An Analysis of Competitive Advantage of Vetiver (*Vetiveria zizaniodes*) towards the Increasing of Locally-Generated Revenue in Garut Regency West Java - Indonesia

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Abstract - The research examines one of the featured product of Garut Regency namely vetiver (*Vetiveria zizaniodes*) as one of the incomes to Locally-Generated Revenue (LGR). The research variables consist of competitive advantage and the increasing of Locally-Generated Revenue, which aimed to find out the influence of competitive advantage of *Vetiveria zizaniodes* towards the increasing of Locally-Generated Revenue in Garut Regency, West Java – Indonesia. 35 producers or craftsmen of vetiver oil living in Legok Bulus - Sukakarya Village, Samarang District at Garut Regency are examined as research object by using explanation survey method with descriptive and verificative technique approach. In conducting the research, questioner was used as data collecting technique and variant-based Partial Least Square- - Path Modeling (PLS-PM) aided by SmartPLS ver 3.0 software was used as data analyzing technique. The results indicate that competitive advantage of *Vetiveria zizaniodes* has significant and positive influence toward the Locally-Generated Revenue increasing which will raise the Gross Domestic Regional Product (GDRP) of Garut Regency.

Keywords: Competitive Advantage, Locally-Generated Revenue, Vetiver (Vetiveria zizaniodes)

1. Introduction

Garut Regency is located in South of West Java Province, Indonesia. It covers an area of 306.519 Ha (3.065,19 km²). Geographically, it is neighboring with Bandung City as capital city of West Java Province, which lies between 6°56'49 - 7°45'00 South Latitude and 107°25'8 -108°7'30 East Longitude. Therefore, Garut Regency has a strategic position in supplying citizens' needs of Bandung Regency and Bandung City and plays an important role in controlling the environment balance (Central Bureau of Statistics of Garut Regency, 2016).

In 2013, Gross Domestic Regional Product (GDRP) per capita was Rp, 13.880.100, while there was a great increasing amount to Rp. 14.680.308 or 5.77% in 2014. Nevertheless, this increasing has not yet been used fully to describe the increasing of social purchasing power. The reason is not only still contains inflation highly impacted to the purchasing power, but also the distribution pattern of regional revenue of Garut is not absolutely spread evenly in GDRP per capita calculated

based on the current price. However, per capita income approached by per capita GDRP can illustrate the value of products produced in Garut region per resident for one year. It is also can be interpreted as the level of productivity of the population in Garut which can also reflect the income level per resident in Garut Regency (Data and Development Analysis Center of West Java, 2016).

One of the featured products of Garut as an income to Locally-Generated Revenue is vetiver (*Vetiveria zizanoides*) having high selling value and competitive advantage both national and international scala. This plant might not be familiar, but it has been a typical plant that becomes the pride of Garut Regency. Vetiver belonging to one family with lemongrass and rice has a scientific name *Vetiveria zizanioide*. Vetiver only thrives in the three regions in the world; Haiti, Jamaica and Indonesia, exactly in Garut (Garut Regional Government, 2016).

Vetiver oil (<u>Andropogon zizanoides</u>) is one of the new special featured commodities of Garut,

as well as green tea and tobacco which are part of the plantation sub-sector. Vetiver oil has a bright prospect to be continually developed because it has comparative and competitive advantage. Then, the market share both domestic and international are still widely opened for vetiver oil.

The cultivation of vetiver in Garut is based on Regent's Decree No: 520/SK.196-HUK/96 dated August, 6 1996, about the determining sets of vetiver plantation area and its development by the community of 2,400 ha and spread across four districts; Samarang District is 750 ha, Bayongbong District is 210 ha, Cilawu District is 240 ha, and Leles District is 750 ha. Of the total development areas, the cultivated areas in each year averagely reach 12.400 ha producing vetiver oil averagely as much as 54 tons. It can be noted that it has been produced 72 tons of vetiver oil from 2.400 Ha cultivated areas in on year, with details are as follows:

Districts	На	Tons
Cilawu	240,00	7,20
Bayongbong	210,00	6,30
Samarang	750,00	22,50
Pasirwangi	450,00	13,50
Leles	750,00	22,50
Total	2.400,00	72,00

Table 1. The Data of Vetiver Plantation Area and Vetiver Oil Production

Source: Department of Industry and Commerce of Garut Regency (2016)

As one of the raw materials to produce perfumes and other cosmetics, the marketing of vetiver oil does not have any significant obstacles until now. The productions of Garut vetiver oil in accordance with its capacity are sold in the market at reasonable prices (the price in accordance with the prevailing price). Actually, the price is still can be optimized if the quality is improved too. Based on the available data, international markets accepting the product of vetiver oil from Garut are entrepreneurs from Asia, Europe, and America particularly such as Singapore, India, Japan, Hong Kong, Britain, Netherland, Germany, Italy, Switzerland and the United States. In addition, other countries in South Asia and East Asia, East Europe and South America are export destinations to market vetiver oil from Garut. Especially, when you consider the number of producers (the competitor's countries) in the international market are still very limited. Nowadays, Tahitti and Borbon are two only countries developing the same kind of commodity (Garut Regional Government, 2016).

The product of vetiver oil originated from Garut belongs to the world nominative, but the production in both technology and its capital are still very limited. In recent years, export sales value of vetiver oil commodity was 23 520 kg valued at US \$ 1,516,208.00. Although, the volume of export value increased from 1.175.920, 00, the export production capacity declined from the previous year which reached 29.100 Kg (Department of Industry and Commerce of Garut, 2016).

Some problems arising in the development of vetiver oil commodities are as follow:

- 1. The trading system line is still complicated, especially with the presence of the brokers.
- 2. The Lack of cooperation among the owners / managers of the distillery, the limitations of the capital owners and the capital access;
- 3. The lack of adequate technology mastery, so the quality of vetiver oil produced is still relatively low.

Some Efforts are being made to overcome the existing problems. For instance, restructuring the trade system line, the establishment of cooperative or Business Group, capital support both through partnerships and financial institutions, and increased refining technology, are expected to be able to soon realize the increasing of value-added income for the farmers and the managers, which in turn will increase the Locally-Generated Revenue (OSR). In 2008, Regional Technical Implementation Unit has been established by the cooperation Regional Government with Department of Industry that provided guiding facilities to vetiver oil Small and Medium Enterprises (SME) including boilers and Laboratory.

However, the unfortunate condition comes to the vetiver craftsmen. In the earlier, they spread out in some districts, but the exist vetiver craftsmen today are only 35 producers scattered Legok Bulus, Suka Karya Village, Samarang Districts at Garut Regency. Although there are still a lot of veriver farmers, but the vetiver craftsmen decrease, whereas this commodity has very strong market share both in domestic or international market scale, has competitive advantage and can become prime sector that can improve the Locally-Generated Revenue of Garut. The competitive advantage of a product plays an important role in the strength of the price of goods both within the country and abroad. It is perhaps requiring more in-depth study regarding to the more and more decreasing vetiver craftsmen and the market not only in the country but also responded by the world market. It can increase the Locally-Generated Revenue, which in turn is expected to be a resource for people's welfare in general.

2. Theoretical Review

2.1 Competitive Advantage

Porter's theory of competitiveness comes from the belief that classical economic theory that explains the comparative advantage is not sufficient, or even incorrect. According to Porter, a country gain a competitive advantage if the company is competitive (Porter, 2009: 3).

Furthermore, Porter proposed a Diamond model consisting of four determinants (determine factors) which describes a country's competitive advantage (National Competitive Advantage). The four attributes are factor conditions, demand conditions, related and supporting industries, and firm strategy, structure, and rivalry (Porter, 2009:7).

- 1) Factor Conditions, referring to the input used as production factors, such as labor, natural resources, capital and infrastructure.
- 2) Demand Conditions, which refers to the availability of a ready domestic market

plays an essential element in generating competitiveness.

- 3) Related and Supporting Industries, referring to the multitude and their strong linkages between industry supporters and companies, these relation and support has been positively led to the improvement of enterprise competitiveness.
- 4) Firm Strategy, Structure, and Rivalry, referring to the strategies and structures that exist in most companies and the intensity of competition in a particular industry. Factors strategy may consist of at least two aspects: the stock market and individual career choices.

These factors, both as an individual and as a system, create the context in which companies in a country are formed and compete. Availability of resources and skills are needed to achieve a competitive advantage in an industry information that forms what opportunities are perceived and guidance to where resources and power and skills are allocated, the purpose of the owners, managers, and employees involved in or conducting competitions, and much more importantly, the pressure on companies to invest and innovate.

Competitive advantage is the basis of how companies can create value for buyers that exceed the cost incurred by the company for the value creation. Value is what the buyers desired who have a desire to pay, the flow of the creation of superior value that is how companies offer lower prices than its competitors to get the same benefit or provide unique benefits at a higher price. These two basic competitive advantages are cost leadership and differentiation (Porter, 2009).

Competitive advantage is the main core of marketing performance to face the competition, as a benefit strategy of the company that cooperated to create a more effective competitive advantage (Porter, 2009: 14).

In the theory of competition is known a theory of Michael E. Porter (2009) which is very popular at analyzing the competition. The theory is very well known by the term **Porter Four Forces Model**. They are as follow:

1) Potential entrance (threat a new entrance), this power is influenced by the size barriers which entry into the industry.

- 2) Supplier (bargaining power of suppliers), usually fewer the number of suppliers, the more important products supplied, then the stronger bargaining position.
- 3) Buyer (bargaining power of buyers), the larger the purchase, the more options available to the buyers and it will generally make the buyers position is getting stronger.
- Substitutes (threat of substitutes products or services), many availability of substitute products will restrict the range of players in the industry to determine the selling price of the products.

2.2 Locally-Generated Revenue (LGR)

Regional revenue is all regional revenues in form of assets increasing or debt decreasing from various sources in the relevant fiscal year period. Locally-Generated Revenue is one of the regional revenues sources having crucial role in the development. Locally-Generated Revenue is a revenue gained from sources of regional revenue and managed by the local government.

Local revenue is the backbone of regional funding, hence the ability to implement the economic measured by the magnitude of the source-own revenue contribution to the Regional Government Budget (RGB), the greater the contribution provided by the Own-Source Government means the less the dependency of local government to the help of local government.

Locally-Generated Revenue is one of the components of country's financial revenue source besides the other incomes such as equalization funds, loans, etc. Legitimate receipts and the rest of the previous year's budget can be added as a funding source of governance management. Annually overall admissions are reflected on the Regional Government Budget, although Own-Source Regional Revenue is not entirely able to cover the Regional Government Budget. It is in line with Santoso (1995:200) that reveals that the proportion of Locally-Generated Revenue to the total revenue is an indication of the local government finance.

The local government is expected to be able to draw financial resources maximally, of course based on applicable constitution especially to cover the government's financing needs and the development in the region through Locally-Generated Revenue. The demand of the increasing of Locally-Generated Revenue is greater along with the government greater authority delegated to the local government itself.

According to the Law No. 33 In 2004, the Locally-Generated Revenue is revenue gained by the region from the sources within their own regions levied by local regulations in accordance with the legislation in force. Source-own revenue is region revenue source originally excavated in the region used for capital base of local government in funding the development and regional efforts to reduce the dependence of central government funding.

In addition, Mardiasmo (2002: 132) reveals that "Locally-Generated Revenue is the incomes from local taxes sector, levies, separated regional wealth management outcomes, the results of regional owned enterprises, and other lawful incomes".

Furthermore, according to Law No. 33 in 2004 Article 6, the sources of Locally-Generated Revenues consist of:

- 1) Local tax; is a mandatory contribution made by the individual or group to the region without balance direct payment which can be imposed by legislation in force and used to finance the implementation of local government and regional development. Taxes are the primary financial source for the levies regions.
- Local Retribution; is local levies as a payment for services or certain permits giving specially provided and / or given by local governments for the individual or group benefit.
- 3) Separated regional wealth management outcomes; is a local revenue that comes from separated regional wealth management. This kind of income is specified according to the object of income including part of the return on equity in the regional owned investment enterprises, country/State-Owned and private/group owned Enterprises enterprises.

4) Other lawful incomes; are other incomes received by the region in accordance with the applicable rules.

Based on the study of these theories, the research framework is described as follow:

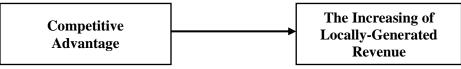


Figure 1. The Research Framework

3. Research Methodology

3.1 Research Method

The method used in this research is explanation research with a survey approach using descriptive and verificative techniques. The purpose of descriptive research is to describe the effect of vetiver competitive advantage to increase Locally-Generated Revenues in Garut Regency. Meanwhile, verificative research aimed to test the hypothesis based on data collecting through questionnaires (Arikunto, 2013: 7). The collected research data sourced from primary and secondary data, in which primary data is obtained by distributing questionnaires to the vetiver oil producers. Then, Verification techniques is used to test the validity or significance of the hypothesis based on the results of primary data collection.

3.2 Types and Sources of Data

The data used in this study are primary and secondary data, in which secondary data is a historical data structure on variables that have been collected and compiled previously by other parties, namely from the Department of Trade and Industry of Garut. Primary data is data collected directly by the researcher to answer problems or objectives of the explanation, description, and clausal research by using data in the form of survey or observation. Primary data in this study is the data directly obtained from interviews with staff of Trustees of Small and Medium Enterprises at the Department of Trade and Industry Garut, as well as respondents through questionnaires distributed to the Group of Producers of vetiver oil in Samarang District -Garut Regency.

3.3 Population, Sample and Sampling Technique

Population is whole subjects of research. If someone wants to examine all elements within

the area of research, then the research is the population study (Arikunto, 2013: 173). The population in this research are vetiver oil producers/craftsmen in Legok Bulus, Sukakarya Village Samarang District - Garut Regency. The samples are the entire population amount to 35 producers/craftsmen so that the sampling technique used nonprobability sampling with purposive sampling technique and census (total sampling).

3.4 Data Collection Technique

The data collection technique is a way conducted by researchers to collect data or information about the research object (Riduwan. 2014: 51). Data collection techniques used in this research is field research to obtain primary data by distributing questionnaires to the respondents, and documents research to obtain secondary data through information derived from the records. reports, journals, and documents related to the research problem.

3.5 Data Analysis Method

The verificative analysis used variant-based structural equation modeling (SEM) approach or well-known as Partial Least Square - Path Modeling (PLS-PM) to determine the significance of independent variable toward the dependent variable. According to Wold, it is a powerful analysis method because it is not based on many assumptions and has its own advantages such as: data should not normally multivariate (indicator distributed with category scales, ordinal, interval until the ratio can be used on the same model) and the sample size should not be large. Hypothesis testing is conducted by comparing the p-value toward of the significance level with a confidence level of 95% ($\alpha = 0.05$)

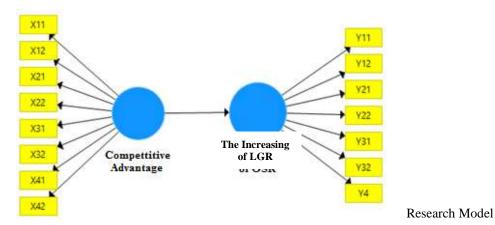


Figure 2. The

4. The Research Results

The Analysis and interpretation of the result data processing are based on the results of hypothesis testing, which hypothesis testing used PLS-PM aided SmartPLS ver. 3.0 software. Decision-making in hypothesis testing was conducting by comparing the p-value at a significance level with a confidence level of 95% ($\alpha = 0.05$) where the decision rules as follows:

- If the p-value ≥ α (0.05), the null hypothesis (H_o) is accepted, it means that there is no influence of independent variable on the dependent variable.
- If the p-value $\leq \alpha$ (0.05), the null hypothesis (H_o) is rejected, it means that there are significant independent variable on the dependent variable.

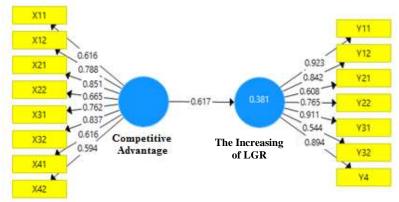


Figure 3. The Result of Data Processing by SmartPLS ver. 3.0.

Based on Figure 2 above, each indicator has a value of loading factor > 0.5 (Hair, et. al. 2010 and Ghozali, 2011) indicating that the

indicators used in this study is valid or has met the convergent validity.

Table 2. Constructs Validity				
Constructs	AVE			
Competitive Advantage	0,522			
The Increasing of OSR	0,635			
Courses Data Data data				

Source: Data Processing

Value of loading factor above is reinforced also by the value of Average Variance Extracted (AVE), which shows that each construct is valid with value > 0.05 (Hair, et. al., 2010 and Ghozali, 2011).

Table 3. Constructs Reliability

Constructs	Composite Reliability	Cronbachs Alpha	Discriminant Validity
Competitive advantage	0,896	0,866	0,723
The Increasing of OSR	0,922	0,901	0,797

Source: Data Processing

Based on Table 3, it can be seen that each of these constructs is reliable with Composite Reliability, Cronbach's Alpha and Discriminant Validity has a value of > 0.7 (Hair, et. al., 2010 and Ghozali, 2011).

Table 4.	The	Result	of I	Hypoth	esis '	Testing
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	Path	Path Coefficient	R Square	p-value			
	KK ==> PAD	0,617	0,381	0,000			
S	Source: Data Processing						

In Table 4, it can be seen that the path coefficient value of the variable of Competitive Advantage to the variable of the increasing of Locally-Generated Revenue is 0.617 with R Square value is 0.381, which means that the variable of the increasing of Locally-Generated Revenue can be explained by the variable of Competitive Advantage is 0.381 or 38.1%. By a value above 0.33 means that the variable of Competitive Advantage is on the moderate classification to explain the variable of the increasing of Locally-Generated Revenue (Ghozali, 2011). Meanwhile, the p-value as a basis of decision making in hypothesis testing has a value of 0.000.

5. Discussion

Hypothesis testing is concerned with the influences of the variable of vetiver competitive advantage toward Locally-Generated Revenue Increasing variable in Garut. The hypothesis testing results obtained p-value (0.000) $<\alpha$ (0.05) then it means that H₀ is rejected. This means that the competitive advantage of vetiver significantly influence on the increasing of Locally-Generated Revenue of Garut Regency. This Significant influence is positive supported by path coefficient value of 0.617, which illustrates that the higher the competitive

6. Conclusion

Based on the research result conducted and the results of the analysis, it can be concluded that the competitive advantage of vetiver has a significant influence on the increasing of advantage of vetiver, the greater its influence on increasing of Locally-Generated Revenue of Garut Regency.

5.1 Theoretical Implications

The concept of the theory supporting the results of hypothesis testing revealing that the competitive advantage of vetiver significantly and positively influence on the increasing of Locally-Generated Revenue, is "Locally-Generated Revenue is the income from local taxes sector, levies, separated regional wealth management outcomes, the results of regional owned enterprises, and other lawful incomes" Mardiasmo (2004: 110).

It is Great or small the contribution of vetiver describing the role or contribution provided by the sources of Locally-Generated Revenue to the total of Locally-Generated Revenue of Garut Regency, which in turn the increasing of Locally-Generated Revenue will affect to the changes in the Gross Domestic Regional Product. The Increasing economic growth is a major priority of local government, Putro in Jaya (2014) states that economic growth is the development of economic activity in which it gives impacts on the amount of productions of goods and services which increase more, so the social prosperity increases.

Locally-Generated Revenue of Garut regency and has a positive influence that be able to raise local revenue enhancement.

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