain cleaning and gain breakage was collected. All the treatment was replicated three times. The schematic design of data collection has been given in Figure 2.
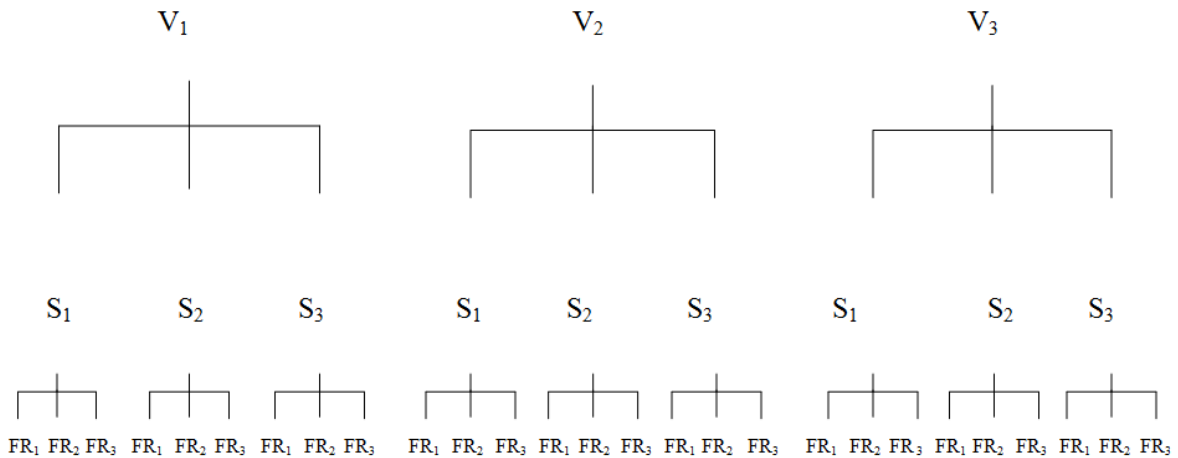
V = Wheat Variety
S = Cylinder Speed, rpm
FR = Feed Rate, kg/h
$V^* = rw = r\,(2\pi s/60)$
Linear velocities at the tip of cylinder (27.13 m/s, 28.83 m/s and 30.52 m/s)

Figure 2 – Schematic Diagram of Data Collection

A measuring tape, stop watch, tachometer and digital balance were used for different measurement during the experiment.

Pre-Test Observations. The power requirements of different functional parts of thresher were determined under load and no load conditions at three different speeds of the thresher cylinder. The cylinder concave clearance was kept constant during whole test.

Feed Rate. Feed rate is very important machine parameter that affects the threshing capacity, cleaning efficiency, grain breakage, grain loss with straw. It was determined by

taking wheat crop bundles of three different weights (5kg, 10kg, and 15kg) and then fed into the threshing unit of the thresher for known time. Feed rate was found as follows (Ukatua, 2006):

$$FR = Qmf/T,$$

Where: FR=Feed Rate, kg/h; Qmf = quantity of crop material fed into the thresher, kg; T=feed time, h.

Threshing Efficiency. Threshing efficiency is an important factor with respect to machine efficiency. It was determined by taking three samples of threshed grains, Weight of each sample was measured. Un-threshed grains were separated and the samples were weighed again. Threshing efficiency was determined by applying following equation (Mahmoud et al, 2007):

$$Threshing\ efficiency,\ (\%) = [(TG - UnG) / TG]\ x\ 100,$$

Where: TE = Threshing efficiency, %; UnG = Weight of un-threshed grains in the sample, g; TG = Weight of total grains in the sample, g.

Un-threshed Grain Losses. Un-threshed grain is an important factor to estimate the machine efficiency. It was determined by taking three samples of threshed grains, Weight of each sample was measured. Un-threshed grains were separated and the samples were weighed again. Un-threshed grain losses percentage was calculated as following (Mishram and Desta, 1990):

$$UGL,\ (\%) = [Un_G / T_G]\ x\ 100,$$

Where: UGL = Un-threshed grain losses, (%); Un_G = Weight of un-threshed grains in the sample, g; T_G = Weight of total grains in the sample, g.

Damaged Grain Losses. All the grains are required to be in their original form as the broken grains are more liable for the attack of insects or pests. Three samples of threshed grain were taken and weighed. The damaged/broken grains were separated and weighed. The grain damage grain losses were calculated using following equation (Mishram and Desta, 1990):

$$DGL,\ (\%) = [\ D_G / T_G]\ x\ 100,$$

Where: DGL = Damage grains losses, %; D_G = Weight of damaged grains in the sample, g; T_G = Weight of total grains of the sample, g.

Cleaning Efficiency. Cleaning efficiency is an important factor because of its value addition with respect to machinery. It was determined by taking three samples of threshed grains. Weight of each sample was measured. All the materials other than clean grains (MOG) were separated and the samples were weighed again. The cleaning efficiency was found using following equation (Ukatua, 2006):

$$Cleaning\ efficiency,\ (\%) = [W / W_O\ ]\ x\ 100,$$

Where: CE= Cleaning efficiency, %; W = Weight of unwanted material from sample, g; W_O = Weight of sample, g.

Grain Loss in Straw. This is the important machine parameter of a thresher which shows that how much grains losses in straw. It was determined by taking three samples of chaff coming out in known time during threshing the wheat crop material (Ukatua, 2006). All grains were separated and weighed which were throwing out with chaff. Grain loss was determined as following:

$$GLS= W_{gs} / GFR × 100,$$

Where: GLS= Grain loss in Straw, %; W_{gs} = Weight of grain in straw, g/min; GFR = Grain feed rate, g/min; GFR = FR (1 + 1/GSR); GSR = grain straw ratio.

Grain Straw Ratio. A known weight of harvested wheat bundle of each crop variety was manually threshed using sticks. Grains and straw were separated. Collected grain and straw were weighed separately and grain straw ratio was determined as follows:

$$GSR = Wg/Ws,$$

Where: GSR=Grain straw ratio; Wg=weight of grain, kg; Ws=weight of straw, kg.

Total Grain Losses. The total threshing losses percentage (TGL) including both un-threshed grain losses (UGL), damage grain losses (DGL) and grain losses in straw (GLS) were calculated for Vogal head plant thresher using the following equation, (Mishram and Desta, 1990):

$$TGL, (\%) = UGL + DGL + GLS,$$

Where: TGL = Total Grain Losses, kg; DGL = Percent of damaged grain losses, %; UGL = Percent of un-threshed grain losses, %; GLs = Percent of Grian losses in straw, %.

Statistical Analysis. Statistical test was done using GLM (General Linear Model) software of SAS (SAS, 2009).

Table 3 – Treatments of the Experiment

Parameters	Levels
Cylinder speed (S)	3 - S1=1600 rpm S2=1700 rpm S3=1800 rpm
Wheat variety (V)	3 - V1= Sehar-2006 V2 = Shafaq-2006 V3 = Lasani-2008
Feed rate (FR)	3 - FR1=200 kg/h FR2=250 kg/h FR3=300 kg/h
Replication (R)	R1, R2, R3

A 3 x 3 x 3 factor factorial was employed in CRD statistical design to explore the effects of three varieties (V_1 = Sahar-2006, V_2 = Shafaq-2006 and V_3 = Lasani-2008), three cylinder speeds (S1 = 1600 rpm, S2 = 1700 rpm and S3= 1800 rpm) and three feed rates (FR1 = 200 kg/h, FR2 = 250 kg/h and FR3 = 300 kg/h) on threshing efficiency, wheat grain breakage and cleaning efficiency by Vogal Head Plant Thresher. Detail of treatment and their results has been presented in presented in Table 3.

RESULTS AND DISCUSSION

Vogal Head Plant Thresher was modified and tested for determination of Threshing efficiency(TE), Cleaning efficiency (CE), Damage grain losses (DGL), grain losses in straw (GLS) and un-threshed grain losses (UGL) at Agricultural Engineering Workshop Department of Farm machinery and power, University of Agriculture Faisalabad.

The data were collected to study the effect of three wheat varieties (V_1 = Sahar-2006, V_2 = Shafaq-2006, V_3 = Lasani-2008), three different cylinder rpm (S_1 = 1600 rpm, S_2 = 1700 rpm and S_3 = 1800 rpm) at three different feed rates (FR_1 = 200 kg/h, FR_2 = 250 kg/h, FR_3 = 300 kg/h) on the machine efficiency and crop recovery. The collected data were statistically analyzed with the help of SAS system on personal computer. The statistically analyzed results of effects of variety (V), Thresher speed (S) and feed rate (FR) on machine threshing efficiency (TE), machine cleaning efficiency (CE), damage grain losses (DGL), grain loss in straw (GLS), un-threshed grain losses (UGL) and total grain losses (TGL) have been presented and discussed as following.

Effect of machine and crop parameters on threshing efficiency, Un-Threshed grains, Damage Grain Losses, Cleaning Efficiency, Grain Loss in Straw and Total grain losses. The statistically analyzed results for the effect of wheat varieties, cylinder speed and feed rate on the threshing efficiency Un-Threshed grains, Damage Grain Losses, Cleaning Efficiency, Grain Loss in Straw and Total grain losses of Vogal head wheat thresher has been presented in table 3. The results indicate that greatest threshing efficiency and cleaning efficiency was observed for variety V_1 (Sahar-2006). Similarly, it is also clear from the table that minimum un-threshed grain, damage grain losses and grain loss in straw were observed for variety V_1. It is therefore recommended that if a farmer is going to cultivate the wheat crop, he should cultivate variety V_1 (Sahar-2006) for getting more wheat threshing efficiency, cleaning efficiency and minimum damage of grains because variety V_1 (Sahar-2006) was better for threshing by thresher. It can safely be concluded that variety V_1 is more brittle and inelastic than the other two varieties which helped in grain detachment from wheat plant and ultimately increased threshing efficiency, cleaning efficiency and the lowest grain damage and total grain losses.

Similarly, the greatest threshing efficienc**y** and cleaning efficiency of wheat thresher was observed at speed level S_3 (1800 rpm). It is also clear from the table that minimum un-threshed grains, damage grain losses, grain loss in straw and total grain loss was observed at speed level S3 (1800 rpm). The speed S_3 (1800 rpm) could be the best for detaching/separating grains from straw that increased threshing efficiency and threshing efficiency due to which minimum un-threshed grains, damage grain losses, grain loss in straw and total grain loss was observed at speed level S3 (1800 rpm). It could therefore, be recommended that if a farmer have to thresh the wheat for getting greatest threshing efficienc**y**, cleaning efficiency and minimum losses of grain speed level S_3 (1800 rpm) would be better for threshing.

This was due to the reason that the grain needed certain force to be detached from the ear head. Since the impact and rubbing forces imparted by rotating cylinder to the grain varied with speed, therefore, at a particular speed only a fraction of grains present in the ear head would be threshed and this fraction of threshed grain increased at higher speeds. When the force exerted by cylinder on ear-head just equaled the maximum force needed to thresh all grain, the threshing efficiency became almost constant and approached 100 %. At a cylinder speeds of 1800 rpm where the total losses were 3.106% the threshing efficiency was found to be 93.05%.

The statistically analyzed results show that the greatest threshing efficiency, cleaning efficiency, and minimum un-threshed grains, damage grain losses, grain loss in straw and total grain loss was observed of wheat thresher at feed rate FR_1 (200 kg/h). The table depicts that with the increase in feed rate, there was decrease in the threshing efficiency of wheat thresher. The lower threshing efficiency at higher feed rate could be due to more cushioning effect of more material that hindered in grain separation.

Table 3 – Effect of machine and crop parameters on threshing efficiency, Un-Threshed grains, Damage Grain Losses, Cleaning Efficiency, Grain Loss in Straw and Total grain losses

Parameter		Threshing Efficiency	Un-threshed Grain Losses	Damage Grain Losses (%)	Cleaning Efficiency (%)	Grain Losses in Straw (%)	Total Grain Losses (%)
Wheat varieties	V_1	92.94[a*]	0.81[a*]	0.81[a*]	95.05[a*]	0.6641[a*]	3.189[a*]
	V_2	92.83[a]	1.65[a]	0.86[a]	94.79[b]	0.7233[b]	3.256[a]
	V_3	92.81[a]	1.72[a]	0.87[a]	94.71[a]	0.9089[a]	3.296[a]
Cylinder Speed (rpm)	S_1	92.617[b*]	1.714[a]	0.8711[a*]	94.602[a*]	0.8211[a*]	3.384[a*]
	S_2	92.908[ab]	1.636[b]	0.8474[a]	94.908[a]	0.7855[b]	3.252[a]
	S_3	93.052[a]	1.546[b]	0.83[a]	94.984[b]	0.6896[b]	3.106[b]
Feed rate (kg/h)	FR_1	93.048[a*]	1.525[a*]	0.815[a*]	94.95[a*]	0.6807[b*]	3.21[a*]
	FR_2	92.816[b]	1.675[a]	0.857[a]	94.83[a]	0.7889[b]	3.23[a]
	FR_3	92.714[b]	1.696[b]	0.877[a]	94.71[a]	0.8267[a]	3.3[a]

Superscripts show column wise and row wise comparison respectively; Same alphabets a, b, c etc indicate means in each column followed by the same letter are not significantly different at 5 % probability level V_1 = Sahar-2006, V_2 = Shafaq-2006, V_3 = Lasani-2008, S_1= 1600 rpm, S_2 = 1700 rpm and S_3 = 1800 rpm and FR_1=200 kg/h, FR_2= 250 kg/h, FR_3=300 kg/h

Model of threshing efficiency, cleaning efficiency and total grain losses for machine parameters. The data of threshing efficiency of Vogal head wheat thresher for wheat at various combinations of machine and crop parameters i.e. crop variety (V), cylinder speed (S, rpm) and feed rate (FR, kg/h) were recorded. A covariate (Regression analysis) using statistical package, PROG GLM (General Linear Model) procedure of the SAS was employed to study the effect of different machine and crop parameters. The covariate analysis yielded the model which is shown in Eq.1 for the threshing index in term of crop variety (V), cylinder speed (S, rpm) and feed rate (FR, kg/h) having a coefficient of correlation of 0.537. The equation 1 indicates that speed, feed rate contributed 31% and 18.5% respectively while the interaction of V*S, V^2*S and V*S*FR^2 contribute 30.50%, 11.5% and 7.96% respectively. It was confirmed that the speed and feed rate were important machine parameter toward machine threshing efficiency, while their interaction had played a moderate role in threshing efficiency.

The covariate analysis yielded the model (Eq.2) for the cleaning index in term of crop variety (V), cylinder speed (S, rpm) and feed rate (FR, kg/h) having a coefficient of correlation of 0.319. The equation 2 indicated that variety; speed and feed rate contributed 30.46%, 50% and 19.54% respectively while the interaction of variety, speed and feed rate had non-significant effect. It was confirmed that the variety, speed and feed rate were important parameter toward machine cleaning efficiency, while their interaction had play a fewer role in cleaning efficiency.

$$TE = 83.44 + 8.008*S + 2.11*FR - 4.21*V*S - 0.03*V^2*S + 2.09*V * S * FR^2 \quad (1)$$
$$CE = 91.64 + 1.76*V + 3.23*S - 0.29*FR \quad (2)$$
$$TGL = - 7.823 + 19.86*S + 5.67*V^2 *S - 1.69*V^2 * S^2 \quad (3)$$

The covariate analysis yielded the following model for the total grain losses index in term of crop variety (V), cylinder speed (S, rpm) and feed rate (FR, kg/h) having a coefficient of correlation of 0.48. The equation (Eq.3) indicates that cylinder speed contributed 57.32 % while the interaction of V^2*S and V^2*S^2 contribute 31.68% and 11% respectively to the total gain losses index. It was confirmed that the variety and speed were important parameters toward machine total grain losses, while interaction of other parameter i.e. feed rate and speed had play a moderate role in total grain losses.

CONCLUSION

Following important conclusions can be drawn from the whole discussion:

The threshing efficiency (TE) was found greatest for variety V_1 (Sahar-2006), speed S_3 (1800 rpm) and feed rate FR_1 (200 kg/h);

The un-threshed grain losses (UGL) were found minimum for variety V_1 (Sahar-2006), speed S_3 (1800 rpm) and feed rate FR_1 (200 kg/h);

The damage grain losses (DGL) were found minimum for variety V_1 (Sahar-2006), speed S_3 (1800 rpm) and feed rate FR_1 (200 kg/h);

The cleaning efficiency (CE) was noticed as greatest for variety V_1 (Sahar-2006), speed S_3 (1800 rpm) and feed rate FR_1 (200 kg/h);

The grain losses in straw (GLS) were found minimum variety V_1 (Sahar-2006), speed S_3 (1800 rpm) and feed rate FR_1 (200 kg/h);

The total grain losses (TGL) were found minimum variety V_1 (Sahar-2006), speed S_3 (1800 rpm) and feed rate FR_1 (200 kg/h);

The cylinder speed S_3 (1800 rpm) and feed rate FR_1 (200 kg/h) was found most appropriate conditions for the operation of Vogal head plant thresher.

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ОПРЕДЕЛЯЮЩИЕ ДЕФИНИЦИИ ЭКОСИСТЕМНОГО ПОДХОДА В ДЕЯТЕЛЬНОСТИ ПРЕДПРИЯТИЙ РЫБНОЙ ПРОМЫШЛЕННОСТИ
DETERMINATIVE DEFINITIONS OF AN ECOSYSTEM APPROACH IN THE ACTIVITIES OF THE FISHING INDUSTRY ENTERPRISES

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АННОТАЦИЯ
Выявлено, что процесс развития производительных сил общества, связанный с увеличением численности населения Земли, привел к комплексу экологических проблем, вызванных нарушением воспроизводственной способности природных экологических систем в результате чрезмерной эксплуатации и исчерпаемости природных ресурсов, ухудшения качества экологической среды. Сформирована иерархическая структура экосистемы, основанная на принципах гомеостатичности. Доказано, что предприятие является субъектом взаимоотношений с природной средой, первичным базовым элементом планетарной экологической системы, в рамках которой осуществляется экологическая деятельность по обеспечению устойчивого состояния и устойчивого развития человечества и среды его существования.

ABSTRACT
It is revealed that the development process of productive forces of society connected with increase in population of Earth led to a complex of the environmental problems caused by violation of reproduction ability of natural ecological systems as a result of overexploitation and exhaustibility of natural resources, deterioration of the ecological environment. The hierarchical structure of an ecosystem founded on the principles of a homeostasis is created. It is proved that the enterprise is a subject of relationship with the environment, primary basic element of planetary ecological system within which ecological activities for providing a steady state and sustainable development of mankind and the environment of its existence are carried out.

Начиная с середины XX века экологическая проблематика приобрела чрезвычайную важность в обеспечении природного равновесия и устойчивого развития общества и среды его существования. Процессы активизации производственно-хозяйственной деятельности превысили по масштабам и интенсивности воздействия возможности возобновления природных процессов, а также оказывают дестабилизирующее антропогенное воздействие на состояние природной среды.

Агропромышленные, промышленные, транспортные предприятия оказались в эпицентре экологических проблем, являясь источником экологических угроз из-за чрезмерной эксплуатации сырьевых природных ресурсов и вредных выбросов в окружающую среду, носителями экологических рисков, обусловленных возможностью

подрыва природной воспроизводственной способности природных ресурсов, снижением их качества в результате загрязнения окружающей среды. Вышесказанное позволяет рассматривать предприятие как самостоятельный субъект взаимоотношений с природной средой, так и первичный базовый элемент глобальной (планетарной) экологической системы (рис. 1), в рамках которой реализуется экологическая функция - экологическая деятельность по обеспечению устойчивого состояния и устойчивого развития человечества (общества) и среды его существования исходя из масштабов и специфики производственной деятельности.
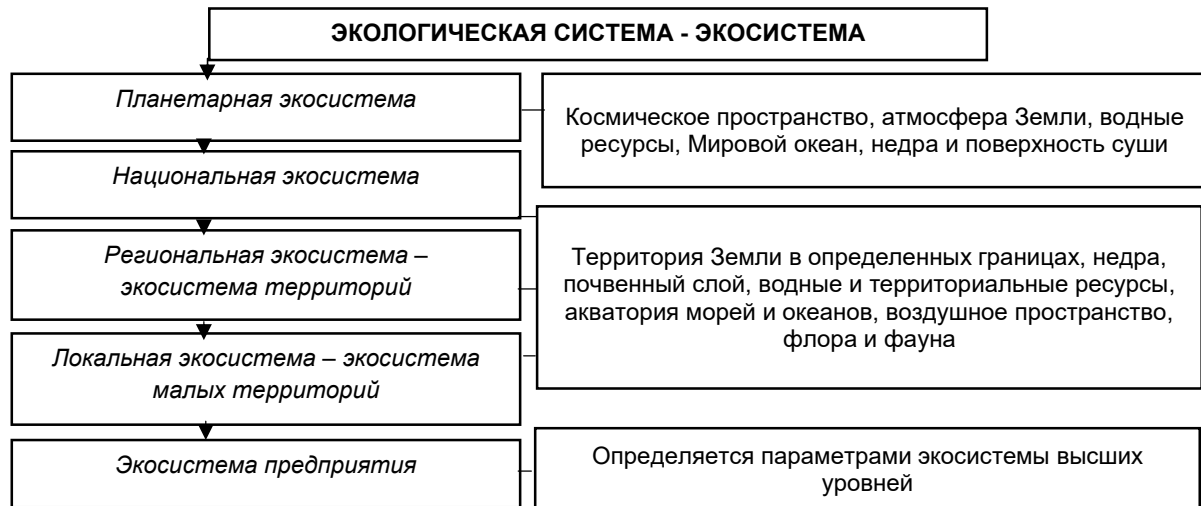
Рисунок 1 – Иерархическая структура экосистемы

Планетарная экосистема в единстве экосистем обеспечивает устойчивое развитие общества и среды обитания. Взаимообусловленность и подчиненный характер экосистем различных уровней обуславливает единый подход к формированию и реализации экологической политики для всех типов экосистем. Данный подход заключается в системном, комплексном, скоординированном регулировании равновесных диапазонов изменения параметров устойчивого состояния среды существования и развития общества на всех экосистемных уровнях, что обеспечивает их гомеостатичность [1].Реализация принципа гомеостатичности экологической системы, как обязательного условия ее равновесного устойчивого состояния, предполагает необходимость формирования нормативно-правового инструментария управления экологической деятельностью. Требования и возможность реализации экосистемного подхода в деятельности предприятия отражены в серии стандартов ISO 14000, которые являются основой для построения системы экологического менеджмента. Эти стандарты должны обеспечить снижение неблагоприятных воздействий на окружающую среду на трех уровнях:

- на уровне отдельного предприятия - путем улучшения его экологического поведения;

- на национальном уровне - посредством создания соответствующего дополнения к национальной нормативно-правовой базе и формирования государственной экологической политики;

- на международном уровне - путем улучшения условий международной торговли [2], что предполагает рост масштабов производства и улучшения конкурентоспособности продукции, удовлетворяющей общественные потребности.

Документы, входящие в серию стандартов ISO 14000, а также ISO 19000, можно условно разделить на три группы, отражающие функциональную направленность в контексте экосистемного подхода:

- стандарты, основанные на принципах создания и использования систем экологического менеджмента;

- стандарты, включающие инструменты экологического контроля и оценивания;
- стандарты, ориентированные на продукцию и технологии ее производства [3,4,5].

При использовании позиций экосистемного подхода в деятельности предприятия изначальной точкой является его экологическая политика, представляющая собой совокупность основных правил, принципов и норм, которые воплощены в экологической стратегии [6] и реализуются в рамках экологической деятельности предприятия. Совокупность компонентов, определяющих экологическое поведение и экологическую политику предприятия, отражена на рис. 2.

Рисунок 2 – Экологическая политика предприятия с позиции экосистемного подхода

Эффективность экологической политики предприятия предполагает выполнение таких требований, как:
- документирование и утверждение на уровне высшего руководства;
- популярность и понятность персоналу и бизнес-партнерам;
- доступность всем заинтересованным лицам, проявляющим интерес к экологическим аспектам деятельности предприятия, продукции;
- периодический пересмотр и переоценка исходя из изменяющихся условий и требований внутренней и внешней среды предприятия [7].

Формирование эффективной экологической политики предприятия предполагает идентификацию экологических аспектов, экологически значимых событий - элементов хозяйственной деятельности, процесса производства продукции, которые взаимодействуют или могут взаимодействовать с окружающей средой. При этом учитываются те экологические аспекты и изменения, в отношении которых предприятие может осуществлять контроль и на которые оно может повлиять.

Экологические аспекты деятельности предприятия определяются, в первую очередь, его отраслевой спецификой, которая проявляется в особенностях ресурсно-сырьевой базы, технологиях производства продукции и ее экологических характеристиках качества и связанные с природоохранными и ресурсосберегающими функциями, а также обеспечением экологической безопасности продукции. Отметим,

что идея экологического управления берет свое начало от концепции тотального управление качеством (Total Quality Management - TQM). Концепция TQM предполагает целенаправленное и скоординированное применение систем и методов управления качеством во всех сферах деятельности и для всего жизненного цикла продукции (от добычи (получения) сырья, производства и использования продукции до окончательного размещения отходов) при участии руководства и сотрудников всех уровней и при условии рационального использования технических возможностей. Многие положения концепции TQM нашли отражение в международных стандартах ISO серии 9000, отражающих основные положения систем менеджмента качества.

К конкретным экологическим аспектам деятельности предприятия можно отнести анализ внешних условий экологической деятельности с учетом особенностей региона и предприятия; анализ жизненного цикла продукции в соответствии с требованиями охраны окружающей среды; финансирования экологической деятельности; экологические риски и управление ими; регулирование использования материально-сырьевых и топливно-энергетических ресурсов, условий хранения и транспортировки сырья, материалов, энергоносителей и готовой продукции; подготовку специалистов и обучение работников предприятия по проблемам экологизации хозяйственной деятельности; экологическую сертификацию как меру по обеспечению качества (экологической безопасности) производимой продукции.

Декларируемые экологической политикой принципы отражают уровень экологической корпоративной культуры, формируют положительный имидж предприятия, обеспечивающих рост его инвестиционной привлекательности и доверия как со стороны бизнес-партнеров, так и общественных организаций. Принцип экологической прозрачности (экопрозрачности) означает доступность объектов и результатов экологической деятельности всем заинтересованным сторонам. Под экоэффективностью понимается такая организация разносторонней экологической деятельности предприятия, которая позволяет не только сократить соответствующие расходы, но и получить дополнительный экономический эффект за счет увеличения объемов производства продукции, улучшение ее качества, роста уровня деловой репутации и других преимуществ в конкурентной борьбе. Принцип экосправедливости проявляется в осознании руководством предприятия моральной ответственности за отрицательное воздействие на окружающую среду и нерациональное использование природных ресурсов.

С экологической стратегией связывают принятую (утвержденную) экологическую политику и тактические экологические программы и планы. При этом цели экологического управления должны быть согласованными с другими приоритетными целями предприятия и поддерживать его общую стратегическую цель [8,9]. Таким образом, экологическая составляющая механизма управления предприятием является совокупностью средств (рычагов, методов и инструментов) воздействия с учетом экологических аспектов на всех этапах и направлениях хозяйственной деятельности предприятия.

Проблема производства экологически безопасной продукции актуализируется в современных условиях, когда обеспечение жизнедеятельности человечества становиться первоначальной задачей общества. Человечество, увеличиваясь физически и развиваясь технически, обусловило конфликт между растущими потребностями в продуктах питания и возможностью природной среды обеспечить их удовлетворение. Продовольственный кризис из гипотетической категории трансформировался в реальную угрозу продовольственной безопасности общемирового масштаба. Важнейшим источником сырьевого обеспечения продовольственной сферы является Мировой океан, на водное пространство которого в пределах планетарной экологической системы приходится 71% всей поверхности Земли и в нем сосредоточено 98,3% всей свободной воды планеты. Общеизвестно, что рыба и рыбопродукция занимает важное место в рационе людей, будучи ценным источником белка и основных микроэлементов, и одним из ключевых факторов здорового образа жизни [10]. Мировой объем предложения пищевой рыбы на душу

населения увеличился со среднего показателя в 9,9 кг (в эквиваленте живого веса) в 1960-е годы до 18,6 кг в настоящее время, то есть почти в 2 раза [11]. Общий рост потребления рыбы является отражением тенденций в потреблении продуктов питания, обусловленных действием различных факторов и, в первую очередь: ростом населения, быстрыми темпами урбанизации, растущим уровнем жизни, глобализацией торговли, преобразованиями в системе распределения продовольствия. При этом он существенно увеличивает нагрузку на экосистему мирового океана. Человечество заинтересовано, с одной стороны, в результатах деятельности предприятий рыбного хозяйства, с другой - в сохранении природного баланса экосистемы Мирового океана, как обязательного условия жизни на Земле. Субъекты рыбохозяйственной деятельности стремятся к наращиванию добычи рыбы и морепродуктов с целью реализации собственного экономического интереса, и таким образом, усиливают свое воздействие на экосистему. Интенсификация промысла и антропогенное воздействие на окружающую среду могут нарушить естественную воспроизводственную способность сырьевой базы. Сырьевая база рыбного хозяйства является элементом экосистемы Мирового океана и напрямую зависит от ее состояния и воспроизводственной способности. Отрицательное антропогенное воздействие на аква и биосреду морей и океанов на фоне глобального изменения климата уже привело к ухудшению качественных и количественных характеристик промышленных объектов. В последние десятилетия остро ощущается проблема перелова рыбы как во внутренних водоемах и морских территориальных водах, так и в открытой части Мирового океана.

Чрезмерная эксплуатация основных промысловых видов рыб обусловила относительную стабилизацию объемов мирового морского промысла в 2008-2015 гг. [12], что объясняется тем, что вылов в Мировом океане наиболее традиционных объектов промысла приблизился к объективно допустимому уровню, превышение которого грозит нарушением естественного воспроизводства рыбных и других водных биоресурсов и способности их запасов к самовоспроизводству. Полностью эксплуатируемыми являются те запасы, которые дают объемы улова, соответствующие или максимально приближены к показателям максимального устойчивого производства. Следовательно, они не дают возможности для дальнейшего наращивания промысла, а при отсутствии рационального управления даже могут оказаться под угрозой сокращения. Чрезмерно эксплуатируемые запасы дают уловы ниже своего биологического и экологического потенциала. Для наращивания плотности этих запасов и восстановления их полной и стабильной производительности нужны четкие управленческие планы. Запасы, которые эксплуатируются не полностью, подвергаются сравнительно низкой нагрузке и имеют некоторый потенциал для роста объема добычи. Однако эти запасы нередко имеют невысокий потенциал воспроизводства, в силу чего потенциал для наращивания вылова обычно может быть ограничен.

Преобладающая часть запасов основных десяти видов (перуанский анчоус, минтай, атлантическая сельдь, полосатый тунец, японская скумбрия, сабля-рыба, путассу, перуанская ставрида, японский анчоус, желтоперый тунец), на долю которых в целом приходится около 30% мирового объема производства продукции морского промышленного рыболовства, эксплуатируются полностью и, следовательно, не имеют потенциала для наращивания объема продукции.

Наблюдаемое последнее десятилетие во всем мире сокращение общего объема морского вылова вместе с увеличением доли чрезмерно эксплуатируемых рыбных запасов и снижением доли видов, эксплуатируемых не в полной мере, заставляет сделать вывод о том, что состояние мирового морского рыбного хозяйства ухудшается и оказывает отрицательное влияние на производство продукции рыболовства.

Таким образом, интенсификация промысла на фоне климатических изменений и отрицательного антропогенного воздействия приводит к пагубным последствиям для экосистемы Мирового океана, связанным с нарушением природных воспроизводственных процессов сырьевой базы рыбного хозяйства, что влечет за собой снижение объемов добычи рыбы и морепродуктов и увеличение усилий (затрат

материально-технических, трудовых, информационных, финансовых ресурсов) на производство единицы продукции, что отрицательно отображается на результатах бизнеса в рыбной промышленности. Уменьшение объемов производства мирового рыбного хозяйства грозит человечеству недопоставками продовольствия и сокращением источников средств к существованию населения, занятого в рыболовстве [5].

Нарушение гомеостаза экосистемы Мирового океана (то есть его способности воспроизводить себя, восстанавливать утраченное равновесие, преодолевать сопротивление внешней среды) любого уровня (глобального или локального) приводит к нарушению баланса сил участников рыбохозяйственной деятельности и вызывает необходимость реализации экосистемного подхода к управления предприятием рыбной промышленности. Применение экосистемного подхода в национальной рыбохозяйственной практике нацелено на долгосрочное развитие рыбной отрасли и ее хозяйствующих субъектов в единстве с интересами общества и конкретных морских экосистем. Таким образом, экосистемный подход в деятельности предприятий нацелен на обеспечение жизнеспособности и конкурентоспособности предприятия в долгосрочной перспективе, с одной стороны, и поддержку устойчивого состояния и устойчивого развития общества и среды его существования, - с другой. Он основан на исследовании закономерностей взаимодействия хозяйствующих субъектов и окружающей среды, проблем и методов его устойчивого сохранения и развития; отражает экологическую культуру собственников и менеджеров предприятия, проявляется в положениях экологической политики и выборе типа экологического поведения (управления); предусматривает формирование соответствующей системы экологического управления.

Экологически ориентированный бизнес строится на социально-экономической и социально-психологической мотивации и гармонии взаимоотношений человека с окружающей средой и опирается на многоуровневую нормативно-правовую базу регулирования экологической деятельности, ориентированной на отраслевую специфику бизнеса и, в частности, особенности рыбопромышленной деятельности, субъекты которой активно взаимодействуют с экосистемой Мирового океана [13].Экосистемный подход рассматривается с социально-экономических позиций, способствует улучшению репутации предприятия в глазах общественности, органов государственной власти, инвесторов; улучшению взаимодействия с поставщиками и потребителями; получению права на льготное налогообложение; уменьшению количества случаев, приводящих к юридической ответственности; экономии сырья, материалов, энергии и совершенствованию управления затратами предприятия; улучшению качества продукции. Кроме экономических эффектов, экоориентований бизнес вносит положительный вклад в обеспечение естественного равновесия и устойчивого развития общества.

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ВЕТЕРИНАРНО-САНИТАРНАЯ ОЦЕНКА МЯСА ЦЫПЛЯТ-БРОЙЛЕРОВ ПРИ ПРИМЕНЕНИИ БЕЛКОВОГО ГИДРОЗИЗАТА АБИОПЕПТИДА
VETERINARY AND SANITARY ASSESSMENT OF BROILER CHICKENS' MEAT UNDER APPLICATION OF THE ABIOPEPTIDE'S PROTEIN HYDROLYZATE

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АННОТАЦИЯ
В данной статье представлен материал экспериментальных исследований по влиянию белкового гидролизата Абиопептид на ветеринарно-санитарные показатели продуктов убоя бройлеров, выращиваемых на приусадебном участке. Было сформировано две группы бройлеров первая опытная, которой выпаивали Абиопептид из расчета 1,5 мл/кг живой массы на протяжении 33 суток содержания бройлеров, и вторая – контроль, которая препарат не получала; птица содержалась в одинаковых условиях. По результатам проведенных исследований не установлено отрицательного влияния Абиопептида на ветеринарно-санитарные показатели продуктов убоя бройлеров, а также отмечалось увеличение среднесуточного прироста в опытной группе на 10% по отношению к контрольной группе.

ABSTRACT
This article presents the material of experimental studies on the effect of the abiopeptide's protein hydrolyzate on the veterinary and sanitary indicators of slaughter products of broilers grown on a private plot. Two groups of broilers were first tested, which was evaporated with abiopeptide at a rate of 1.5 ml per kg of live weight for 33 days of broiler maintenance, and the second was a control that the preparation did not receive; the bird was kept in the same conditions. According to the results of the studies, the negative effect of abiopeptide on the veterinary and sanitary indicators of broiler slaughter products was not established, and an increase in the mean daily growth in the experimental group by 10% relative to the control group was noted.

КЛЮЧЕВЫЕ СЛОВА
Птицеводство, безопасность, фармакология, качество мяса.

KEY WORDS
Poultry, security, pharmacology, meat quality.

Обеспечение населения продуктами питания является основной задачей животноводства и птицеводства. Птицеводство занимает одно из ведущих мест. В мире производится 84 млн. т. мяса, что составляет 30,9% от общего производства мяса птицы. В России на одного жителя в год производят 10,9 кг курятины и 14,9 кг яиц

[Мысик А.Т., 1998; 2005; 2008]. Птицеводство России развивается так динамично потому, что это наиболее наукоемкая отрасль [Фисинин В.И., 2003; 2008]. Увеличение производства высококачественных продуктов животноводства остается до сих пор основной задачей современной науки и практики. Для того чтобы достичь высоких показателей продуктивности, ученые выводят генетически устойчивые породы птицы, а также применяют фармакологические средства – эрготропики – направляющие энергию питательных веществ на повышение продуктивности животных. К ним относят ферменты, пробиотики, органические кислоты, гормоны, имунностимуляторы, адаптогены, стресс-протекторы.

На данном этапе развития птицеводства актуально не только повышение продуктивности птицеводства, но и улучшение качества получаемой продукции, что очень важно для потребителя [Андреева Н.Л., 2006; Богданов В., 2005]. По мнению ряда ученых, понятие качество мяса и мясопродуктов состоит из многих показателей. Но одним из главных показателей является его безвредность и доброкачественность [Беленький Н.Г., 1988; Сарана А.А., Ерохин С.А., 2000].

Одно из ведущих мест в ветеринарной практике нашли и белковые гидролизаты, по данным отечественных и зарубежных ученых они способствуют увеличению получения продукции и нашли широкое применение в животноводстве и птицеводстве.

Целью наших исследований было изучение влияния белкового гидролизата Абиопептид на рост цыплят-бройлеров и показатели безопасности продуктов убоя.

Абиопептид (производства ООО Фирма «А-БИО», г. Москва) - препарат, предназначенный для орального применения птице с жидкими или сухими кормами. Содержит полный комплекс незаменимых аминокислот и низшие пептиды. Выпускают в 2 формах: водного концентрированного до 25% раствора ферментативного гидролизата соевого белка, компенсированного по метионину, и высушенного порошка этого гидролизата.

В форме раствора Абиопептид - жидкость от соломенно-желтого до светло-коричневого цвета с небольшим количеством выпадающей в осадок плохо растворимой аминокислоты - тирозина. Перед использованием его необходимо взбалтывать. Хорошо смешивается с водой. В сухой форме препарат представляет собой аморфный порошок желто-соломенного цвета.

Абиопептид по степени воздействия на организм относится к 4 классу опасности (по ГОСТ 12.1.007 - 76) - веществам малоопасным.

МАТЕРИАЛЫ И МЕТОДЫ ИССЛЕДОВАНИЙ

Нами был проведен экспериментальный опыт в частном хозяйстве Московской области по влиянию белкового гидролизата Абиопептид на рост и сохранность цыплят-бройлеров и показатели безопасности продуктов убоя. Было сформировано две группы цыплят-бройлеров по принципу аналогов по 15 голов в каждой. Опытной группе применяли препарат из расчета 1,5 мл/кг живой массы бройлеров с 12 суточного возраста ежедневно до 45 суток выращивания, контрольная группа находилась на стандартном рационе.

Прирост живой массы определяли путем индивидуального взвешивания.

Ветеринарно-санитарную экспертизу тушек бройлеров проводили согласно действующим нормативным документам «Правила ветеринарного осмотра убойных животных и ветеринарно-санитарной экспертизы мяса и мясных продуктов» (1983 г. с дополнениями и изменениями 1988 г.) с учетом требований санитарно-эпидемиологических правил и нормативов «Гигиенические требования к безопасности и пищевой ценности пищевых продуктов» (СанПиН 2.3.2.1078-01). Органолептические исследования мяса бройлеров проводили согласно ГОСТ 31962-2013 Мясо кур (тушки кур, цыплят, цыплят-бройлеров и их части). Технические условия.

Мясо цыплят-бройлеров (замороженное) опытной и контрольной группы исследовали на соответствие «Гигиеническим требованиям безопасности и пищевой ценности пищевых продуктов» (СанПиН 2.3.2.1078-01) по микробиологическим

показателям, наличию антибиотиков, токсичных элементов, пестицидов и радионуклидов. Исследования проводили в соответствии с утвержденными нормативными документами (ГОСТ, МУ, МУК).

РЕЗУЛЬТАТЫ И ИХ ОБСУЖДЕНИЕ

В результате применения белкового гидролизата Абиопептид, цыплятам-бройлерам в дозе 1,5 мл/кг живой массы с 12 суточного возраста ежедневно до 45 суток, не установлено негативного влияния на клиническое состояние птицы.

При взвешивании цыплят-бройлеров, установлено, что птицы опытной группы имеют достоверно большие привесы, по сравнению с контрольной группой. Таким образом, масса цыплят – бройлеров к концу опыта в опытной группе составила 3323,2±2,2 г, а в контроле 2707,3±1,2 г.

	1	2	3	4	5	6
■ сутки	12	19	26	33	40	45
■ опыт, гр	341	799	1477,5	1988,2	2563,3	3323,2
■ контроль, гр	343	726	1138,6	1637,4	2171	2707,3
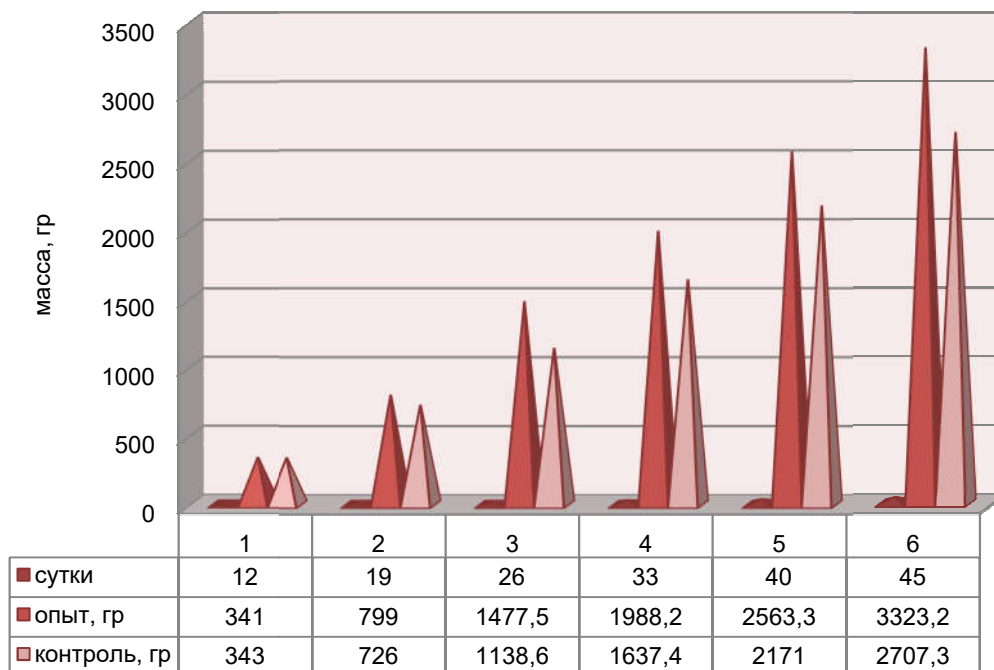
Рисунок 1 – Изменение массы цыплят-бройлеров в течении опыта

По результатам органолептических исследований тушек и внутренних органов бройлеров было отмечено, хорошая степень обескровливания, на поверхности тушки и на слизистых оболочках грудной и брюшной полостях не отмечали побитостей и патологоанатомических изменений. Мышцы развиты хорошо. Форма груди округлая. Мышцы развиты хорошо. Форма груди округлая. Киль грудной кости не выделяется. Отложения подкожного жира в области нижней части живота незначительные, запах соответствовал свежему мясу птицы, мышечная ткань бледно-розового цвета, упругая, кожа бледно-желтого цвета не повреждена.

Мясо птиц обладает приятным запахом и вкусом. Оно отличается наличием большого количества ароматообразующих компонентов в специфическом соотношении, многие из которых возникают при тепловой обработке. В создании аромата и вкуса наряду с водорастворимыми компонентами принимают участие и летучие жирорастворимые соединения, возникающие главным образом из липидов мяса. От них зависит в значительной степени специфический вкус мяса птицы.

При пробе варки в обеих группах отмечалось хорошие органолептические показатели мясного бульона, он был прозрачным и ароматным, без постороннего привкуса и запаха. Полученные результаты исследований представлены в таблице 1.

Таблица 1 – Определение качества мяса согласно СанПин 2.3.2.1078-01

Наименование определенных показателей	Фактический результат		Нормы по НД	НД на момент испытания
	опытная группа	контрольная группа		
Микробиологические показатели: - количество мезофильных аэробных и факультативно-анаэробных м/о, КОЕ/г	$2,6{\times}10^4$	$3,4{\times}10^4$	$1,0{\times}10^5$	ГОСТ 10444.15-94
Антибиотики, мг/кг:				
- левомицетин	не обнаружено	не обнаружено	не допускается	МУК 4.1.1912-04
- тетрациклиновая группа	не обнаружено	не обнаружено	не допускается	МУ 3049-84 МЗ РФ
- бацитрацин	не обнаружено	не обнаружено	не допускается	МУ 3049-84 МЗ РФ
Токсические элементы, мг/кг:				
- свинец	0,22	0,19	0,5	ГОСТ 30178-96
- кадмий	менее 0,01	менее 0,01	0,05	ГОСТ 30178-96
- мышьяк	0,05	0,03	0,1	ГОСТ 26930-86
- ртуть	менее 0,002	менее 0,002	0,03	ГОСТ 26927-86
Пестициды, мг/кг:				
- ГХЦГ	менее 0,001	менее 0,001	0,1	МУ по определению остаточного содержания микроколичеств пестицидов в продуктах питания, кормах и внешней среде. Сб. ч. V – XXIV, 1976-94 гг., т. 1-2, 1992.
- ДДТ и его метабольты	менее 0,005	менее 0,005	0,1	

Мясо цыплят-бройлеров как опытной, так и контрольной групп практически не отличалось по показателям безопасности и соответствовало требованиям СанПиН 2.3.2.1078-01.

Заключение. Применение белкового гидролизата Абиопептид не оказывает негативного влияние на клиническое состояние цыплят – бройлеров, а также не влияет на качество продукции, при этом стимулирует привесы бройлеров.

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THE IMPACT OF THE POLICY ON THE IMPORTED BEEF FROM AUSTRALIA AND THE PRODUCTION OF DOMESTIC BEEF

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ABSTRACT

The objective of this study was to analyze the impact of the policy on the imported beef from Australia and the production of domestic beef. This study was conducted in Indonesia. The type of data used in this study was time series data of the period of 1990 to 2014. The data of the prices were obtained from the Ministry of Trade and the FAO and the Ministry of Agriculture. For the prices of the imported beef from Australian, the data were obtained from Australian authorities (Australian Bureau Statistic, Meat Livestock Association and Australian Bureau of Agricultural and Resource Economics and Sciences). The data analysis used was trend analysis. The volume of beef imports from Australia has increased enormously over the last 25 years with an average increase of 40.19% per year. The policy affecting beef imports from Australia is the Indonesian Act No. 18 of the Year 2009 on Animal Husbandry and Animal Health with the country-based principles.

KEY WORDS

Policy, import, production, beef.

Initially, the import system of beef and live cattle used was a country base system. But then the government then chose the zone base import system. This system is a system that is the continuation of the previous one in harmony with the increasing availability of meat supply in the country. With this system, the government will direct the imports only to certain zones of the country that have not reached their beef sufficiency. The most difficult zones to meet are Jabodetabek and parts of North Sumatra. Therefore, in the first quarter, the government imported 100,000 head of feeder cattle to meet the needs in these two locations. One of the main beef-importing countries to Indonesia in the era of country base was Australia. Australia was chosen because of the proximity and excess supply of meat it has, in addition to low production costs and geographical proximity that minimizes shipping costs. Eighty seven percent (87%) of live cattle exported from the Northern Australia is directed to the Indonesian market (Martin *et al*., 2012). In January 2015, Australia exported US $ 327 million worth of beef to Indonesia, 13% or US $ 42 million was in the form of secondary cut and edible offal.

In the era of zone base, Indonesia is free to import meat from various countries. In line with this, there an idea to replace Australian beef with Indian buffalo meat. Later, in order to prepare for self-sufficiency in cattle, private importers are required to import 20% of the total imports of beef feeder cattle and broodstock, while the cooperative farmers are required to import 10% only. The Ministry of Trade will oversee the private sectors, while the Ministry of Cooperatives and SMEs will oversee the farmer cooperatives. It is expected that with the import of feeder cattle and broodstock, the farmers and the private sector are encouraged to breed their own cattle rather than importing from abroad.

Indonesia is the largest market for live cattle from the Northern Australia. The data of 2011 showed that 87% of Australia's exports of live cattle were directed to Indonesia. Even so, live cattle are account for only 8% of the total Australian cattle exports. The majority of Australian cattle exports is in the frozen form (92%). Indonesia has very little portion for frozen beef. Cumulatively, Indonesia is only an export market of 8.03% of Australian cattle products, comprising 5.03% live cattle and 3.00% frozen meat. From the Indonesian side, this means that the imported meat from Australia consists of 62.6% of live cattle and 37.4% of frozen meat (Martin *et al*., 2012).

What are Indonesian government efforts to achieve self-sufficiency in cattle in Indonesia. Tenrissana et al (2016) stated that until 2014 Indonesia had made four attempts to issue the policy of self-sufficiency in cattle in Indonesia, and all of them failed. What then ensures that current policies will succeed in achieving self-sufficiency in cattle? Tenrissana et al (2016) suggested that there should be an evaluation of the policy of meat self-sufficiency in Indonesia to anticipate the problems and find the recommendations at the level of farmers and livestock entrepreneurs.

METHODS OF RESEARCH

This study was conducted in Indonesia. The location of the study was deliberately determined on the basis that the needs of Indonesian meat are always unmet, so importing is required. Beef imports to Indonesia are mainly from Australia. The type of data used in this study is time series data of the period of 1990 to 2014. The data on prices are obtained from the Ministry of Trade and FAO and the Ministry of Agriculture. The data on local cattle productivity, the quantity of chicken and fish are obtained from the Ministry of Agriculture. The data on the previous and current imports and related industrial developments are obtained from the Ministry of Trade. The data on per capita income are obtained from *BPS.* The data on the proportion of previous imports are obtained from Australian authorities (*Australian Bureau Statistic*, *Meat Livestock Association*, and *Australian Bureau of Agricultural and Resource Economics and Sciences*). The data are analyzed by means of trend analysis.

RESULTS AND DISCUSSION

Imported Beef from Australia. The volume of beef imports from Australia has increased enormously over the last 25 years (Figure 1). It is proven by the fact that the volume of beef imports from Australia in 1990 was 391.771 kg which increased very high to become 58,111,173 kg in 2014, or an average increase of 40.19% per year. On the one hand, the volume of the imports of beef from all countries increased considerably during the same period, namely in 1990 from 1,422,454 kg to become 67,908,200 kg in 2014, or an average increase of 28.85% per year.

According to Tseuoa (2011), the policy of importing permit of feeder cattle and beef issued by the government in the 1980s was originally intended to provide cheap meat, so that the consumption of meat in the community would increase. However, in 2012 the proportion of the imported beef reached 369,693 tons of the national beef need, thus it alarmed food sovereignty and food security.

The share volume of beef import from Australia against the volume of beef imports from all other countries in the last 25 years tends to increase, namely 77.85% in 2014 which increased as compared to 27.54% in 1990. On the average the share volume of the beef imports from Australia dominates (55.25% per year) during the period of 1990-2014 against the beef imports from all other countries.

Prices of Domestic and Australian Beef. The price of domestic beef for 25 years, namely the period of 1990-2014 fluctuated with a tendency to increase from 2,686 US $ per kg in 1990 to 8,373 US $ per kg or an average growth of 7.67% per year. The average growth rate of domestic beef prices is much higher than the growth rate of Australian beef prices (1.80% per year) and the growth of beef price of the World (1.61% per year) in the

same period (Figure 2). According to the Ministry of Agriculture of the Republic of Indonesia (2015), the current increase in beef prices is the result of an imbalance between the production quotas and the high public demand for beef. There are a number of constraints of cattle distribution / transportation from the production centers to consumers, both in terms of inter-island vessel transportation and land transportation which trigger increases in beef prices. Consequently Indonesia must import beef.
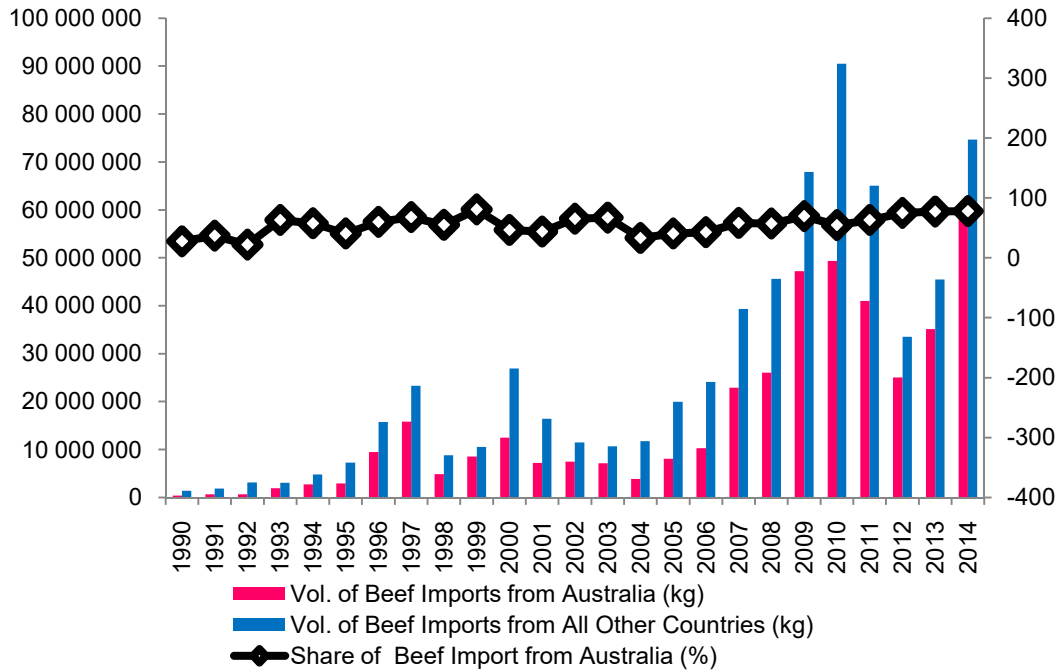

Figure 1 – The Development of the Volume and Share of Beef Import from Australia and All Other Countries, 1990-2014
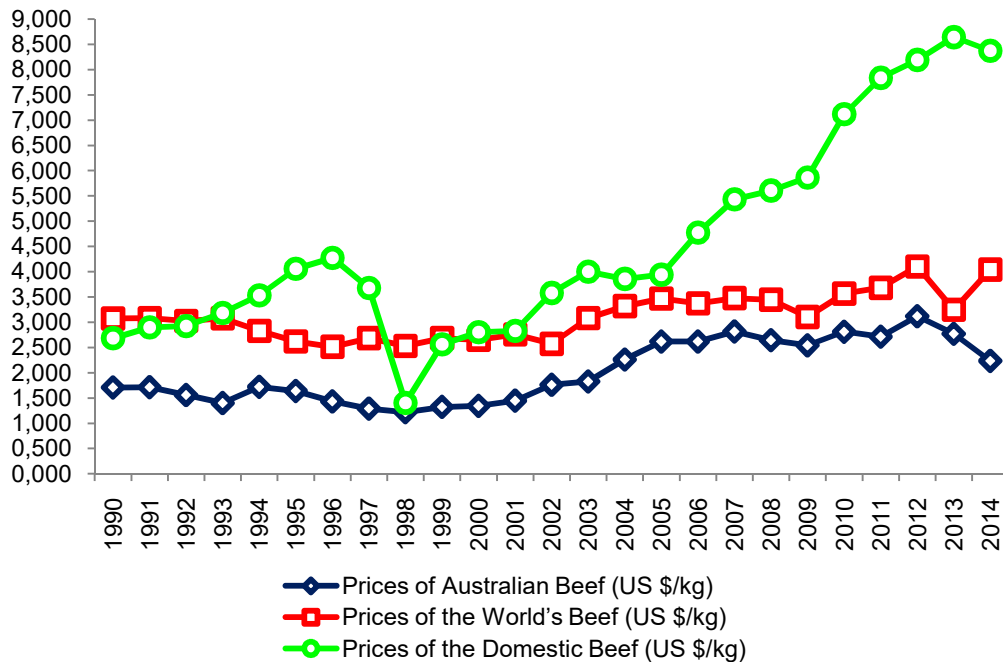
Figure 2 – The Development of the Australian, the World's and the Domestic Beef Prices, 1990-2014 (US $ / kg)

The development of Australian beef prices during the period of 1990-2014 relatively less fluctuating with the tendency to increase from 1,708 US $ per kg in 1990 to 2,235 US $ per kg or on average only grows at 1.80 % per year, as shown in Figure 2. Compared to the price of the world's beef, the price of Australian beef for 25 years has been always lower, i.e the average difference (gap) of 1,088 US $ per kg per year. Similarly, when compared to the price of the domestic beef, Australian beef is also always lower with an average of difference (gap) of 2.605 US $ per kg per year.

Domestic and Australian Beef Production. The development of the domestic beef production in the same period (1990-2014) fluctuated with an increasing trend of 259,200,000 per ton in 1990 to 545,621,000 per ton or on average growth of only 3.80% per year. The development of Australian beef production during the period 1990-2013 as shown in Figure 3 was relatively stable with an increasing trend of 1,697,883 tons in 1990 to 2,480,458 tons in 2013 or an average growth of only 1.73% per year. The growth rate of Australian beef production during the period 1990-2013 was lower than the growth rate of the domestic beef production in the same period (3.80% per year). However, the growth rate of the Australian beef production was higher than the growth rate of the world's beef production in the period of 1980-2015 (data source: USDA) that is only 0.93%.
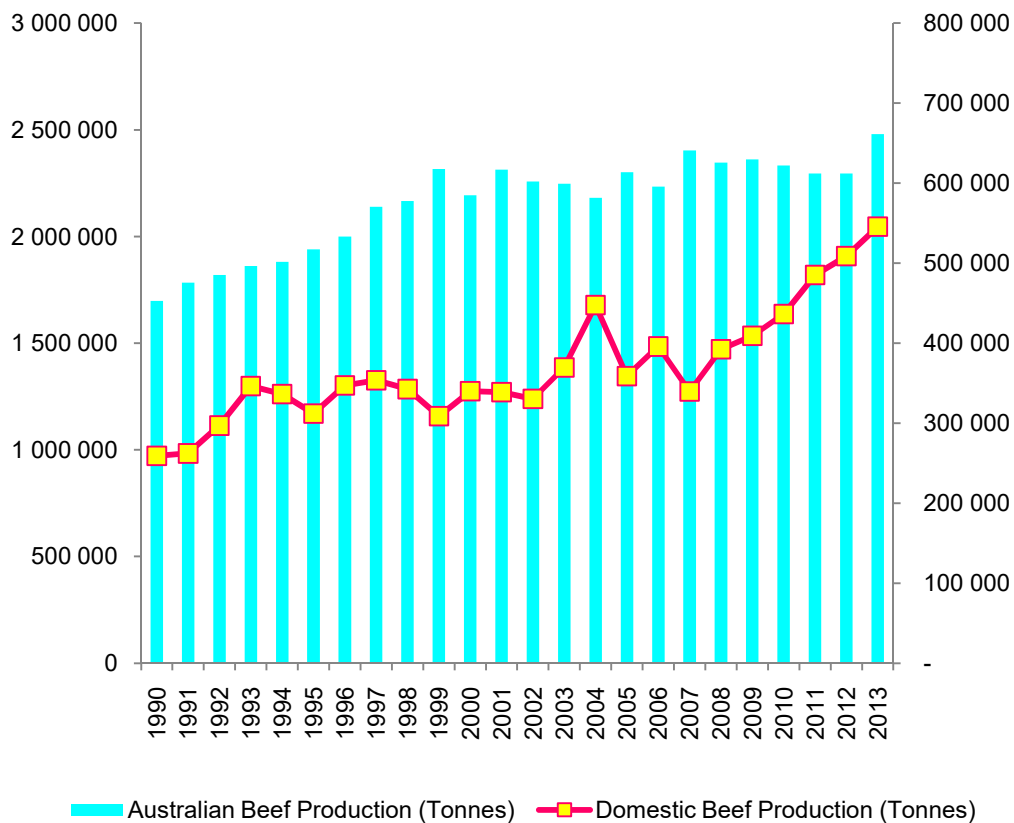
Figure 3 – The Development of Australian and Domestic Beef Production In the Period of 1990-2013 (tones)

In 2015 (USDA's Data), Australia's beef production was 2,275,000 tons. It contributed only 3.89% of the world's beef production. The largest contribution to the world's beef production was from the following countries: the United States (19.53%), Brazil (16.09%), European Union (12.88%) and China (11.35%) and India (6.50%). While the development of the domestic beef production in the same period (1990-2014) fluctuated with the increasing trend, namely from 259,200,000 per ton in 1990 to 545,621,000 per ton or on average only grew by 3.80% per year.
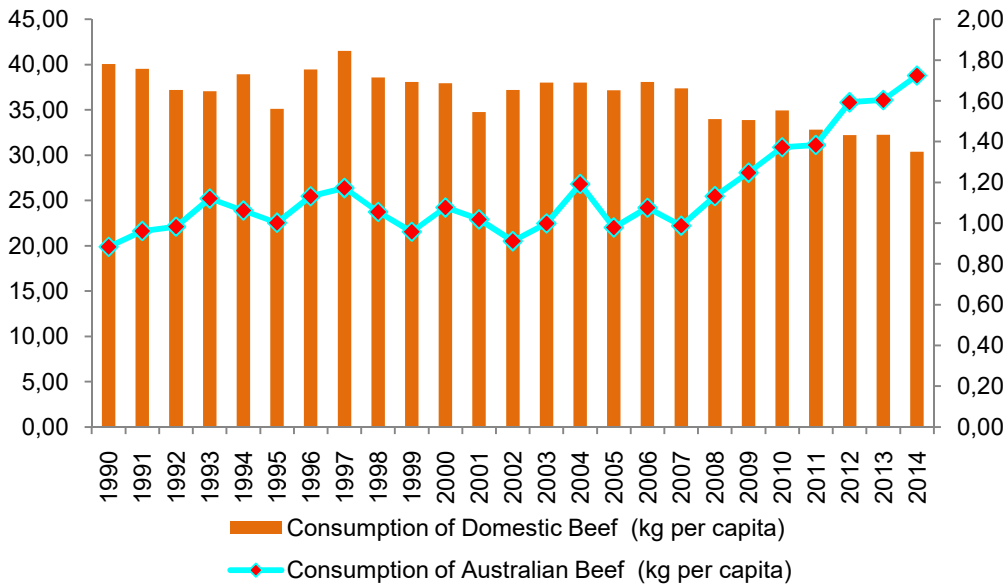
Figure 4 – The Development of the Per Capita Consumption of the Domestic and Australian Beef in the Period of 1990-2014 (Kg)

Consumption of Domestic Beef. The consumption of the domestic beef per capita increased substantially over the last 25 years (Figure 4). It is proven by the fact that the consumption of domestic beef in 1990 was only 0.88 kg / capita, while the consumption of domestic beef in 2014 was 1.72 kg / capita, which means that there was a very high increase by an average of 3.32% per year. Interestingly, Figure 4 presents an interesting fact that the consumption of Australian beef per capita during the period of 1990-2014 indicated a downward trend from 40.06 kg / capita / year in 1990 to 30.38 kg / capita / year in 2014 or an average decrease of 1.01% per year. The lowest per capita consumption of Australian beef occurred in 2014 at 30.38 kg / capita, while the highest per capita consumption of Australian beef occurred in 1997 at 41.50 kg / capita. In addition, the lowest growth rate of Australian beef consumption occurred in 1995, namely -9.78% of that of the previous year, while the highest occurred in 1996, namely 12.34% of that of the previous year.
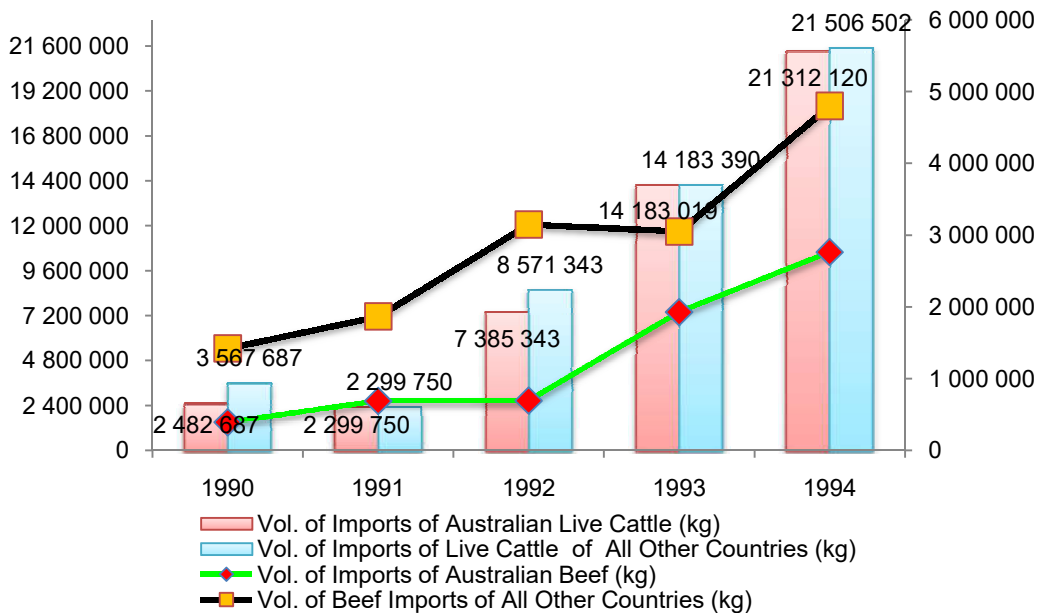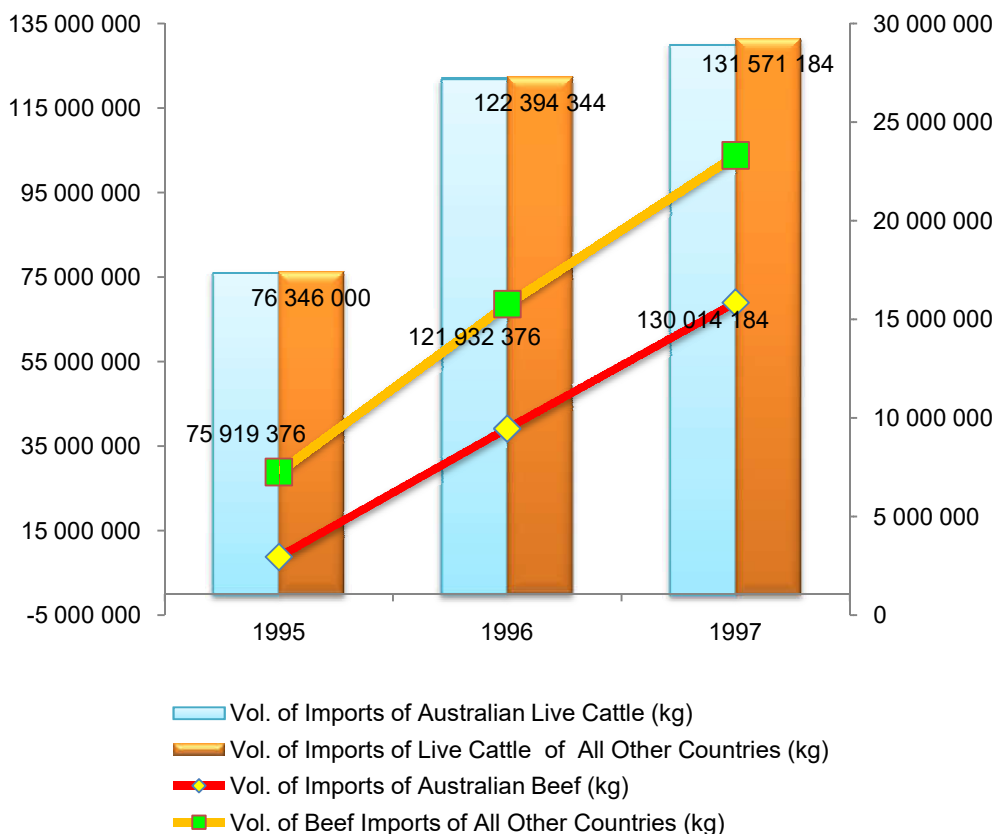

Figure 5 – The Development of Cattle Import from Australia and All Other Countries with the Existence of the Policy of Cattle Export Cessation

The Impact of the Policy to stop export of cattle and buffalo to Singapore and Hong Kong in 1979. In the period of 1970-1979 Indonesia were a cattle and buffalo exporting country, with destination countries, among others, Singapore and Hong Kong. Some of the export livestock source areas are Aceh Province, Bali Province, West Nusa Tenggara (NTB) Province and East Nusa Tenggara (NTT) Province. However, on the grounds of the increasing domestic demand, since 1979 the government took a policy to stop the exports of cattle and buffalo (*Ditjennak,* 1990). 'With the policy to stop the exports of cattle and buffalo in 1979, the import of cattle from Australia from 1990-1994 continued rising.

Figure 5 shows the development of live cattle imports from Australia and the rest of the country with the policy of cessation of export of cattle and buffalo in 1979 with destination countries such as Singapore and Hong Kong has encouraged the development of Australian cattle imports relative to the development of cattle imports from all other countries.

The Impact of the Policy May Package of 1995. Under the policy of May Package 1995, the government issued a deregulation package of five parts: additional tariff and entry fees, import trading system, capital investment, licensing, business restructuring, and the export entrepot of the manufacturers and bonded areas. In 1995 through the May Package, the government followed the commitments of international trade agreements by opening itself to imported agricultural products and commodities. The concrete steps taken by the government were reducing the tariff on beef cattle products from 10% to 5%, and lowering the import tariff of brood-stock cattle and feeder cattle from 5% to 0%.

Figure 6 – The Development of Cattle Import from Australia and All Other Countries
with the Existence of the Policy of May 1995 Package

The data in Figure 6 show that the policy of May 1995 Package has encouraged the increase of cattle imports from both Australia and all other countries, and the increase in cattle imports from Australia is much faster than the increase in cattle imports from all other countries.
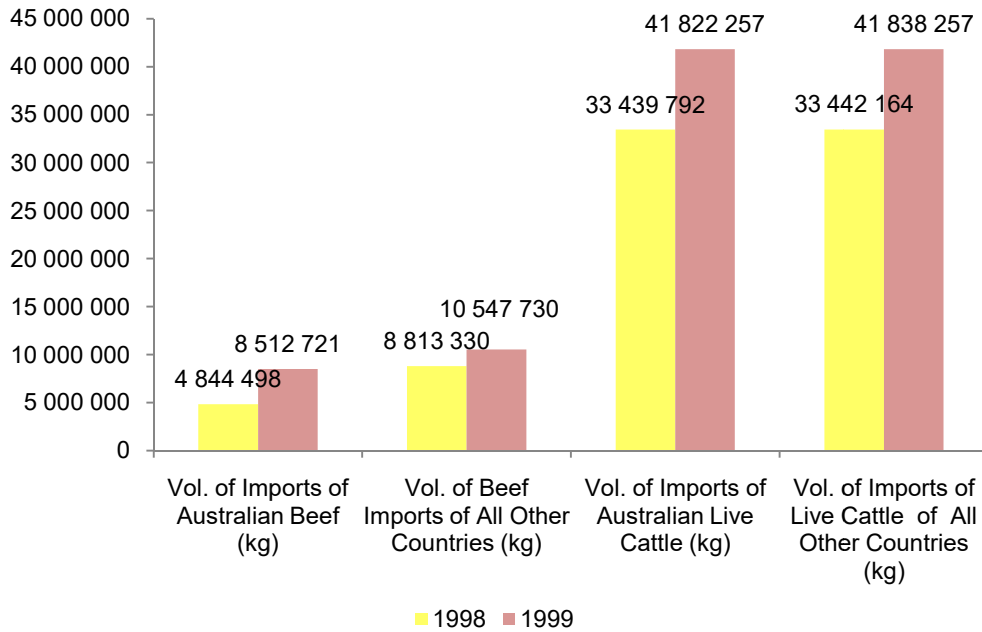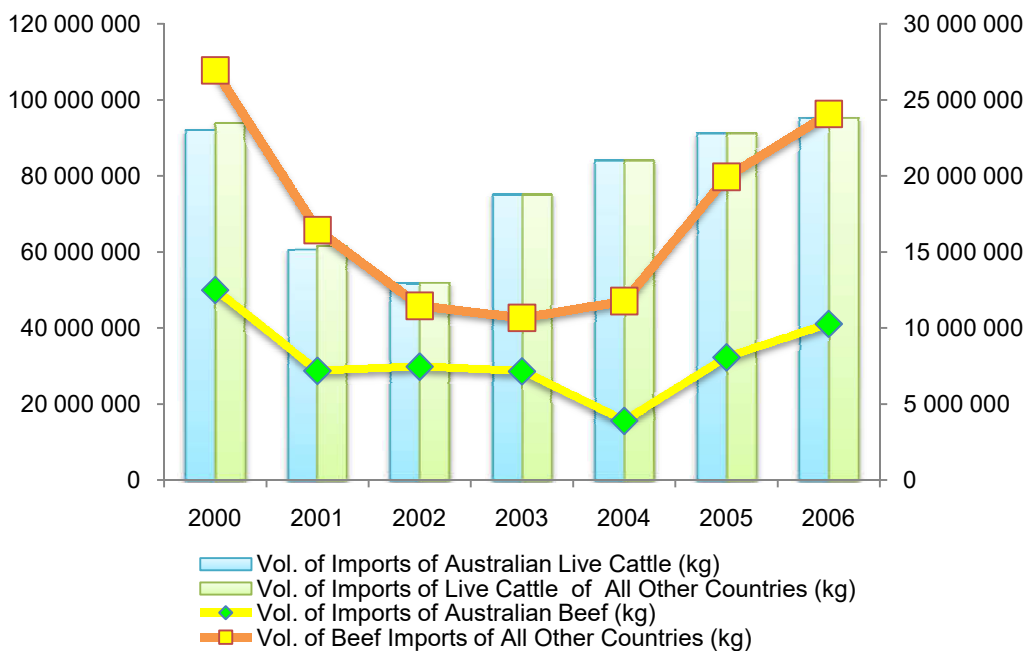
Figure 7 – The Development of Beef Import from Australia and All Other Countries with the Existence of the Presidential Instruction (*Inpres*) no. 2 of the Year 1998

The Impact of The Instruction of the President of the Republic of Indonesia Number 2 of the Year 1998 Concerning Trade Between Provinces and Regencies / Islands. The policy in the form of the Presidential Instruction of the Republic of Indonesia No. 2/1998 on the Trade Between Province and Regency / Islands arises from the insistence and pressure by IMF (International Monetary Fund) to eliminate all trade barriers occurring in Indonesian territory. The Instruction of the President of the Republic of Indonesia Number 2 of the Year 1998 has an impact on the increase in beef imports from Australia and all other countries of the period of 1998-1999 (Figure 7). This policy has stimulated an increase in beef imports from Australia much faster than the increase in beef imports from all other countries.
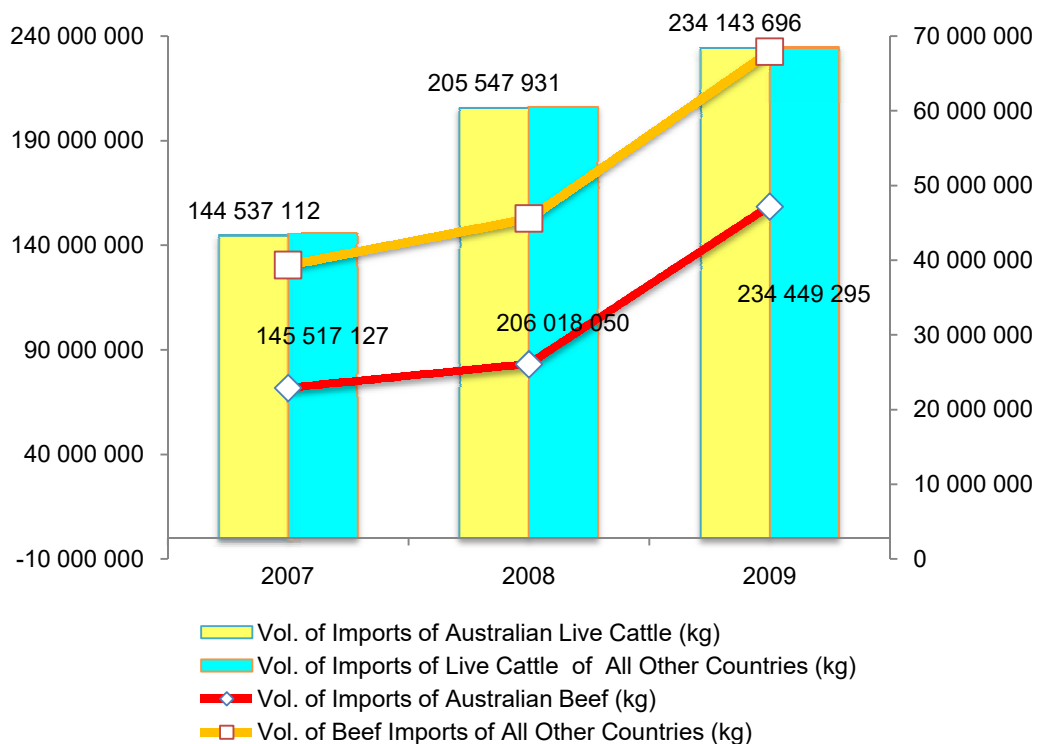

Figure 8 – The Development of Cattle Import from Australia and All Other Countries with the Existence of the Cattle Sufficiency Program of 2005

The Impact of the Beef Sufficiency Program of 2005. The 2005 Beef Sufficiency Program is listed in the Strategic Plan of the Directorate General of Livestock in the period of 2005-2010. The 2005 Beef Sufficiency Program has an impact on imported cattle from Australia during 2000-2006 in the form of the decrease in cattle imports from Auatralia, namely from 12,502,770 kg in 2000 down in 2006 to 10,271,066 kg (Figure 8). This program had a negative impact on the imports of cattle from all countries during 2000-2006. The impact was indicated by the decrease of the import of cattle from all countries from 26,937,124 kg in 2000 to 24,078,542 kg in 2006, or an average of 17,326,550 kg per year

The Impact of The Regulation of the Minister of Agriculture Number: 59/Permentan/HK. 060/8/2007 about the Guidelines for Accelerating the Achievement of Self-Sufficiency of Beef. The Policy of Accelerating the Achievement of Self-Sufficiency of Beef (P2A2SB) to ensure the success of farmer empowerment efforts, the strict supervision must be conducted on the export/import of livestock and livestock products. The results of the calculation indicate that the imposition of 25-40% import duties can still be considered for the farmers' empowerment. The policy of P2A2SB affects the increase of beef import from Australia and all other countries in the period of 2007-2009. The rate of beef imports from Australia increased by an average of 47.46% per year. The average increase in beef imports from Australia is greater than the average increase in beef imports from all other countries (32.24%).

Figure 9 – The Development of Cattle Import from Australia and All Other Countries with the Existence of the Policy of Accelerating the Achievement of Self-Sufficiency in Beef (P2A2SB)

The Impact of The Regulation of the Minister of Agriculture Number: 19/Permentan/ OT.140 / 2/2010 On the General Guidelines of the Beef Self-Sufficiency Program in 2014. The polici of the Beef Self-Sufficiency Program in 2014 (BSSP) had the objective of reducing cattle and meat imports to only 10% of the community's consumption needs. The negative impact of the policy (decrease) of BSSP of 2014 on beef import from Australia also applies to the imports of beef from all other countries during 2010-2011. The data in Figure 10 indicate that the policy of the Self-Sufficiency Program of 2014 inhibits the import of beef from Australia and imports of beef from all other countries. The rate of beef imports from Australia

declined at an average of -16.93% per year. The average decline in import rate of beef from Australia is lower than the average decline in import rate of beef from all other countries (-28.16% per year).
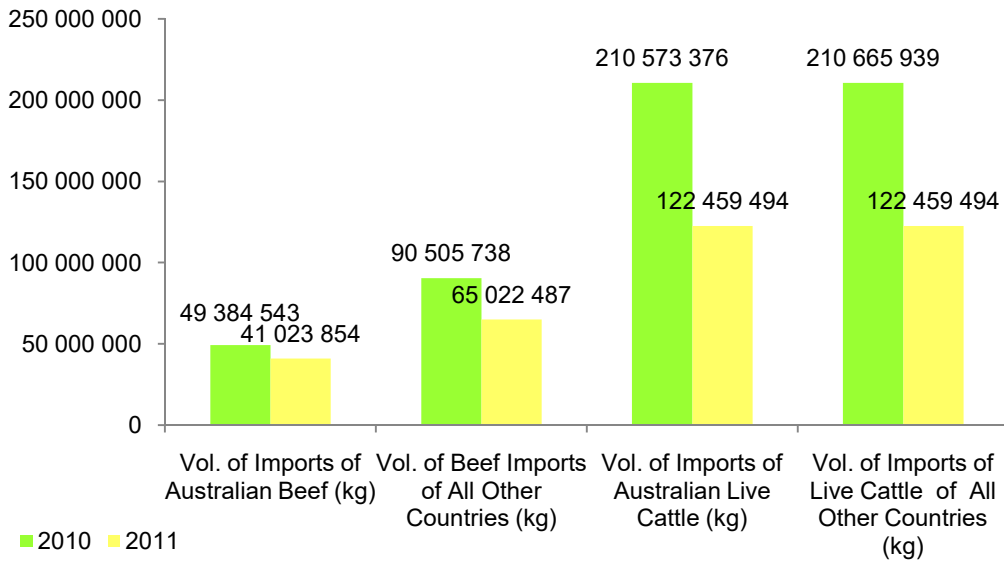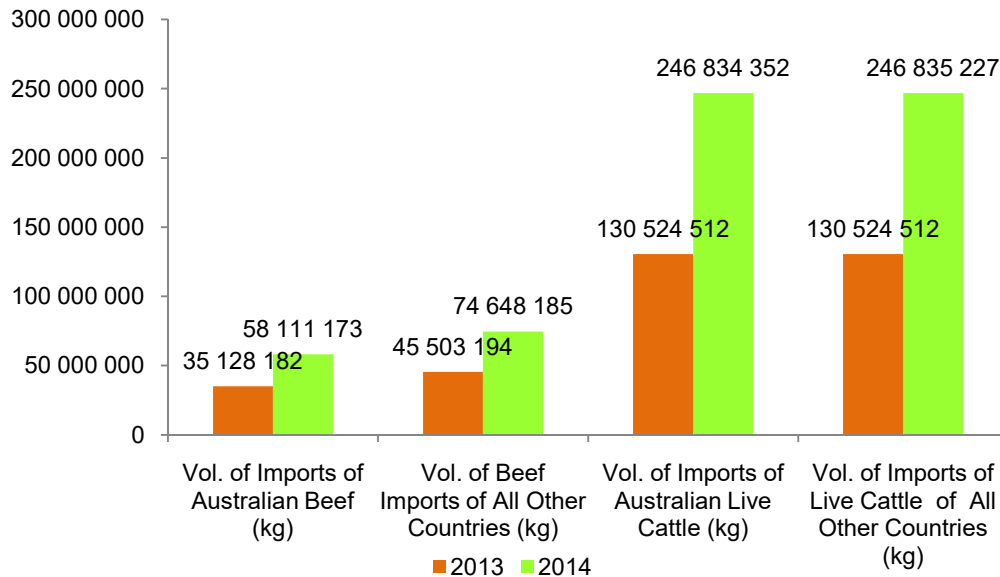

Figure 10 – The Development of Beef Import from Australia and All Other Countries with the Existence of BSSP 2014

The Impact of The Regulation of the Minister of Agriculture Number: 50/Permentan /OT.140/9/2011 On the Recommendation of Approval of Import of Carcass, Meat, Offal, and/or Processed Items into Indonesia and the Regulation of the Minister of Trade No. 24/M-Dag/Per/9/2011 About the Provisions of Import and Export of Animals and Animal Products. These regulations impeded the import of Australian beef and beef imports from all other countries. However, on the average the number of beef imports from Australia from 2011-2012 was still below the average number of beef imports from all other countries at 49,264,463 kg per year (Figure 11). However, the rate of beef imports from Australia declined at an average of -38.91% per year, lower than the average decline in import rate of beef from all other countries (-28.16% per year).
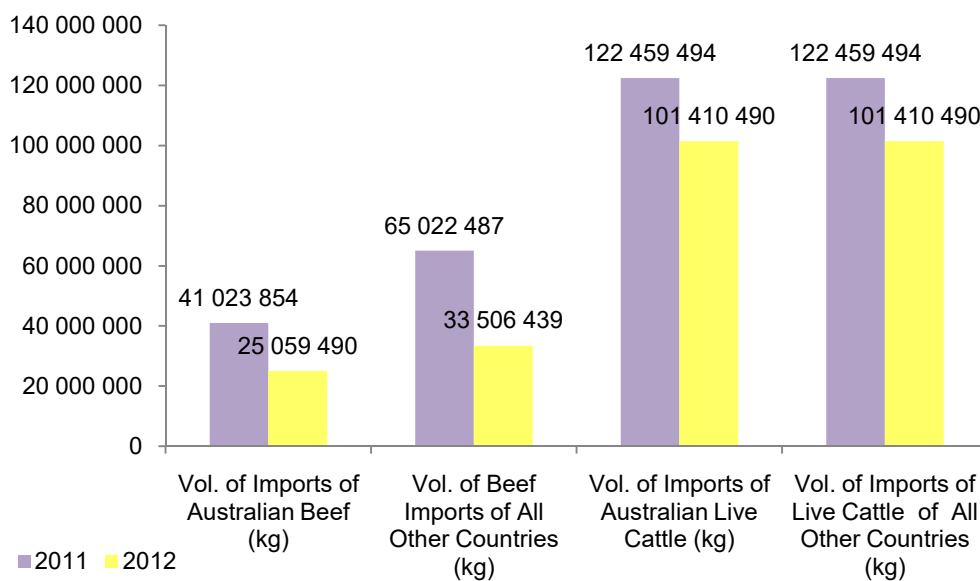
Figure 11 – The Development of Cattle Imports from Australia with the Existence of the Policy of the Minister of Agriculture No. 50 of 2011 and the Regulation of the Minister of Trade #24 of the 2011

It is interesting that in this period the import of live cattle from Australia was exactly the same as the import of live cattle from all other countries. This means that the government policy in the form of the Regulation of the Minister of Agriculture Number: 50 / Permentan / OT.140 / 9/2011 and the Regulation of the Minister of Trade No. 24 / M-Dag / Per / 9/2011 had caused no other country than Australia to export live cattle to Indonesia.

The Impact of the Regulation of the Minister of Trade No. 46/M-Dag/Per/8/2013 on the Provisions on the Import and Export of Animals and Animal Products. The data in Figure 12 show that the Regulation of the Minister of Trade of the Republic of Indonesia No. 46 / M-Dag / Per / 8/2013 encouraged the import of beef from Australia and the imports of beef from all other countries.

Figure 12 – The Development of Beef Import from Australia and All Other Countries with the Existence of the Policy on Trade Ministerial Regulation No. 699 of the year 2013 and Minister of Trade Regulation No. 46 of 2013

In 2013 the Regulation of the Minister of Trade of the Republic of Indonesia No. 46 / M-Dag / Per / 8/2013 Regarding Provisions on the Import and Export of Animals and Animal Products was implemented. The regulation caused an increase in beef imports from Australia during the period of 2011-2012. The data in Figure 12 show that the import of beef from Australia in 2013 as much as 35,128,182 kg rose to 58.111.173 kg in 2014 with an average of 46.619.678 kg per year. However, on the average the number of beef imports from Australia during 2011-2012 was still below the average number of beef imports from all other countries, namely 60,075,690 kg per year. However, the rate of beef imports from Australia has increased by an average of 65.43% per year, relatively the same as the average increase in import rate of beef from all other countries (64.05% per year).

The Impact of Indonesian Act Number 18 of the Year 2009 about Animal Husbandry and Animal Health. The policy affecting the import of beef from Australia and the import of live cattle from Australia is the Indonesian Act No. 18 of 2009 on the Livestock and Animal Health. The policy of import of beef and live cattle applied by Indonesia is the principle of country based. The country-based principle restricts Indonesia to be able to import beef and live cattle only from countries that have met health requirements, such as free of mouth and nail disease (MND). The countries that have been declared free of MND are Australia, New Zealand, USA, Canada, and Indonesia.

The imports of beef from Australia before the Act was valid (1990-2008) was an average of 8,082,171 kg per year. After the law was in force (2009-2014) the import of beef from Australia jumped very high at an average of 42,649,507 kg per year. Similarly, the

import of live cattle from Australia before this Act was implemented was an average of 71,578,562 kg per year. After this Act was implemented, the import of live cattle from Australia jumped very high, on the average, as much as 119.992.788 kg per year.
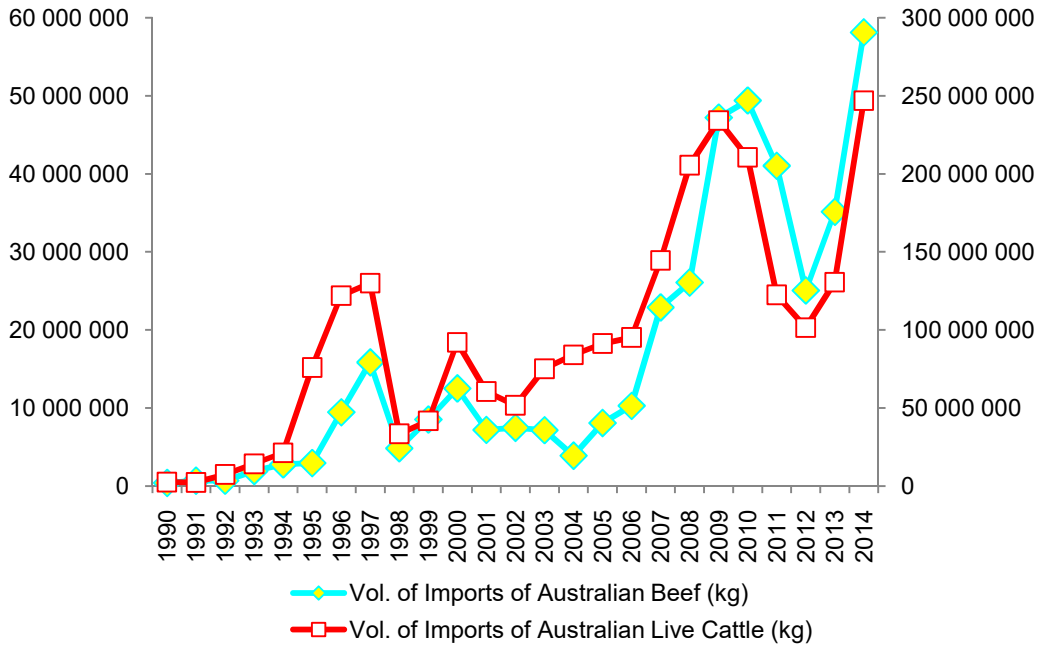

Figure 13 – The Impact of Indonesian Act No. 18 of 2009 on the Development of the Imports of Meat and Live Cattle from Australia in the Period of 1990-2014

The Impact of the Australian Cattle Export Regulations. Shipping by sea or airway will have a negative impact on the quality of beef cattle. Ferguson & Warner (2008) state that the quality of beef will decrease when the cow is under stress when it is above the sea, especially when it lasts for a long time. On the other hand, there are some concerns that some parties have on the feasibility of handling livestock in Australia.
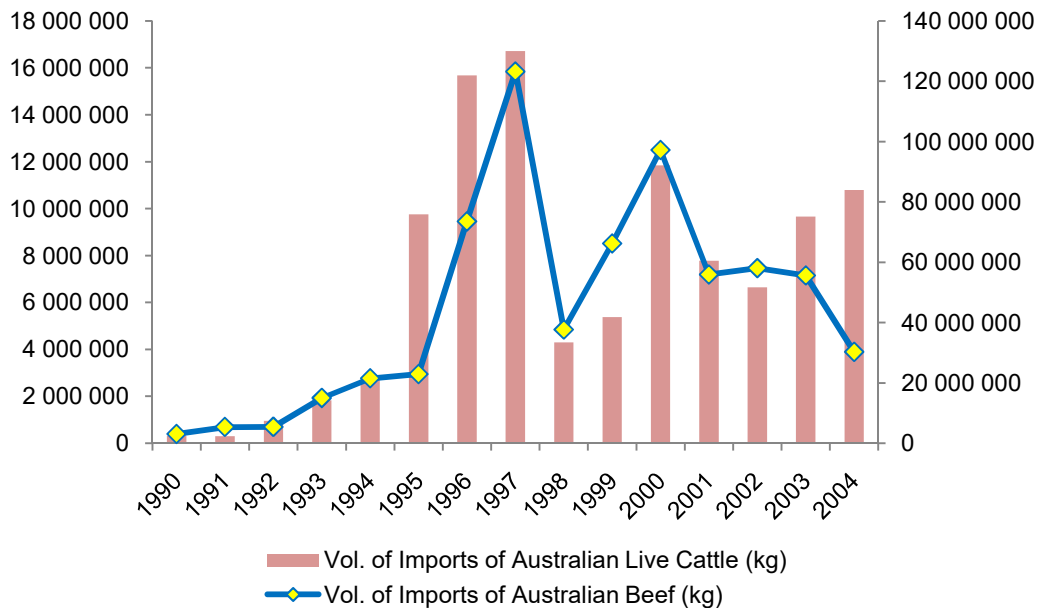

Figure 14 – The Development of the Imports of Beef and Live Cattle from Australia with the Existence of Australian Export Policy

The animal protection groups, especially the protection of beef cattle, pressure the government to always improve the rules in the management of beef export industry. According to the ABARES report (Martin, Mellor, & Hooper, 2007), there have been so many demands related to the implementation of governance in the cattle export industry to the Australian government over the past decade. This leads to the implementation of the strict export standards of cattle exports in Australia.

Australia has two key regulatory frameworks that serve as an umbrella in the Australian beef cattle export industry, the Australian Standards for the Export of Livestock (ASEL) and the Exporter Supply Chain Assurance System (ESCAS) (Deards, Leith, *et al*, 2014). ASEL, as a rule initiated in 2004, will focus more on protecting domestic and cross-island transport, either by sea or airways. The current rules of ASEL include 5 aspects (Deards, Leith, *et al*, 2014), namely: 1) Early preparation of livestock of beef cattle, from the production sources and the management while in breeding site of the beef cattle; 2) Delivery of export ready beef cattle by road; 3) Management of beef cattle at the listed temporary collection point; 4) Preparation of the ship up to the process of loading of beef cattle on board; and 5) Management of beef cattle on board, both sea vessels and airplane.

While the ESCAS regulation aims to minimize the incidents that conflict with animal welfare standards by ensuring better handling of beef cattle in importing countries. The ESCAS contains 4 main rules, namely: 1) Following OIE rules: following the standards set out in OIE; 2) Control: Having controlled reporting and accountability; 3) Traceability: or effective tracking of the authorities, from producers to consumers; and 4) Audits: or willing to be verified by a qualified independent party.
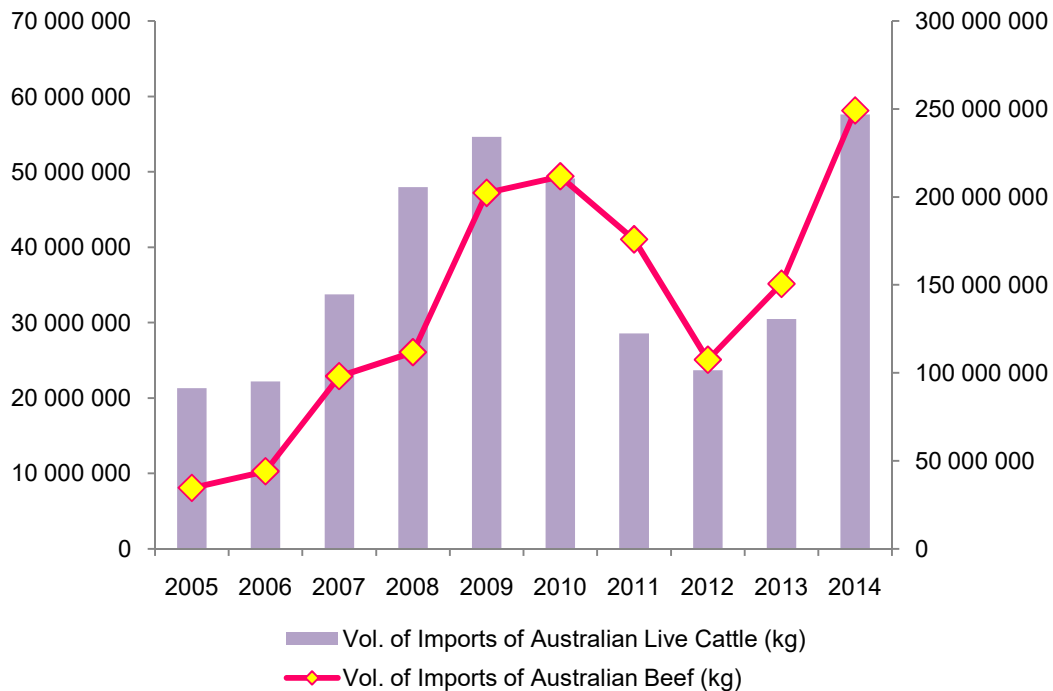

Figure 15 – The Development of the Imports of Beef and Live Cattle from Australia with the Existence of Australian Export Policy

This loss was originally the impact of the unintentional structural violence carried out by the Australian government by setting the policies that were not adaptive to the interests of the Australian beef cattle producers. The implementation of 2 policies, namely An Order under regulation 3 of the Export Control (orders) regulation 1982 - the Export Control (Export of Live-stock to the Republic of Indonesia) Order 2011 and) An Order made under section 17 of the Act - The Australian Meat and Live-stock Industry (Export of Live-stock to the Republic of Indonesia Order 2011) in June 2011 is a policy that is not in favor of local Australian beef producers, especially those who export their beef cattle production to Indonesia.

CONCLUSION

The volume of beef imports from Australia has increased enormously over the last 25 years with an average increase of 40.19% per year. The domestic beef prices during the period of 1990-2014 fluctuated with an increasing trend of an average growth of 7.67% per year. The development of the domestic beef production in the same period only grew by an average of 3.80% per year. The domestic beef consumption per capita increased from 0.88 kg / capita in 1990 to 1.72 kg / capita in 2014, an average increase of 3.32% per year. Various policies affecting the imports of beef from Australia are contained in the Indonesian Act No. 18 of 2009 on Animal Husbandry and Animal Health with country-based principle.

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ЭКССУДАТИВНЫЙ ЭПИДЕРМИТ СВИНЕЙ: ОСОБЕННОСТИ ЭТИОЛОГИИ И ПРОЯВЛЕНИЯ
EXUDATIVE EPIDERMITIS OF PIGS: FEATURES OF ETIOLOGY AND MANIFESTATION

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АННОТАЦИЯ
В работе описаны особенности клинического проявления экссудативного эпидермита поросят, зафиксированные на территории частных свиноводческих предприятий в различных регионах Российской Федерации. Приведены результаты изучения культуральных, морфологических, тинкториальных и биохимических свойств бактерий подвида *Staphylococcus hyicus subsp. hyicus*, являющегося возбудителем данного инфекционного заболевания. Обоснована целесообразность разработки отечественного средства специфической профилактики экссудативного эпидермита поросят.

ABSTRACT
The paper describes the features of the clinical manifestation of piglets exudative epidermitis recorded on the territory of private pig enterprises in various regions of the Russian Federation. The results of studying the cultural, morphological, tinctorial and biochemical properties of the bacteria subspecies *Staphylococcus hyicus subsp. hyicus*, which is the causative agent of this infectious disease are given. The development expediency of a domestic means of specific prevention of piglets' exudative epidermitis is substantiated.

КЛЮЧЕВЫЕ СЛОВА
Экссудативный эпидермит свиней, этиология, проявление, профилактика.

KEY WORDS
Экссудативный эпидермит свиней, этиология, проявление, профилактика.

Предотвращение инфекционных болезней в животноводстве является важной задачей для ветеринарной службы, при этом обеспечение эпизоотического благополучия достигается благодаря использованию эффективных средств специфической профилактики. Так, на сегодняшний день на территории Российской Федерации зарегистрировано огромное количество биологических препаратов против наиболее распространённых заболеваний животных, приводящих к

значительным экономическим потерям. При этом стоит отметить, что существует ряд инфекций, имеющих достаточную распространённость, но для которых не разработаны вакцинные препараты. Ярким примером данной ситуации является экссудативный эпидермит свиней [16].

Экссудативный эпидермит свиней – инфекционное заболевание, вызываемое бактериями подвида *Staphylococcus hyicus subsp. hyicus*. В соответствие с литературными данными, в случае циркулирования возбудителя на предприятии распространённость инфекции достигает 80% поголовья молодняка поросят, которые во время болезни и после выздоровления отстают в росте и развитии по сравнению со здоровыми животными, испытывают иммуносупрессивное состояние и становятся подверженными массовой заболеваемости другими вирусными и бактериальными инфекциями, что и приводит к серьезным экономическим потерям [10, 14, 19].

Цель исследования заключалась в изучении особенностей этиологии и проявления экссудативного эпидермита у молодняка свиней и обосновании необходимости разработки средства специфической профилактики данного заболевания.

МАТЕРИАЛ И МЕТОДЫ ИССЛЕДОВАНИЙ

Исследование проводилось на базе ФГБНУ «Всероссийский научно-исследовательский институт экспериментальной ветеринарии имени Я. Р. Коваленко» в рамках выполнения научно-исследовательской программы «Мониторинг изменений эпизоотической обстановки по инфекционным болезням животных» № 0578-2014-0025. Проведение клинического осмотра животных, отбор клинического и патологического материала были реализованы на территории частных свиноводческих предприятий Кировской, Орловской, Тульской, Тамбовской и Челябинской областей, а также Республики Мордовия в 2016-2017 годах.

При проведении комплексной лабораторной диагностики инфекционных болезней были использованы следующие питательные среды: агар Эндо, агар Мак Конки, агар Сабуро, агар Мюллер-Хилтона, бульон Сабуро, агар Шедлера, забуференная пептонная вода, бульон Раппапорта–Василиадиса, МПА, МПБ, MRS-агар, колумбия агар – основа для кровяного агара, цитратный агар, среда Китт-Тароцци, висмут-сульфитный агар, SS-агар, XLD-агар, хромогенный агар cm 1007, основа бульона с бромкрезоловым пурпурным М284.

Для идентификации культур использовали тест-системы *Microbact Staphylococcus12S*, *HiStaph* набор для биохимической идентификации стафилококков, *Microbact12E/A* и 24E, *STREPTOtest* 16, а также углеводы: адонитол, арабинозу, галактозу, D-глюкозу, дульцитол, инозитол, инулин, ксилозу, лактозу, мальтозу, маннитол, маннозу, мелибиозу, раффинозу, рамнозу, салицин, сорбитол, сахарозу, трегалозу, фруктозу, целлобиозу фирмы Himedia, с использованием бромкрезолового пурпурного бульона в качестве индикаторной среды.

Для контроля питательных сред и диагностикумов использовались эталонные культуры микроорганизмов, находящихся в распоряжении лаборатории микробиологии с музеем типовых культур ФГБНУ ВИЭВ имени Я.Р. Коваленко.

Изучение биологических свойств культур проводили на территории вивария Вышневолоцкого филиала ФГБНУ ВИЭВ им. Я.Р. Коваленко с опытной базой о. Лисий. В качестве биологической модели были использованы белые мыши массой 16-18 гр.

Результатом проведения научных мониторинговых исследований распространённости инфекционных болезней животных в различных регионах страны стали зафиксированные случаи массовых кожных поражений среди поросят в возрастной категории 1-7 недель, причиняющий экономический ущерб свиноводческим предприятиям. Микробиологическими методами удалось установить причину данного явления, которой стал бактериальный агент *Staphylococcus hyicus subsp. hyicus*, являющийся возбудителем экссудативного эпидермита свиней.

РЕЗУЛЬТАТЫ И ИХ ОБСУЖДЕНИЕ

Экссудативный эпидермит был зафиксирован на свиноводческих предприятиях Тульской, Орловской и Тамбовской областей, а также в хозяйствах Республики Мордовия. Процент распространённости заболевания среди поросят до 7-ми недельного возраста в различных предприятиях колебался в диапазоне от 22,1% до 57,4%, при этом процент смертности не превышал 4,32%.

При проведении клинического осмотра животных непосредственно на территории предприятий были зафиксированы различные стадии течения заболевания.

Так, среди поросят в возрасте до 14 дней основными клиническими признаками заболевания зафиксированы поражения эпидермиса в виде образования на участках тонкой кожи, а именно в области глаз, ушей, паха и живота, нежных розовых пузырьков – везикулярных экзантем Пузырьки, заполненные серозным содержимым, имели интраэпидермальное расположение. Пузырьки легко разрывались при контакте с твёрдыми предметами или другими животными, образуя на месте разрыва мокнущие эрозии, постепенно эпителизирующиеся. Одновременно с данным клиническим проявлением на всей поверхности кожного покрова туловища и головы наблюдали усиленную секрецию сальных желёз, что выражалось в виде лоснящейся жирной кожи и взъерошенности волосяного покрова. При этом в зафиксированных случаях было отмечено частичное поражение среди поросят одного помёта с различными стадиями развития клинических проявлений заболевания. Вне зависимости от локализации и размеров поражений животные не демонстрировали признаков чесотки. Больные поросята не проявляли признаков снижения аппетита и жажды, несмотря на то, что отставали в росте по сравнению со здоровыми поросятами того же помёта. Так, средняя масса больных поросят в 2-ухнедельном возрасте в различных хозяйствах составляла 3,1-3,7 кг, в то время как здоровые животные имели среднею массу в диапазоне 3,9-4,3 кг. Недополучение привесов, таким образом, составляло 13,9-20,5%. Больные животные в данной стадии не имели иных клинических проявлений заболевания. Смертность до 2-ухнедельного возраста среди поросят проявлялась единичными случаями.

У более взрослых поросят, в возрасте от 2 до 7 недель, ранее образовавшиеся пузырьки и эрозии переходили в форму мокнущей экземы, с последующим образованием легко отшелушивающихся пластов эпидермиса и струпьев чёрно-коричневого цвета на всех участках кожи, в том числе на спине, боках, голове и животе (рис. 1, 2). Данное явление можно связать с длительностью течения инфекционного процесса. Ввиду активной секреции сальных желёз, поросята были покрыты неприятным на ощупь и запах жироподобным экссудатом. В единичных случаях при сильном поражении зон в области глаз отмечали опухание и склеивание век с некротизацией верхнего слоя эпидермиса. Отмечали локальное повышение температуры кожи, в частности, на наиболее пораженных участках. На данной стадии у больных животных наблюдали вялость и пониженную активность. Признаков чесотки не отмечали. Больные животные отличались меньшей массой по сравнению со здоровыми того же помёта. Так средняя масса больных поросят в возрасте 7 недель в разных хозяйствах колебалась в диапазоне 14,4-15,2 кг, в то время, как здоровых 15,7-17,9 кг, т.е. больные поросята отставали по массе на 8,2-15,0%. У 2-5% поросят было зафиксировано обезвоживание и повышение температуры тела до 41 ^{0}С, что рассматривалось как следствие воспалительного процесса. Смертность среди поросят с явлениями лихорадки составляла 100% при отсутствии соответствующей антибактериальной терапии. Гибель животных наступала на 2-5 день с момента появления лихорадки.

Рисунок 1 – Клинические проявления экссудативного эпидермита поросёнка
в возрасте 35 дней (вид со спины).

Рисунок 2 – Клинические проявления экссудативного эпидермита поросёнка
в возрасте 35 дней (вид со стороны живота)

У животных в возрастной категории старше 7 недель кожные поражения исчезали к 3-4-месячному возрасту, даже без соответствующего лечения. При этом интересным явлением стало то, что у клинически переболевших взрослых животных отмечались некрозы кончиков ушей и хвоста (рис. 3, 4).

Рисунок 3 – Некротическое поражение ушей у свиней зафиксированные на свиноводческих предприятиях Тамбовской области (вид сверху)

Рисунок 4 – Некротическое поражение ушей у свиней зафиксированные на свиноводческих предприятиях Тамбовской области (вид сбоку)

По мнению некоторых иностранных авторов некротические явления у взрослых свиней являются следствием длительного воздействия на организм термолабильного эксфолиативного токсина возбудителя *Staphylococcus hyicus subsp. Hyicus* [12]. Российскими учёными доказано, что не все штаммы данного вида возбудителя являются патогенными для поросят, а только те из них, которые обладают генами, детерминирующими синтез эксфолиативных токсинов различных типов. Проведение экспериментального заражения поросят штаммами, не продуцирующими активный токсин, не удалось воспроизвести инфекцию поросят, что, в свою очередь, может быть использовано как критерий дифференциальной диагностики заболевания [2, 7].

Для борьбы с возбудителем экссудативного эпидермита было произведено изучение антибактериальной чувствительности выделенных изолятов. Наиболее активными в отношении возбудителя оказались препараты энрофлоксацин, амоксиклав, тетрациклин и гентамицин. В соответствии с полученными результатами подтитровки к антибактериальным препаратам в хозяйстве Республики Мордовия был использован «Байтрил 5% инъекционный» из расчёта 1 мл на 20 кг массы, с курсом лечения 5 дней. В остальных хозяйствах был использован амоксиклав 62,5% в виде водорастворимого порошка из расчёта 2 гр на 100 кг массы, два раза в день течение 5-7-ти суток. Эффективное действие подобранных препаратов позволило замедлить развитие патологического процесса, но не привело к моментальному исчезновению всех кожных поражений. Стоит отметить, что для уменьшения рисков перезаражения обработкам подвергались все поросята в возрасте от 1-ой до 7-ми недель с явлениями эпидермита, обработка взрослых животных была признана нецелесообразной.

Применение антибиотиков позволило снизить развитие кожных поражений и минимизировать смертность среди поросят до 1-2%.

Переболевшие и подвергавшиеся антибактериальной терапии животные на различных свиноводческих предприятиях в трёхмесячном возрасте имели среднюю массу 43,1±3,2 кг, при том, что неинфицированные животные в аналогичном возрасте имели массу 47,8±1,9 кг. Такое соотношение говорит о недополучении 9,8% приростов живой массы (продукции) и неоднородности поросят по массе в группе переболевших.

При проведении клинических обследований животных особое внимание было уделено свиноматкам, что связано с наличием научных данных об их причастности в распространении инфекционной патологии[6]. Ни в одном из базовых для проведения исследований хозяйств не было зафиксировано случаев кожных поражений у свиноматок, присущих экссудативному эпидермиту, но, при этом, даже среди них отмечались особи с некротическими поражениями ушей.

С целью выявления всех бактериальных и грибных представителей микрофлоры, циркулирующих на свинарниках, а также для определения их этиологической значимости в проявлении заболеваемости и в патогенезе экссудативного эпидермита свиней был проведён отбор образцов для микробиологического исследования. От животных отбирали образцы помёта, мазки с поверхности кожи, в том числе с поверхности молочных желёз и пробы секрета молочных желез, а также образцы кормов. Полученные результаты выделения и идентификации культур микроорганизмов из отобранного материала представлены в таблице 1.

Таблица 1 – Результаты проведения микробиологического исследования материала полученных от свиноматок в различных свиноводческих предприятиях России

Место выделения	Результат бактериологического исследования*	Результат микологического исследования
Тамбовская область	*Bacillus cereus* *Staphylococcus hyicus subsp. hyicus* *E. Coli* *Enterobacter faecalis* *Proteus mirabilis* *Pseudomonas fluorescens* *Staphylococcus novobiocin*	*Candida spp.* *Penicillium spp.*
Республика Мордовия	*E. Coli* *Enterobacter aerogenes* *Stenotrophomonas maltophilia* *Staphylococcus haemolyticus* *Enterococcus faecalis* *Staphylococcus capitis subsp. capitis* *Staphylococcus hyicus subsp. hyicus*	*Penicillium spp.* *Candida spp.* *Fusarium spp.*
Орловская область	*Bacillus cereus* *Stenotrophomonas maltophilia* *Staphylococcus hyicus subsp. hyicus* *Acinetobacter calcoaceticus* *Micrococcus luteus* *Staphylococcus agnetis* *Proteus mirabilis*	*Fusarium spp.* *Penicillium spp.* *Candida spp.*
Тульская область	*Staphylococcus hyicus subsp. hyicus* *Lysinibacillus sphaericus* *Acinetobacter calcoaceticus* *Streptococcus dysgalactiae* *Enterobacter cloacae* *Proteus vulgaris* *Staphylococcus hominis*	*Aspergillus spp.* *Candida spp.* *Penicillium spp.*

Все выделенные изоляты получили индивидуальный номер и были сохранены в коллекции микроорганизмов ФГБНУ ВИЭВ имени Я.Р. Коваленко для дальнейшего изучения.

Как видно из приведённой выше таблицы, разнообразие видовых бактериальных и грибных представителей, выделенных от свиноматок достаточно велико. При этом стоит отметить, что во всех четырёх случаях от свиноматок был выделен возбудитель

экссудативного эпидермита – *Staphylococcus hyicus subsp. hyicus*, что говорит о распространенности этого микроорганизма на свиноводческих предприятиях. Выделенные от свиноматок культуры *Staphylococcus hyicus subsp. hyicus* по биохимическим свойствам были идентичны ранее выделенным изолятам от поросят с клиническими признаками заболевания, ввиду чего изолят признавался единым. В результате проведения данного исследования было установлено наличие возбудителя *Staphylococcus hyicus subsp. hyicus* на поверхности молочных желёз, кожи и в помёте, что, в свою очередь, является свидетельством контактного пути передачи и не подтверждает алиментарный путь передачи инфекции с молоком свиноматки. В соответствие с литературными данными, экссудативный эпидермит свиней чаще всего распространяется благодаря непосредственному контакту свиноматки со своим помётом. При этом скученность содержания новорожденных поросят приводит к ускорению развития клинических проявлений ввиду агрессивного поведения свиней в борьбе за территорию и корм, приводящему к травмированию [8, 9, 15].

Согласно имеющимся литературным данным остальные представители выделенной бактериальной и грибной флоры не приводят к развитию заболеваний, схожих с экссудативным эпидермитом, поэтому их этиологическая значимость в представленных случаях не рассматривалась.

Выделенные изоляты бактерий подвида *Staphylococcus hyicus subsp. hyicus* являлись грамположительными неподвижными кокками. При микроскопировании культур обнаруживались клетками расположенные единично, парно или в виде больших скоплений. На кровяных питательных средах наблюдался рост блестящих бело-кремового цвета колоний размером 2-4 мм в «S»-форме после 24 часов культивирования при температурном режиме 37 ^{0}С. Гемолиз отсутствовал (рис. 5).

Рисунок 5 – Рост колоний бактерий подвида *Staphylococcus hyicus subsp. hyicus* на кровяном агаре спустя 24 часа ингибирования при 37 ^{0}С

Все четыре штамма Staphylococcus hyicus subsp. hyicus были оксидазаотрицательными, каталазоположительными, давали положительный результат теста восстановления нитратов, отрицательный результат теста гидролиза эскулина, демонстрировали положительную реакцию в тестах ферментирования галактозы, глюкозы, ксилозы, лактозы, раффинозы, сукрозы, трегалозы, фруктозы и отрицательную реакцию в тестах ферментирования адонитола, арабинозы, ксилитола, маннитола, мелецитозы, салицина, целлобиозы.

Как видно из представленных данных, экссудативный эпидермит является инфекционным заболеванием, поражающим преимущественно молодняк свиней, с развитием характерных поражений эпидермиса и явлениями септицемии. Наибольшая заболеваемость наблюдается у молодняка в возрастной категории до 6-тинедельного возраста. Установлено, что возбудитель свободно распространяется среди восприимчивых животных благодаря контактному пути передачи. Заболеваемость среди молодняка достигает 80%, при этом смертность не превышает 5%.Летальный исход, как правило, фиксировали у молодняка 3-4 недель с признаками сильного обезвоживания и развития септических процессов. Больные животные без применения антибактериальной терапии или с неадекватным лечением в большинстве случаев приобретали хроническое течение заболевания [1, 5, 13, 18].

Изучены факторы, способствующие распространению возбудителя. В большинстве случаев ими оказались скученное содержание, нарушение техники кормления, отъема и доращивания поросят-отъемышей. Изучение анамнеза и эпизоотологических данных на обследованных фермах позволило предположить, что предрасполагающими к экссудативному эпидермиту свиней факторами являются заболевания вирусной этиологии, в частности: цирковирусная инфекция 1 типа, парвовирусная инфекция и репродуктивно-респираторный синдром свиней, которые были зафиксированы в обследованных фермах с неблагополучием по экссудативному эпидермиту свиней.

Таким образом, изучение особенностей этиологии и проявления позволяет характеризовать экссудативный эпидермит свиней как достаточно распространенную инфекцию в условиях промышленного свиноводства Российской Федерации, требующую системных подходов в борьбе с этой заразной болезнью. Решение проблемы антибиотикообработками не исключает потерь продуктивности и качества продукции, поэтому актуальным является поиск решений биопрофилактики заболеваемости и распространения этой болезни, в частности, посредством вакцинации [3, 4, 11, 17].

В настоящее время средств специфической профилактики данного инфекционного заболевания официально не зарегистрировано ни на территории Российской Федерации, ни в зарубежных странах, что, в свою очередь, делает актуальной задачу по разработке вакцины против экссудативного эпидермита свиней. Возможно, ввиду ассоциативной концепции возникновения и распространения инфекционных болезней молодняка свиней и низкой смертности при экссудативном эпидермите, целесообразным комбинирование вакцинопрепарата с несколькими наиболее эпизоотически актуальными в свиноводстве антигенами.

ЗАКЛЮЧЕНИЕ

Свиноводство в России является одной из основных отраслей сельского хозяйства, обеспечивающее население страны продуктами питания, тем самым гарантируя продовольственную безопасность. При этом эффективность производственной деятельности свинотоварных ферм имеет зависимость от ряда факторов, прямо или косвенно снижающих объём производимой продукции или увеличивающих себестоимость её производства. Нами были рассмотрены случаи возникновения инфекционных патологий в свиноводстве, одновременно влияющих на снижение продуктивности и увеличение себестоимости конечной продукции. Вне зависимости от объёмов производства, инфекционные болезни влекут снижение качества продукции, привесов и выхода молодняка, ввиду чего для сохранения поголовья и предотвращения распространения инфекционной патологии необходимым условием является назначение ограничительных или карантинных мероприятий, назначение и выполнение массовых лечебных обработок с последующим проведением вакцинаций. Для упреждения экономических потерь в любой животноводческой отрасли предусмотрена система профилактических мер, тем не менее, проведение вакцинации не предусмотрено по многим инфекциям, что,

в первую очередь, связано с этиологической значимостью возбудителя, его распространённостью. Однако, в свете меняющейся эпизоотической обстановки актуализируются новые лечебно-профилактические подходы в борьбе с инфекциями. На сегодняшний день разработаны и активно реализуются биопрепараты против бактериальных инфекций, приводящих к большим экономическим потерям при снижении продуктивности и массовой гибели животных, в частности, для свиноводства это – сальмонеллез, колибактериоз, пастереллёз, рожа, энтеротоксемия, энтерококковая инфекция, актинобациллёзная плевропневмония. Приведённые инфекционные болезни бактериальной природы являются наиболее распространёнными в свиноводстве, и для каждого существует средство специфической профилактики. В случаях, когда заболевание имеет значительную долю распространённости в свиноводческих предприятиях, но не приводит к массовым падежам животных, использование препаратов для специфической профилактики не получило развития. В сложившихся условиях стоит осознавать необходимость развития свиноводства не только благодаря его интенсификации, но и использования ресурсосберегающих технологий, позволяющих снизить затраты производства свинины до минимума при увеличении объёмов и качества конечной продукции.

В этом качестве стоит рассмотреть необходимость проведения профилактических обработок от инфекционных болезней, приводящих не только к массовой гибели животных, но и снижающих их продуктивность, в том числе против экссудативного эпидермита. Экссудативный эпидермит является инфекционной патологией преимущественно молодняка свиней, имеет широкое распространение: заболеваемость среди молодняка может достигать 80%. Низкая смертность при высокой заболеваемости является свидетельством целесообразности разработки и использования ассоциированного препарата, позволяющего снизить риск эпизоотий и затрат на профилактические мероприятия.

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ЦИРКОВИРУСНАЯ ИНФЕКЦИЯ СВИНЕЙ ВТОРОГО ТИПА
SECOND TYPE OF PIGS' CIRCOVIRUS INFECTION

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АННОТАЦИЯ
В статье представлены этиологические факторы и эпизоотологические данные заболевания свиней цирковирусной инфекцией второго типа. Описаны клинические проявление заболевания, диагностические подходы и патологоанатомические изменения в паренхиматозных органах инфицированных поросят. Исследованиями выявлено, что наибольшие патологические изменения наблюдаются в легочных тканях и паховом лимфатическом узле.

ABSTRACT
The article presents etiological factors and epizootic data of pig disease with circovirus infection of the second type. The clinical manifestation of the disease, diagnostic approaches and pathoanatomical changes in the parenchymal organs of infected piglets are described. Studies have revealed that the greatest pathological changes are observed in the lung tissues and the inguinal lymph node.

КЛЮЧЕВЫЕ СЛОВА
Вирус, свиноматка, диагностика, гистология, патоморфология.

KEY WORDS
Virus, sow, diagnosis, histology, pathomorphology.

Впервые, возбудитель цирковирусной инфекции сивиней 2 типа был выявлен в Канаде в 1991 году. Это ДНК-содержащий вирус, относящийся к роду *Circovirus*, семейства *Circoviridae*. На сегодняшний день цирковирус свиней 2 типа (ЦВС-2) являлся одним из самых распространенных патогенов среди свиноводческих комплексов и достигает 100% уровня серопревалентности [1]. На основании первичной структуры генома ЦВС-2 подразделяется на несколько генотипов (ЦВС-2a, ЦВС-2b, ЦВС-2c), один из которых, ЦВС-2b, обладает наивысшей патогенностью [13].

Несмотря на то, что ЦВС-2 это небольшой безоболочечный вирус с длиной генома в 1766-1768 последовательностей [16], он вызывает сложный комплекс заболеваний из-за многообразия субклинических и клинических синдромов [7], относящихся к мультифакторной природе заболевания, которая основывается на множестве путей передачи инфекционного начала. Такая всесторонняя векторность передачи патогена способствует широкому распространению вируса и усилению его вирулентных свойств [8].

Эпизоотологические данные. На эпизоотический процесс влияет наличие других патогенов, таких как *M. hyopneumoniae*, и вирус репродуктивно-респираторного синдрома свиней. Данные возбудители болезней усугубляют течение цирковирусной инфекции и усложняют дифференциальную диагностику [4].

Последние данные о высокой степени серопозитивности поголовья и о тяжести патогенного влияния вируса на организм подтверждаются эпизоотологическими данными, полученными из ряда стран мира. Так, в США, Франции, Швейцарии и

Канаде отмечают увеличение числа заболевших поросят на 31,1% за несколько лет. А в Великобритании падеж заболевшего поголовья увеличился на 9,7%. В России данный вирус впервые выделили в 2000 году. В настоящее время, при исследовании поголовья свиней, практически у 80-100% из них выявляются антитела к вирусу ЦВС-2 по всей стране [18].

В естественных условиях заболевание чаще регистрируют у поросят 1,5-3,5-месячного возраста. Иногда, при напряженности эпизоотической ситуации в неблагополучных пунктах, могут заболеть поросята как 1, так и 4-6-месячного возраста. Источником возбудителя инфекции являются больные и животные вирусоносители, как правило, более старшего возраста, которые выделяют вирус в окружающую среду с естественными жидкостями (испражнениями, слюной, истечениями из глаз и носа) [6].

ЦВС-2 размножается в организме поросят в тканевых макрофагах. Усиление размножения вируса происходит после активации иммунной системы с помощью адъювантов, каких-либо вакцин или инфицирования другими вирусами [6]. Стоит отметить, что в настоящее время с успехом применяются рекомбинантные и инактивированные вакцины позволяющие сохранить и улучшить поголовье практически на всех этапах выращивания стада [9].

Цирковирус 2 типа проникает через плаценту свиноматок, вызывая гибель плодов и аборты во второй половине беременности, а также рождение мертвых и нежизнеспособных поросят. Кроме этого, ЦВС-2 поражает хряков и выделяется со спермой в течение длительного времени (более 6 месяцев).

Диагностика. Одной из важнейших задач, связанных с данным заболеванием является быстрая и надежная диагностика, которая позволит осуществить контроль над инфекционным процессом [15, 20]. При диагностике ЦВС-2, как и при других заболеваниях, применяют молекулярно биологические методы, направленные на выявление возбудителя. К таким методам относится полимеразная цепная реакция (ПЦР), ПЦР в реальном времени, иммуноферментный анализ сывороток крови. При изучении патоморфологии заболевания обращают внимание на патологоанатомические изменения при вскрытии павших животных, а также применяют гистохимические и иммуногистохимические методы исследования паренхиматозных органов, которые позволяют определить локализацию возбудителя в тканях макроорганизма и выявить патологическое действие вируса на клеточном уровне [10, 11, 19].

По данным ряда авторов, при патологоанатомическом вскрытии у мертворожденных поросят выявляют миокардиальную гипертрофию и застойную гиперемию печени. В миокарде выявляют множественные некротические участки белого цвета. Гистологически наблюдают фиброзный и некротический миокардит [17]. При естественном заражении отмечается усиление патологического действия ЦВС-2 на организм, которое выражается в тяжелых поражениях лимфатических узлов (чаще паховых), почек, селезенки и легких. Одним из дифференциальных признаков является резкое увеличение паховых лимфоузлов с кровоизлияниями в паренхиме органа.

Кроме диагностических мероприятий необходимы и эпизоотологические, которые позволят отразить полную картину эпизоотической ситуации и будут способствовать прогнозу, который, в свою очередь, позволит своевременно выработать стратегию эпизоотического контроля. Для выполнения таких задач крайне необходимо применение электронной системы ГИС, которая полностью отражает необходимые для эпизоотических мероприятий данные [14, 12].

Цель работы – провести исследование внутренних органов поросят с подозрением на цирковирусную инфекцию свиней с целью дифференциальной диагностики респираторных синдромов.

Материалы и методы. Патогистологические исследования выполняли в секторе патоморфологии ФГБНУ ВИЭВ.

Для гистологического исследования органов поросят отбирали участки легкого и паховые лимфатические узлы.

Полученный материал фиксировали в 10% растворе забуференного формалина в течение 5 дней. Размер образцов составлял 0,5*0,5*0,5см. Объекты помещали в гистологические кассеты и маркировали. Далее, образцы пропитывали в изопропиловой проводке для парафиновой заливки. Для формирования парафиновых блоков применяли Гистомикс с температурой плавления 56°С. Срезы нарезали толщиной 5мкм, приклеивали на предметные стекла и высушивали на нагревательном столике. Далее депарафинировали и окрашивали гематоксилином и эозином, просветляли и покрывали синтетической средой под покровное стекло.

Результаты исследований. В ходе выполненной работы мы получили следующие результаты:

В лимфатическом узле выявлено диффузное скопление зернистых эозинофилов в красной пульпе и стромальной части органа. Также было выявлено утолщение трабекул, характеризующееся отечным состоянием. Некоторые лимфатические фолликулы имели размытые границы и сливались с соседними фоликулами. Стенка центральной вены фолликула была утолщена. Красная пульпа обеднена эритроцитами, белая пульпа без четких границ с декомпозицией клеточного состава.

В легочной ткани отмечали обширные участки ателектаза альвеол, такие участки ограничивались от основной ткани соединительно-тканным «ободком». В той части органа, где была сохранена дыхательная функция, отмечали гиперплазию межальвеолярных перегородок. Висцеральная плевра была в состоянии отека с диффузно расположенными эозинофильными гранулоцитами. Отмечались гиперемия сосудов с периваскуляной инфильтрацией лимфоидных клеток и гранулематозные образования, располагающиеся преимущественно на периферии органа.

Заключение. При оценке литературных данных отечественных и зарубежных исследователей можно сделать вывод, что ЦВС-2 распространен повсеместно. Клиника болезни чаще всего разнообразна и трудно дифференцируема. Отмечено также, что вирус ЦВС-2 находясь в латентном состоянии, оказывает иммунодепрессивное действие на организм, что в свою очередь вызывает множество различных синдромов и симптомов. Еще одним важным фактором являются взрослые животные вирусоносители, которые заражают молодое поголовье в период воспроизводства стада, это супоросные свиноматки и хряки - производители. Свиноводческие хозяйства несут большие экономические потери, складывающиеся из недополучения приростов живой массы поголовья, потере ремонтного молодняка и производителей, а так же продукции на выходе.

Исходя из полученных нами данных, после гистологического исследования внутренних органов поросят, мы выявили депрессию лимфопоэтической ткани, характеризующуюся декомпозицией лимфоидных клеток в лимфатическом узле. Нарушение дыхательной функции легких в следствии патологического развития в межальвеолярных перегородках. Пристеночная пролиферация затрудняла питание клеток органов, что привело к выпадению основной функции паренхимы.

Основываясь на вышеизложенном следует принять во внимание то, что Межведомственная координационная программа фундаментальных и приоритетных прикладных исследований по научному обеспечению развития АПК, определяет цель для научных организаций по созданию препаратов нового поколения для диагностики и профилактики болезней животных с применением генетической инженерии и клеточной биотехнологии [2, 3, 5].

Непрерывное проведение планового наблюдения и анализ мер для выявления изменений в среде проживания животных и состояния их здоровья позволит своевременно предпринять меры по ликвидации распространения заболевания в случае их возникновения.

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МЕТОД КОРРЕКЦИИ ХРОНИЧЕСКОЙ ПОЧЕЧНОЙ НЕДОСТАТОЧНОСТИ У КОШЕК
THE METHOD OF CORRECTION OF CHRONIC RENAL FAILURE IN CATS

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АННОТАЦИЯ
В работе представлены методы коррекции хронической почечной недостаточности. Для исследования были отобраны 20 спонтанно заболевших кошек различных пород в возрасте от 9 до 14 лет, живой массой до 6,0 кг, которым по результатам биохимического исследования был поставлен диагноз хроническая почечная недостаточность III степени по классификации IRIS. Установлено, что наилучший результат в коррекции фосфатемии, креатининемии, азотемии и коррекции электролитного дисбаланса показал метод совместного применения препаратов трех различных групп фосфатбиндеров.

ABSTRACT
The paper presents methods for the correction of chronic renal failure in cats. For the study were selected 20 spontaneously infected cats of various breeds aged between 9 and 14 years of age, body weight up to 6.0 kg, which according to the results of biochemical research has been diagnosed with chronic renal failure III degree of IRIS classification. It was found that the best result in the correction of phosphatemia, creatininemia, azotemia and correction of electrolyte imbalance showed the method of joint application of drugs of three different groups of phosphate-binders.

КЛЮЧЕВЫЕ СЛОВА
Кошки, хроническая почечная недостаточность, гиперфосфатемия, фосфатбиндеры.

KEY WORDS
Cats, chronic renal failure, hyperphosphatemia, phosphate-binders.

Хроническая почечная недостаточность (ХПН), является одной из ведущих причин заболеваемости и гибели у гериатрических кошек, затрагивающих до 30% популяции. При этом, главная стратегия лечебных мероприятий направлена на использование средств обеспечивающих качество жизни животных на фоне азотемии

[1; 13]. Болезнь провоцирует гибель нефронов почки, что приводит к снижению скорости клубочковой фильтрации и как следствие, невозможности концентрировать мочу почкой и к развитию азотемии. В подавляющем большинстве случаев у кошек, ХПН обусловлена хроническим интерстициальным нефритом, дилатацией и атрофией канальцев, а также фиброзом интерстиций [2; 5; 9]. Восстановить утратившие нефроны невозможно, но необходимо разработать схему терапевтической коррекции, которая снижала бы нагрузку на работающие нефроны [8]. Наиболее значимыми факторами уремической интоксикации являются нарушение кальций-фосфорного баланса и развивающийся на его фоне гиперпаратиреоз. На конечной IV стадии хронической болезни почек, состояние многократно ухудшается за счет нарушения кислотно-щелочного равновесия [7]. В этой связи, использование препаратов на основе фосфатбиндеров при лечении кошек с ХПН представляет большой интерес для ветеринарной медицины.

Цель исследования - изучить возможность применения фосфатбиндеров для коррекции состояния организма кошек, при хронической почечной недостаточности.

МАТЕРИАЛЫ И МЕТОДЫ ИССЛЕДОВАНИЙ

Для исследования по принципу аналогов были отобраны 20 спонтанно заболевших кошек различных пород в возрасте от 9 до 14 лет, живой массой до 6,0 кг. Данным животным по результатам биохимического исследования был поставлен диагноз хроническая почечная недостаточность III степени по классификации IRIS (International Renal Interest Society, www.iris-kidney.com.). Во время терапевтической коррекции, все животные были постепенно в течении 5-ти дней, переведены на специализированный лечебный корм Hill's k/d. Лечение ХПН в части коррекции гиперфосфатемии начинали вместе с симптоматической, заместительной и патогенетической терапией. Кошки 1-ой группы (n = 16) получали Пронефра, в дозе 1 мл на 4 кг во время еды в течение 30-ти суток, в последующие 15 суток Ренал Адванс с кормом 1 раз в день и далее Нефрокэт из расчета – 1 таблетка на 10 кг массы животного с небольшим количеством корма или принудительно на корень языка. 2-ая группа (n=4) служила контролем находясь на лечении по общепринятой методике и не получала препаратов данной группы. За время исследования, в течение 3-ех месяцев, гибели животных не отмечали. Биохимические исследования сыворотки крови и клинические анализы мочи проводили в день поступления пациентов - в 1-ые сутки приема и далее 15, 45 и 60-е сутки. Исследования периферической крови проводили по методу Долгова В.В., Луговской С.А. с соавт. (2001) [2]. Клинический анализ мочи включал в себя оценку физических и химических характеристик, анализ содержащихся в моче минеральных и органических веществ исследовали посредством микроскопии осадка мочи ориентировочным методом (Бажибина Е.Б., Коробов А.В., Середа С.В., 2004) с использованием тест-полосок UrineRS A10. Отбор проб мочи осуществляли путем цистоцентеза. Плотность мочи определяли с помощью ареометра с диапазоном шкалы от 1,001 до 1,050. Полученные данные обработаны методом вариационной статистики с использованием пакета программ Statistica для Windows.

РЕЗУЛЬТАТЫ И ИХ ОБСУЖДЕНИЕ

Биохимические исследования сыворотки крови у кошек проводили с целью контроля работы фильтрационного аппарата почек на стадии умеренной ренальной азотемии (Табл.1). При III стадии ХПН уровень креатинина составляет выше 250 мкмоль/л, при этом потеря более 80% функциональной части нефронов. В 1-ые сутки исследования у всех животных отмечали повышение уровня мочевины в 2,7 раза, а также креатинина в 2 раза.

В 1-ые сутки исследования у всех животных отмечали повышение уровня мочевины в 2,7 раза, а также креатинина в 2 раза. Повышение уровня азотистых метаболитов в крови вызвано снижением детоксикационной функции почек. Резкое

повышение уровня мочевины обусловлено гиперкатаболическим состоянием животного. Необратимые структурные изменения паренхимы почек, такие как повреждение канальцевого эпителия и сосудистого эндотелия, приводят к снижению количества функционирующих нефронов, их атрофии. Невозможность регенерации паренхимы, истощение компенсаторных возможностей почек является характерной особенностью ХПН [14]. В момент поступления наблюдалось высокое содержание общего белка в сыворотке крови, значения составляли 75,3±2,4 в 1-ой группе, 69,4±2,1 г/л в контрольной группах, что может быть в результате рвоты, кахексии и дегидратации.

Таблица 1 – Биохимические изменения сыворотки крови при коррекции гиперфосфатемии у кошек

Показатель	Группы животных	Период исследования (сутки) M±m				РЗ
		1	15	45	60	
Общий белок, г/л	1	75,3 ± 2,4	72,1 ± 1,6	69,2 ± 1,5	67,4 ± 1,4	58-76
	2	69,4 ± 2,1	67,8 ± 1,4	69,1 ± 1,8	70,9 ± 1,9	
Мочевина, ммоль/л	1	29,7 ± 1,5	18,5 ± 0,6	12,3 ± 0,5	10,5 ± 0,6	5,5-11,0
	2	30,2 ± 0,4	21,6 ± 0,5	20,5 ± 0,6	14,6 ± 0,5	
Креатинин, мкмоль/л	1	348,6 ± 7,8	299,5 ± 5,2	247,4 ± 4,9	236,4 ± 4,7	48,6-165,3
	2	351,5 ± 5,1	310,2 ± 4,5	306,1 ± 5,2	285,3 ± 6,5	
Кальций, ммоль/л	1	2,1 ± 0,2	2,2 ± 0,1	2,4 ± 0,06	2,5 ± 0,05	1,9-2,6
	2	2,1 ± 0,2	2,2 ± 0,04	2,2 ± 0,2	2,2 ± 0,04	
Фосфор, ммоль/л	1	2,8 ± 0,1	2,2 ± 0,2	1,8 ± 0,1	1,5 ± 0,1	1,3-2,3
	2	2,9 ± 0,15	2,5 ± 0,2	2,5 ± 0,2	2,6 ± 0,2	
Натрий, ммоль/л	1	138,2 ± 5,5	141,1 ± 3,4	146,5 ± 2,0	153,1 ±1,6	145,8-158,7
	2	139,1 ± 5,2	144,3 ± 3,2	148,1 ± 2,6	150,2 ± 1,5	
Калий, ммоль/л	1	3,1 ± 0,2	3,3 ± 0,2	3,3 ± 0,15	4,1 ± 0,3	3,8-5,3
	2	3,1 ± 0,2	3,3 ± 0,3	3,1 ± 0,1	3,4 ± 0,15	

Примечание: 1-ая группа - опытная; 2-ая группа – контрольная. РЗ – референсные значения.

Абсолютное же повышение белка в крови в данном случае обусловлено хроническим течением воспалительных процессов – в частности, хроническим гломерулонефритом. Значения общего кальция были близки к нижней границе референсных значений – 2,1±0,2 ммоль/л в 1-ой и 2,1±0,2 ммоль/л в 2-ой контрольной группах и повышение уровня общего фосфора. Гиперфосфатемия связана у кошек с интенсивным интерстициальным фиброзом и минерализацией [13], ее степень изменяется, как правило, параллельно с ростом мочевины, что является прогностически неблагоприятным признаком [5]. В исследуемых группах в первые сутки наблюдали гипонатриемию и гипокалиемию. На 15–е сутки после прохождения стандартного курса симптоматической, патогенетической и заместительной терапии, не прекращая коррекции гиперфосфатемии, наблюдали улучшение состояния всех животных. Аппетит у животных появился, но суточная норма потребления корма была снижена приблизительно на 25,5% от рекомендуемой нормы производителей корма согласно весу животного. Наиболее заметные изменения произошли в концентрациях мочевины, креатинина и фосфора. Концентрация мочевины снизилась на 33%. Такая же зависимость прослеживалась в концентрации уровня креатинина, которая снизилась на 13%. Значения фосфора снизились на 12,6% и находились за пределами верхней границе РЗ. Содержание фосфора наравне с концентрацией креатинина, превышающей в 2 раза средние показатели для вида, расценивается как гиперфосфатемия, которая требует корректировки фосфатбиндерами. Показатели общего белка и общего кальция к 15 суткам наблюдения находились в пределах РЗ. Проявление гипокалиемии и гипонатриемии к 15-м суткам стало менее выражено, но все равно прослеживалось, значения для калия составляли 3,3±0,2 в 1-ой и 3,3±0,3 ммоль/л в контрольной группах; для натрия 138,2±5,5 в 1-ой и 139,1±5,2 ммоль/л в контрольной группах. На 15–е сутки после прохождения стандартного курса симптоматической, патогенетической и заместительной терапии, не прекращая коррекции гиперфосфатемии, наблюдали улучшение состояния всех животных.

Аппетит у животных появился, но суточная норма потребления корма была снижена приблизительно на 25,5% от рекомендуемой нормы производителей корма согласно весу животного.

Самые заметные изменения произошли в концентрациях мочевины, креатинина, фосфора. Концентрация мочевины снизилась на 33% и составляла 18,5±0,6 ммоль/л в 1-ой и 21,6±0,5 в контрольной группах. Такая же зависимость прослеживалась в концентрации уровня креатинина, которая снизилась на 13% (299,5±5,2 в 1-ой и 310,2±4,5 мкмоль/л в контрольной группах). Значения фосфора снизились на 12,6% и находились за пределами верхней границе РЗ (2,2±0,2 ммоль/л в 1-ой и 2,5±0,2 в контрольной группе). Такое содержание фосфора наравне с концентрацией креатинина, превышающей в 2 раза средние показатели для вида, расценивается как гиперфосфатемия, которая требует корректировки фосфатбиндерами. Ряд осложнений, которые вызваны гиперфосфатемией и снижением синтеза активного витамина D, ведут к повреждению почек, а также костной ткани и мозга, снижает качество жизни животного. У кошек с III стадией ХПН уровень фосфора в сыворотке крови должен быть в пределах 0,9 – 1,6 ммоль/л согласно рекомендациям IRIS.

Следует отметить, что несмотря на то, что уровень мочевины и креатинина превышает РЗ, качество жизни животных резко улучшилось. Мы это связываем с системным снижением интоксикации организма животного. При этом показатели общего белка, альбумина, глюкозы и общего кальция к 15 суткам наблюдения находились в пределах РЗ. Проявление гипокалиемии и гипонатриемии к 15-м суткам стало менее выражено, но все равно прослеживалось, значения для калия составляли 3,3±0,2 в 1-ой и 3,3±0,3 ммоль/л в контрольной группах; для натрия 138,2±5,5 в 1-ой и 139,1±5,2 ммоль/л в контрольной группах. К 45-м суткам мы наблюдали положительную динамику по основным маркерам функциональной активности почек. Как следует из анализа данных табл. 1, содержание мочевины составляло 12,3±0,5 и 20,5±0,6 ммоль/л в 1-ой и 2-ой контрольной группах, что не является нормой, но можно говорить о заметной динамике снижения мочевины у исследуемых групп (в среднем на 28% от 15 дня наблюдения), в сравнении с контрольной группой. Уровень креатинина в этот же период, по-прежнему классифицируется как III стадия ХПН по IRIS. В начале курации концентрация креатинина на 45 день исследования уменьшилась на 29% в 1-ой и 13% в контрольной группах соответственно. Эти цифры уже говорят в пользу выбора совместного применения фосфатбиндеров в тактике лечения III стадии ХПН. Концентрация общего белка находилась в пределах нормы на 45-е сутки исследования и понизилась от первоначальных значений в среднем на 8% в исследуемой группе и осталась практически неизменной в контрольной группе. Такое незначительное снижение уровня общего белка может быть причиной компенсации дегидратации животного [10].

Ограничение кошек в фосфоре и дача им препаратов, связывающих фосфаты в кишечнике, приводили к повышению уровня выживания кошек, страдавших ХПН, что мы и наблюдали. Уровень фосфора на 45 сутки исследования планомерно снижался, кроме контрольной (2,5±0,2 ммоль/л) – и соответствовал 1,8±0,1 ммоль/л у 1-ой группы. Анализируя полученные значения, мы видим, что выраженная динамика наблюдается в коррекции гиперфосфатемии (уменьшение на 35,7% концентрации фосфора в сравнении с 1-ым днем исследования в 1-ой группе против 13,8% в контрольной группе). Показатель кальция поэтапно возрастал. К 45-м суткам ситуация с гипонатриемией полностью разрешилась в обеих группах, что нельзя сказать об уровне калия. Содержание калия было ниже физиологического показателя на 13% (3,3±0,15 в 1-ой и 3,1±0,1 ммоль/л в контрольной группах). На 60-е сутки курации выраженная динамика по всем показателям наблюдалась у животных 1-ой группы, концентрация креатинина продолжала снижаться и составляла 236,4±4,7 мкмоль/л, что позволило перевести животных данной группы на II стадию ХПН по IRIS. Эти показатели были значительно ниже (на 11,2%) уровня креатинина в контрольной группе. Также можно было говорить о полной коррекции гиперфосфатемии, согласно рекомендациям IRIS к III стадии ХПН. При концентрации креатинина, у кошек с II стадией ХПН уровень

фосфора с плазме крови не должен привышать 1,45 ммоль/л. Концентрация мочевины у животных исследуемых групп подошла к РЗ, что не скажешь о контрольной группе, где уровень мочевины был 14,6±0,5 ммоль/л. Концентрация общего белка в данный период во всех группах была в пределах референсных значениях. Электролитный состав крови на 60-е сутки в разных группах был не одинаков. В контрольной группе отмечена гипокалиемия. Оптимальная концентрация в 1-ой группе - 4,1±0,3 ммоль/л. Концентрация натрия была средняя для вида во всех группах. Физиологическая гиперфосфатемия наблюдалась на 60 день у контрольной группы – 2,6±0,2 ммоль/л. Уровень фосфора в 1-ой группе составлял 1,5±0,1 ммоль/л.

Клинические анализы мочи показали значимые отклонения от референсных значений в 1-ые сутки, отмеченные по относительной плотности мочи, содержанию белка в моче, наличия переходного, почечного эпителия. При этом, одним из основных клинических признаков у кошек всех групп являлся симптом «полиурии/полидипсии». В данном периоде плотность мочи во всех группах составляла приблизительно 1,010 ± 0,005 г/см^3, что можно трактовать как гипостенурию. Гипостенурия и изостенурия свидетельствуют о нарушении способности почек концентрировать и разводить мочу из-за дистрофии и атрофии клеток тубулярного эпителия и снижения количества белка аквапорина в восходящем сегменте петли Генле, что неминуемо происходит при хронической болезни почек (Табл. 2).

Таблица 2 – Изменения клинического анализа мочи при коррекции гиперфосфатемии у кошек

Показатель	Группы животных	Период исследования (Сутки) M±m				РЗ
		1	15	45	60	
pH	1	6,5 ± 0,5	6,2 ± 0,5	6,00 ± 0,15	6,00 ± 0,10	5.0 - 6.5
	2	6,00 ± 0,5	6,00 ± 0,6	6,00 ± 0,10	6,00 ± 0,10	
Плотность, г/см ^{3}	1	1,010±0,005	1,012±0,002	1,020±0,002	1,030±0,005	1,020 - 1,040
	2	1,010±0,005	1,010±0,002	1,010±0,002	1,015±0,003	
Белок, г/л	1	0,40 ± 0,05	0,30 ± 0,05	0,15 ± 0,05	0,05 ± 0,01	0 - 0,1
	2	0,40 ± 0,05	0,30 ± 0,10	0,20 ± 0,10	0,15 ± 0,05	
Переходный эпителий, шт/п.зр.	1	2,00 ± 1,00	1,00 ± 0,05	0,5 ± 0,05	0, ± 0,005	0
	2	2,00 ± 1,00	1,50 ± 0,50	1,0 ± 0,05	1,0 ± 0,05	
Почечный эпителий, шт/п.зр.	1	2,00 ± 0,5	1,00± 0,05	1,5 ± 0,05	0 ± 0,005	0
	2	3,00 ± 0,50	2,00 ± 0,50	2,00 ± 0,50	1,5 ± 0,05	
Эритроциты, шт/п.зр.	1	3,50 ± 0,50	2,00 ± 0,20	1,50 ± 0,20	1,00 ± 0,05	0 - 2
	2	4,50 ± 0,50	3,00 ± 0,10	2,00 ± 0,10	1,50 ± 0,10	
Лейкоциты, шт/п.зр.	1	3,00 ± 0,05	2,50 ± 0,10	2,00 ± 0,5	2,00 ± 0,05	0 - 2
	2	3,00 ± 0,50	3,00 ± 0,50	3,00 ± 0,10	3,00 ± 0,10	
Цилиндры гиалиновые, шт/п.зр.	1	1 ± 0,5	1 ± 0,5	1 ± 0,05	1 ± 0,5	0 - 2
	2	2 ± 0,05	1,50 ± 0,05	1,50 ± 0,05	1,50 ± 0,05	
Бактерии	1	Кокки +	Кокки +	Кокки +	Кокки +	Единичные
	2	Кокки +	Кокки +	Кокки +	Кокки +	

Примечание: 1-ая группа - опытная; 2-ая группа – контрольная. РЗ – референсные значения.

Во вторичной моче и у здоровых животных может присутствовать некоторе количество низкомолекулярных белков - альбуминов, трансферринов, фрагменты иммуноглобулинов и др., поэтому содержание в моче белковых молекул в количестве, не превышающем 0,010 г/л, является физиологической нормой и называется нормомикроальбуминурией. Чем выраженнее протеинурия, тем больше риск прогрессирования болезни до той стадии, когда происходит гибель или вынужденная эвтаназия животного. В нашем же исследовании в 1-ый день наблюдения у животных 1–ой и контрольной группы диагностировали гиперпротеинурия, или неселективная протеинурия (содержания белка в моче 0,40±0,05 г/л). Слабо или умеренно выраженная лейкоцитурия у кошек не всегда говорит об инфекционном заболевании мочевыделительной системы и доказательством этому служат и содержание лейкоцитов в моче в первый день исследования – 3,00±0,50 шт/п.зр. во всех группах. В 1-ые сутки обнаружено большое количество клеток как переходного, так и почечного эпителия, что свидетельствует о поражении паренхимы почек. Присутствие гиалиновых цилиндров в моче обусловлено протеинурией в 1-ые сутки исследования. Их содержание отражено в таблице 2. На 15-е сутки наблюдения стала прослеживаться

тенденция к незначительному повышению плотности мочи (1,012±0,002 в 1-ой и 1,010±0,002 г/см^3 в контрольной группах). В двух группах диагностирована микроальбуминурия, что говорит о динамическом снижении протеинурии приблизительно на 60%. Наблюдалось снижение содержания почечного, переходного эпителия, но показатели не достигли нулевых значений, что соответствовало бы норме. На 60-е сутки курации моча животных 1-ой группы была в пределах референсных значениях по всем показателям, в отличии от животных контрольной группы.

Показатели плотности мочи в 1-ой группе составляли 1,030±0,005 г/см^3, концентрации белка - 0,05±0,01 г/л, переходный эпителий – 0,0±0,005 шт/п.зр., почечный эпителий - 0,0±0,005 шт/п.зр. и гиалиновые цилиндры - переходный эпителий - 1,0±0,05 шт/п.зр., против этих же показателей в контрольной группе. Такие значения говорят об эффективности совместного применения фосфатбиндеров на III стадии ХПН. К животным 1-ой группы может быть применен термин «функциональный дефицит почек».

Заключение. В результате биохимических исследований сыворотки крови и клинического анализа мочи установлено, что наилучший результат в коррекции гиперфосфатемии, гиперкреатининемии, азотемии и коррекции электролитного дисбаланса показал метод совместного применения трех разных групп фосфатбиндеров (препараты Пронефра, Ренал Адванс и Нефрокэт).

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ПРИМЕНЕНИЕ ПОНИЖЕННЫХ ДОЗ ИМИДОКАРБА ДЛЯ ЛЕЧЕНИЯ БАБЕЗИОЗА СОБАК
THE USE OF LOW DOSES OF IMIDOCARB FOR THE TREATMENT OF BABESIOSIS IN DOGS

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АННОТАЦИЯ
Бабезиоз собак – это протозойное заболевание, проявляющееся угнетением, лихорадкой, желтушностью, гемоглобинурией. Целью работы данной работы являлось изучение возможности применения пониженных доз имидокарба для лечения бабезиоза собак. Установлено, что в особых случаях возможно применение препаратов на основе имидокарба в пониженной дозе 0,3 см^3 на 10 кг массы тела. Однако следует отметить, данное исследование не являются дополнением к официальной Инструкции по применению препаратов.

ABSTRACT
Babesiosis of dogs is a protozoal disease manifested by depression, fever, icterus, and hemoglobinuria. The aim of this work was to study the possibility of using lower doses of imidocarb to treat babesiosis in dogs. It was found that in special cases it is possible to use drugs based on imidocarb in a reduced dose of 0.3 cm3 per 10 kg of body weight. However, it should be noted that this study is not an addition to the official Instruction for the use of drugs.

КЛЮЧЕВЫЕ СЛОВА
Имидокарб, пироплазмоз, бабезиоз, кровепаразитарные болезни, иксодовые клещи, собаки.

KEY WORDS
Imidocarb, piroplasmosis, babesiosis, tick-born diseases, ixodidae ticks, dogs.

Бабезиоз (пироплазмоз) собак – природно-очаговое протозойное трансмиссивное неконтагиозное кровепаразитарное заболевание, вызываемое простейшим паразитом *Babesia canis*. Болезнь протекает сверхостро (молниеносно), остро и хронически [4].

Бабезиоз собак постоянно регистрируется на территории Российской Федерации, По данным многих авторов, на долю данного заболевания приходится от 14 до 18% от общего количества собак, которым были оказаны ветеринарные услуги. Кроме того, согласно статистическим данным в течение последних 10 лет заболеваемость собак бабезиозом возросла в несколько раз [3, 6-10, 12, 13, 20].

Терапия пироплазмидозов животных предполагает комплексное лечение, сочетающее этиотропную и симптоматическую терапию. С момента открытия возбудителей для лечения больных животных было испытано большое количество всевозможных препаратов с различными результатами. Однако наиболее эффективными для лечения пироплазмидозов животных оказались препараты на основе диминазена ацетурата в дозе 3,5 мг/кг живой массы в виде 7%-ного раствора и имидокарба в дозе 5 мг/кг [1, 2, 5].

Однако нередко применение этих препаратов вызывает побочные явления. Решение этой проблемы возможно двумя путями: применением средств симптоматической терапии [7, 11, 14-16] или снижением дозы этиотропного препарата. Например, применение пониженных доз ДАЦ было успешно реализовано нами для терапии бабезиоза собак и лошадей [17-19].

Цель данного исследования – изучить возможность применения и эффективность пониженных доз имидокарба для лечения бабезиоза собак.

Материалы и методы исследований. Для испытания было проведено 2 эксперимента на 18 беспородных собаках в возрасте 10-24 месяца, живой массой 20-25 кг. Заражение проводили путем подкожного введения крови от больных бабезиозом собак в дозе 2-4 см^3 на одно животное. Кровь получали в ветеринарной клинике от спонтанно зараженных собак в период яркого проявления клинических признаков. Диагноз подтверждался микроскопией мазков, окрашенных по Романовскому-Гимзе. Кровь для заражения набирали из вен конечностей собак в стерильные шприцы, стабилизировали гепарином и хранили в холодильнике не более суток.

Для изучения динамики паразитемии у зараженных собак ежесуточно брали мазки крови со дня заражения до конца эксперимента. Одновременно учитывали температуру, частоту пульса и дыхания у опытных животных.

Результаты исследований. В условиях эксперимента заболевание протекало остро. Инкубационный период у всех животных составил 2-3 суток. Среднее значение температуры достигло максимума на 2-й день от начала заболевания (39,8-40,2^{0}С) и удерживалось в течение 2-3 суток. Значения частоты пульса и дыхания возрастали в 2-2,5 раза также на 2-е сутки от начала заболевания. Паразиты в эритроцитах стали обнаруживаться через 36 часов после заражения. К моменту появления клинических признаков паразитемия достигала в среднем 1,5-2,5%, далее при незначительных колебаниях она возрастала до 2,9% к пятому дню клинического проявления болезни. В этот период начинали лечение.

В качестве средства специфической терапии в опыте №1 собакам инъецировали внутримышечно Имидосан двукратно с интервалом 24 часа. Всего в эксперименте мы использовали 9 животных, которые были разделены на три равные группы. I группе препарат вводили в дозе 0,5 см^3/10 кг (согласно Инструкции по применению), во II – в дозе 0,3 см^3 на 10 кг, в III – 0,2 см^3/10 кг массы тела соответственно (Таблица 1).

Через 24 часа после первой инъекции батризина паразитемия снизилась в среднем до 0,8-1,5%, через 24 часа после второй инъекции батризина она достигла значения 0,2-0,5%, еще через 24 часа просматривались только единичные экземпляры паразита. На пятые сутки лечения бабезии в мазках крови от животных I и II групп не обнаруживались. В III же группе наблюдалось снижение уровня паразитемии, но санации от паразитов не произошло.

Таблица 1 – Средние показатели паразитемии в опытных группах при испытании различных доз имидосана

Группа	паразитемии по суткам, $X+S_x$									
	До введения препарата			1-я инъекция	2-я инъекция	После введения препарата			
1	2	3	4	5	6	7	8	9	10
I	–	0,5+0,07	1,8+0,10	2,4+0,12	2,9+0,10	1,5+0,15	–	–	–	–
II	–	0,6+0,04	1,5+0,15	2,6+0,15	2,7+0,08	0,8+0,06	0,2+0,03	–	–	–
III	–	0,8+0,06	1,5+0,14	2,2+0,14	2,6+0,20	1,8+0,11	0,5+0,02	0,5+0,05	0,5+0,01	0,5+0,02

Во №2 опыте в качестве средства специфической терапии мы применяли внутримышечно Пиро-Стоп двукратно с интервалом 24 часа. Всего в эксперименте мы использовали 9 собак, которые были разделены на три равные группы. I группе препарат вводили в дозе 0,5 смг/кг по д.в. (1 мл на 15 кг массы), во II – в дозе 2,5 мг/кг по Д.В. (1 мл на 20 кг массы).

Через 24 часа после первой инъекции Пиро-Стоп паразитемия снизилась в среднем до 1,1-1,8%, через 24 часа после второй инъекции батризина она достигла

значения 0,5-0,6%, еще через 24 часа просматривались только единичные экземпляры паразита. На пятые сутки лечения бабезии в мазках крови от животных I и II групп не обнаруживались. В III же группе наблюдалось снижение уровня паразитемии, но санации от паразитов не произошло (Таблица 2).

Таблица 2 – Средние показатели паразитемии в опытных группах при испытании различных доз Пиро-Стоп

Группа	паразитемии по суткам, $X + S_x$									
	До введения			1-я инъекция	2-я инъекция	После введения				
	1	2	3	4	5	6	7	8	9	10
I	–	0,8+0,04	2,0+0,18	2,8+0,09	2,8+0,10	1,8+0,10	–	–	–	–
II	–	0,6+0,05	1,6+0,11	2,6+0,14	2,7+0,08	1,1+0,09	0,2+0,01	–	–	–
III	–	0,9+0,05	1,5+0,14	2,5+0,14	2,8+0,20	1,8+0,10	1,5+0,06	0,6+0,05	0,5+0,03	0,6+0,02

Температура у щенков снижалась почти до нормы в течение 12 часов после первой инъекции обоих препаратов, а через 24 часа была уже в пределах нормы и не повышалась до конца курса лечения. Показатели частоты пульса и дыхания снижались до нормальных в течение 48 часов лечения.

Животных групп №3 обоих опытов после окончания эксперимента мы лечили путем однократного введения препаратов в дозе 0,5 см^3 на 10 кг массы тела с положительным результатом.

Заключение. Полученные данные позволяют сделать вывод о том, что в особых случаях при лечении бабезиоза собак возможно применение препаратов на основе имидокарба в пониженной дозе 0,3 см^3 на 10 кг массы тела. Следует также отметить, что полученные результаты не являются дополнением к официальной Инструкции по применению изученных препаратов.

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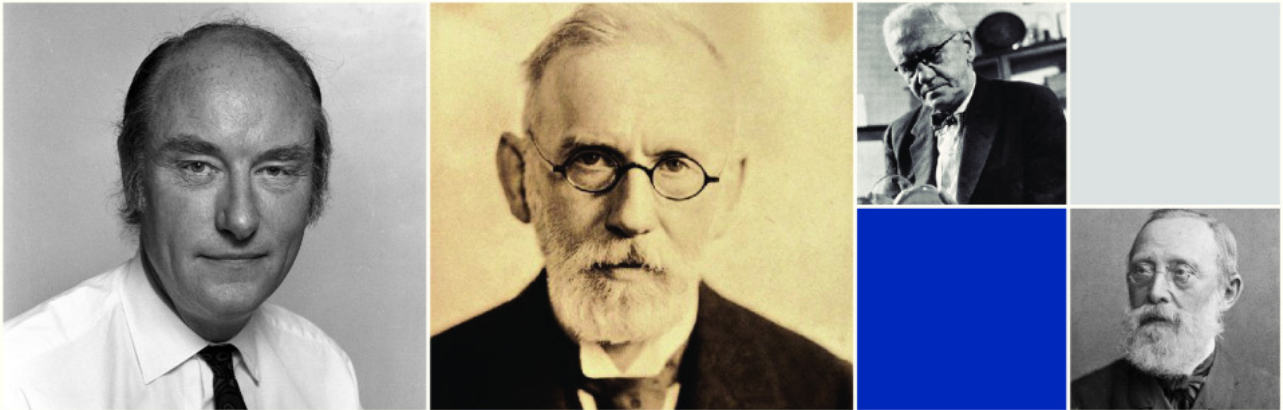
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