LINK

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2760913#

Editorial Board

OIDA International Journal of Sustainable Development
Open access peer-reviewed journal

Analysis of Determinants Sectors Regional Development at 33 Provinces in Indonesia

Dini Hariyanti [a], Maria Ariesta Utha [b]

[a,b] Economic Development Program, Trisakti University, Indonesia.
Corresponding authours: hariyantidini@yahoo.com, imanuelaariestautha@yahoo.co.id

OIDA International Journal of Sustainable Development, Ontario International Development Agency, Canada
ISSN 1923-6654 (print) ISSN 1923-6662 (online)

Available at http://www.ssrn.com/link/OIDA-Intl-Journal-Sustainable-Dev.html

Abstract: The purpose of this study was to analyze the basis of sectors regional development at 33 provinces in Indonesia. The implication is, if a region wants to push the growth of its economic, the sector of regions should have the advantage to develope and sustainable. An explanation of the economic potential of the 33 provinces in Indonesia which is analyzed in terms of the national potential, potential per sector in each province, specializes import and export infrastructure in each region. Thus, every region must has ability in economic potential and specialized. The approach used to see the economic potential of the region is Typology Klassen and analysis of Location Quotient (LQ) in the period 2008 -2012.
Based on the results of calculations leading sectors using Location Quotient (LQ) in 33 provinces in Indonesia showed that dominated by: first, the agricultural sector; second, the mining sector; third, of the manufacturing sector; four, publicities, gas and water sector; five, construction sector; sixth, sector of trade, hotel and restaurant; seven, sectors of transportation and communication; eight, sector financial/Banking and nine, service sector.

The rank of the province that dominates the highest contribution of each sector compared nationally for the agricultural sector, which the highest rank is followed by West Sulawesi, Central Sulawesi, Lampung, Bengkulu and NTT province. As for the mining sector there are 13 provinces that dominate this sector and the highest national contribution is Riau province followed by East Kalimantan, Papua, South Kalimantan. The manufacturing sector, 5 provinces lead this sectors and the highest contribution in the sector of manufacturing/processing industry in the first rank is the Riau Archipelago followed by Banten, West Java province. For publicities, gas and water sector there are 11 provinces lead this sector, and regions that have the highest national contribution is banten followed by West Java province, Aceh, Bali province. For the construction sector, 15 provinces lead this sector, and the highest contributions is North Sulawesi followed by DKI Jakarta, DI Yogyakarta. As for trade, hotel and restaurant there are 17 provinces that have the highest contribution nationally and the highest rank is Bali followed by East Java province, North Maluku. Categories of transportation and communication sector, 10 provinces have lead this sector and the highest provincial contribution is West Sumatra, followed by South Kalimantan, North Sulawesi, Jakarta, and Bali province. For the financial/Banking sector there are only two provinces that dominate this sector and the highest contribution nationally are Jakarta province, after the DI Yogyakarta province. While the service sector there are 22 provinces dominate this sector and the highest contribution nationally namely Nort Nusa Tenggara province, after it by Gorontalo, Bengkulu, DI Yogyakarta, West Sumatra. Finnally, the provinces that lead the business development in Indonesia is the province of Central Sulawesi, Gorontalo, Papua, West Sumatra, Riau, East Kalimantan, South Kalimantan and West Kalimantan. The eighth of province has the contribution of each sector are very high as well as against the growth rate of the sector.

Keywords: Regional Developnment; Typology Klassen; Location Quoetient; The Specialization Index; 33 Province in Indonesia

Introduction

Economic development in some country must have a clear direction and objectives, in term of the short term and the long term. Because economics must have sustainability efforts that undertaken population of a country to achieve the goal of welfare. In order to accelerate the realization of a developed country, the Indonesian government made a policy of "sustainable growth with equity" as a development strategy with pro-growth, pro-poor, pro-jobs and pro-enviroment (Yudhoyono, 2012). The new paradigm in the development of post agenda's 2015 are the coming Sustainable Development Goals (SDG's). SDG's as a tackling for the economic, social and environmental sustainable development as a framework for broader associated with environmental changes (http://www.iges.or.jp/en/rio20). Because of each factor production (resources) owned by a country could be used optimally as possible in order to achieve development targets. Therefore, development of a country should be supported by regional development.

Regional development has significance for the development for and to the public. Munir (2002) confirms the basis of the regional development are the emphasis of development policy is based on the typical characteristics of the area concerned (endogenous development) by using the potential of human resources, institutional and physical resources locally. This orientation leads to the emergence of a regional initiative and creativity in the development process. The development process is done by the people together with the government, in all aspects of community life in a planned, gradual and continuous accordance to the conditions, potential and aspirations of the people who grow and flourish in the area. Regional development is a process that includes the establishment of new institutions, the development of alternative industries, improving the capacity of the existing workforce products and services better, the identification of new markets (Todaro, 2000), (Jhingan, 1996).

Regional development planning by GTZ in Local Development Planning (2000) in Syaifullah (2008) defines it as: “Local development planning is a systematic endeavor of multiple actors (stakeholders) from the public, private and civic domain at the different levels to deal with interdependent physical and socio-economic aspects by means of: continously analyzing regional development conditions, formulating local development goals and policies, conceptualizing strategies for solutions, and implementing them with the available resources so that new oppurtunities which enhance the local communities’ wellbeing can be seized upon in a sustainable manner”. Lin and Liu (2000) states that the government needs to increase capital investment in order to boost economic growth in the region. They found a strong correlation between share (expenditure) investment in infrastructure with decentralized level.

Each regional economic development efforts has the main objective to increase the number and types of employment opportunities for local people. Regional development must be sustainable, Nijkamp et.al (1991: 3) states that Regional Sustainable development as a development which ensures that the regional population can attain an acceptable level of welfare-both at present and the future- and that this regional development is compatible with ecological circumstances in the long run while at the same time it tries to accomplish a globally sustainable development.

To achieve this goal, local governments and communities must take the initiative in regional development. The overall goal could not be separated from changes in the system of governance in Indonesia as defined in Law No. 22 of 1999 on Regional Government which was later changed to the Law. No. 32 of 2004 regarding the reform of the relationship between central and local governments. This law states that development must consider the potential and diversity of the regions. Therefore, local governments - along with community participation - must be able to estimate the potential resources needed to design and build the local economy. The economic potential of the region is the ability of the economy in a region that is possible and feasible to be developed so that it will continue to be a source of livelihood of the local people as well as to encourage the regional economy.

The differences in the regional have implication, that the pattern of development have applied differently. Pattern of wisdom that is implemented and managed on an area, not necessarily provide the same benefits to other areas. If it will build an area, policies should related with the conditions (problems, needs, and potential) of the area. Therefore, to determine the development planning of an area must first be carried out in-depth research on the potential and the state of the area to get appropriate data and information. The scope of this study of 33 provinces in Indonesia.

Regional economic development as part of the national economy has not growth as expected. One of the factors are the differences of the economic characteristics in each region. In other words, there is a difference between the potential of the sector in the area. So, there is a potential sector to be developed to improve the economic development of the region but, there are also sectors that are not potential. In connection with this, there is an

important to identify the potential sector for the regions. So, if there is a potential sector to be developed it' also to encourage the economic development of the region, but there are also sectors that are not potential. In connection with this, very important for the region to identify the potential sectors such. For that to be done calculation steps to identify the sectors related to the potential of regional autonomy. Thus, every region must assess the sectors of economic advantages to become specialists in the sector. To determine the economic potential of the region, can be used two approaches of analysis, namely: analysis Typology Klassen and analysis Location Question (LQ). In addition to reviewing the seed sector, it's necessary also to analyze commodity exports and imports made specialties.

The purpose of this study is firtsly to identify potential sectors and the leading sectors to be developed to increase value added in Indonesia. Secondly, to determine the sectoral planning of the leading sectors to define the type of potential business investment areas in Indonesia and third, to identify index specialization for exports and imports commodity made in Indonesia.

Review of Literature

Economic base theory by Richardson (1973) which states that the main determinants of economic growth of a region is directly related to the demand of goods and services from outside of region. According economic base theory, all regions is a system of socio integrated economy. The theory underlying reasoning location quotient technique, that helps in determining the export capacity of the region's economy and to the degree of self-sufficiency sector.

Regional economic development is a process by which local governments and communities to manage existing resources, and forming a pattern of partnership between local governments and the private sector to create a new jobs and stimulate the development of economic activities in the region. To determine the resources and to create jobs for improving economic activity, it is necessary to analyze the regional specialties and geographical conditions. The approach that can be used; Location quotient, the Hoover Coefficient (Hoover, 1936), Locational Gini Coefficient (Krugman, 1991), and Ellison-Glaeser Coefficients (Ellison and Glaeser, 1994, 1997) in Zheng Lu, et al (2011).

There are several measurement used to compare the local economy, including the shift share analysis. Shift share is a very useful technique to analyze changes in the economic structure of the region compared to the national economy Esteban (2000), Esteban-Marquillas (1972). These analyzes provide data on economic performance in the three areas that relate each other, namely:

- Regional economic growth is measured by analyzing the movement of aggregate sectoral changes compared with the same sectoral changes in the economy which is used as a reference.
- Shifting proportional measures the change in the relative growth or decline, in the area compared to the larger economy as the reference. These measurements allow us to determine whether the region's economy is concentrated in industries that are growing faster than the economy.
- The shift differential helps us in determining how far the competitiveness of local industries (local) economy. Therefore, if a shift differential of an industry is positive, then the industry is higher competitiveness than the same industry in the economy.

Methodology of Data Analysis

The study population was made from 33 provinces in the Indonesia. The observations period were taken from 2008 to 2012. But not all provinces use the observations until 2012 period because the data was not available. So the data came from various years between 2008 to 2011 and 2008 to 2012.

Location Quotient (LQ)

LQ is a simple method for measuring industrial geographic concentration and further for specialization, Zheng Lu, et al (2011). Based on Flegg and Webber (1997), the simple LQ for region of a country is,

$$SLQ_{ij} = \frac{V_{ij} / V_j}{V_{ij} / V_n}$$

Where:
V_{ij} = PDRB of the first sector in the province
V_i = Total PDRB at province
V_{in} = PDRB of the first sector in the national
V_n = Total PDRB of the first sector in the national

- Indicator Criteria:
  - LQ > 1, this imply that the level of specialization in a particular sector of the respective province is greater when compared to the same sector in the respective national. In other words if LQ>1, this means that the sector is a leading sector in the regency/province and have the potential to be develop as a driver of the local economy.
  - LQ < 1, this means the level of specialization in a particular sector of the said province is less than the same sector in the said national. , if the LQ <1, this means that the sector is not the dominant sector and less potential to be develop as a driver of the local economy
  - LQ = 1, the relative roles of certain sectors in the regency/province is equal to the relative roles of certain sectors at the national level

Klassen Typology

Klassen Typology techniques can be used to find a picture of the pattern and structure of regional sectoral growth. According to the typology Klassen, each economic sector in the region can be classified as prime sector, developing, and underdeveloped potential.

Typologi Klassen

Mean Growth Rate Sectoral / Mean Contribution Sectoral	Fast Growth $Y_{sektor} \geq Y_{PDRB}$	Slow Growth $Y_{sektor} \leq Y_{PDRB}$	
High Contribution $r_{sektor} \geq r_{PDRB}$	PRIMARY SECTOR	STAGNANT SECTOR	High Contribution $r_{sektor} \geq r_{PDRB}$
Low Contribution $r_{sektor} \leq r_{PDRB}$	POTENTIAL SECTOR	UNDERDEVELOPED SECTOR	Low Contribution $r_{sektor} \leq r_{PDRB}$

Sources: Syafrizal, 2008; 180

Note:
Y_{sektor} = Average Growth Rate for the sector i
Y_{PDRB} = Average Growth of Provincial Gross Domestic Product
r_{sektor} = The average contribution of the sector to the i
r_{PDRB} = the average contribution of provincial Gross Domestic Product

Kuadran	Sector	Conclusion
I	Primary	Advanced sectors and growing rapidly. This quadrant is the quadrant with an average contribution of the sector and the average growth rate of each sector is greater than the average growth rate of GDP and the contribution of each province. This sector can be interpreted as a potential sector as has the rate of economic growth performance is good and the contribution (share) a high.
II	Potential	This quadrant is the quadrant with an average contribution of the sector to GDP is low but the province had an average growth rate of each sector are higher than the average GDP growth rate of each province. This sector is growing rapidly and may even be regarded as the booming sector.
III	Stagnant	Sector advanced but low. This quadrant is the quadrant with an average contribution of the sector to GDP is high, but the province has an average

		growth rate of each sector are smaller than the average GDP growth rate of each province. The sector is said to be a sector that has been saturated.
IV	Underdeveloped	Slow-growing economic sector and its contribution is relatively small compared to the existing level of economic sector/provincial level

Specialization Index

Specialization index is used to determine whether an area has specialized as an exporter or importer of a commodity type (Kim, 1995), the specialization index used in this study. Specialization index formulated as follows:

$$ISP_{ij} = \frac{X_{ij} - M_{ij}}{X_{ij} + M_{ij}}$$

Where:
X = Export
M = Import
i = Commodity
j = Region (Province)
Specialization Index Value between -1 to 1
If = -1 means= pure importer because the area only to import, no export activities
If = 1 means pure exporter because of the area only to export, no import activities
Specialization Index has no value if there are no exports and imports are carried out by a local.

Result and Analysis

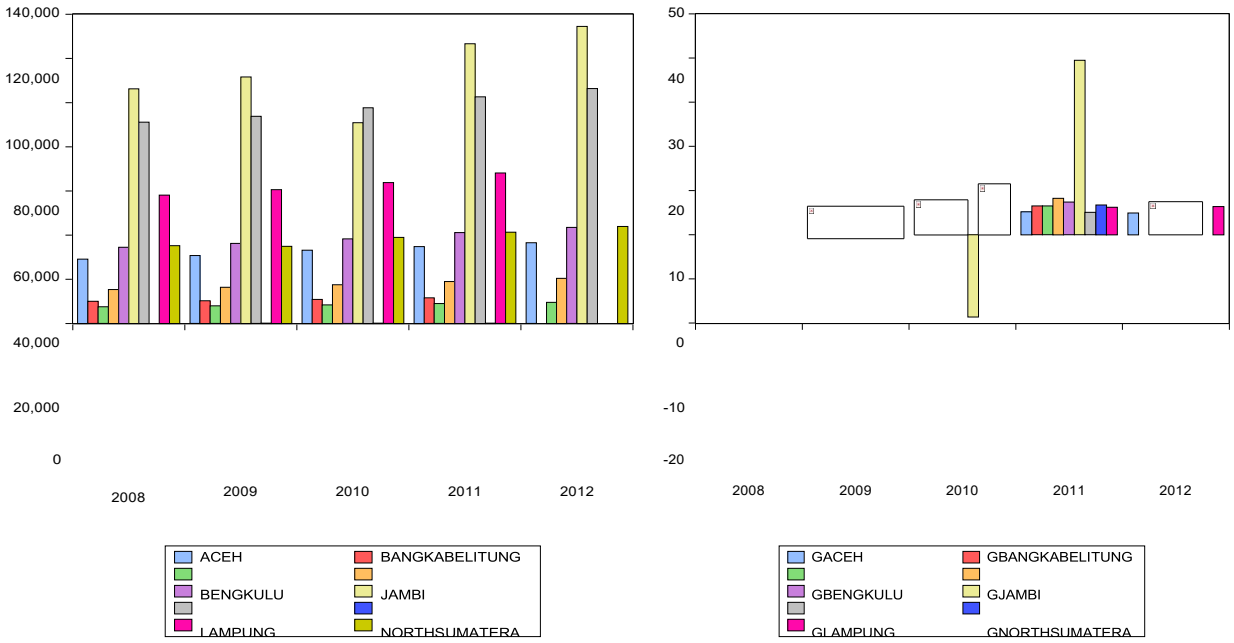
One of the economic indicators used to measure economic development is reflected from the growth and fluctuation of Gross Domestic Product (GDP). In improving GDP and economic growth it is necessary to increase the contribution from each sector, among other sectors of agriculture; mining; manufacturing; publicities and water; construction; trade, hotel, and restaurant; transportation and communication; financial and service. Sectoral grouping described in the primary sector is based on the output produced and the level of the initial (basic) consisting of agriculture and mining/quarrying, secondary sector grouped of economic activities whose input most of the primary sector, comprising manufacturing, electricity and drinking water as well as the construction sector. Category tertiary sector consists of groups of trade, hotels and restaurants, transport and communications, finance, leasing and business services as well as the services sector lainnya. Article below shows the development of regional Gross Domestic Product in the region of Indonesia.

The Development of Gross Regional Domestic Product in the Province of Sumatra Island

The development of GRDP in 10 provinces in the territory of the island of Sumatra in 2008 to 2012 in graph 4.1.a. shows the highest provincial GRDP is North Sumatra Province followed by Riau province, South Sumatra province, while the lowest were Archipelago Riau province. If seen by the growth rate of RGDP 10 provinces in graph 4.1.b, then growth rate of GRDP in 2009 to 2012 the highest was North Sumatra because the province is never achieved high growth rates but also fluctuates widely resulting in the lowest growth rate and reached negative growth figures. The fluctuate fairly significant growth rate even reached a negative values are West Sumatra province. While eight other provinces, GRDP growth rate also fluctuate but not to the negative growth figures.

Next page

Graph 4.1: GRDP development in the province of Sumatra Islands in year 2008 - 2012



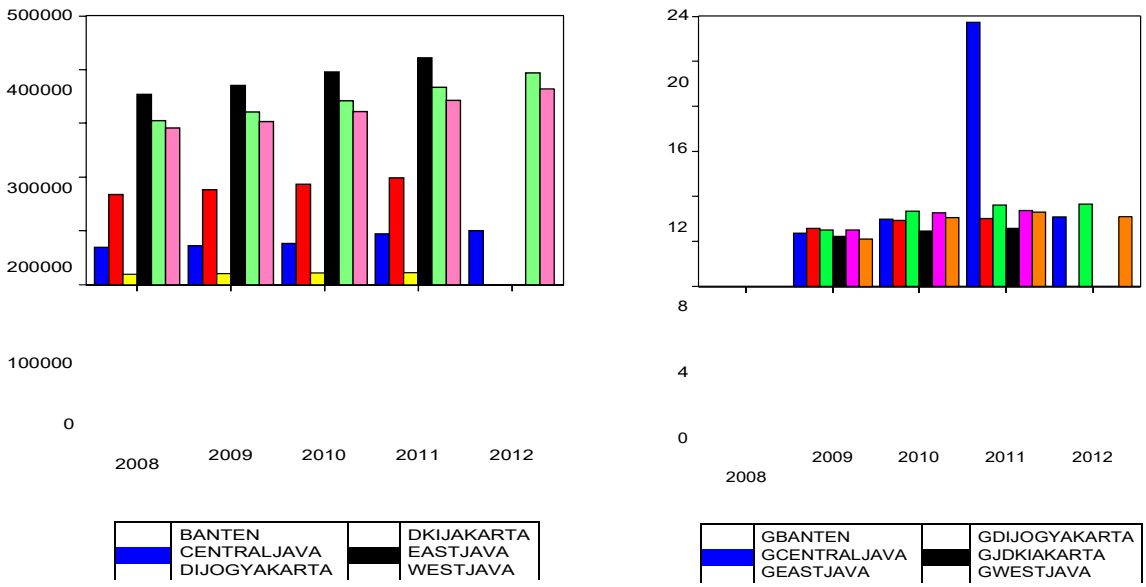
(a) (b)

Sources: Central Bureau of Statistics, (on process)

The Development of Gross Regional Domestic Product in the Province of Java Island

The development of 6 provincial in the area of Java during 2008 until 2012 in the graphs 4.2.a. shows that the development of the highest GRDP is DKI Jakarta Province, followed by East Java, West Java and central Java, while the lowest were DI Yogyakarta province. If seen by the growth rate of GRDP of 6 provinces then GRDP growth rate in 2009 to 2012 in Grafik.4.2b, showed that the growth rate is the highest GRDP East Java province, but when viewed as a whole the growth rate in the 6 provinces is not too much different from each year. However in 2010, a special province of Banten highest growth rate compared to 5 other provinces.

Graph 4.2. GRDP Development in the Province of Java Islands in year 2008 -2012



(a) (b)

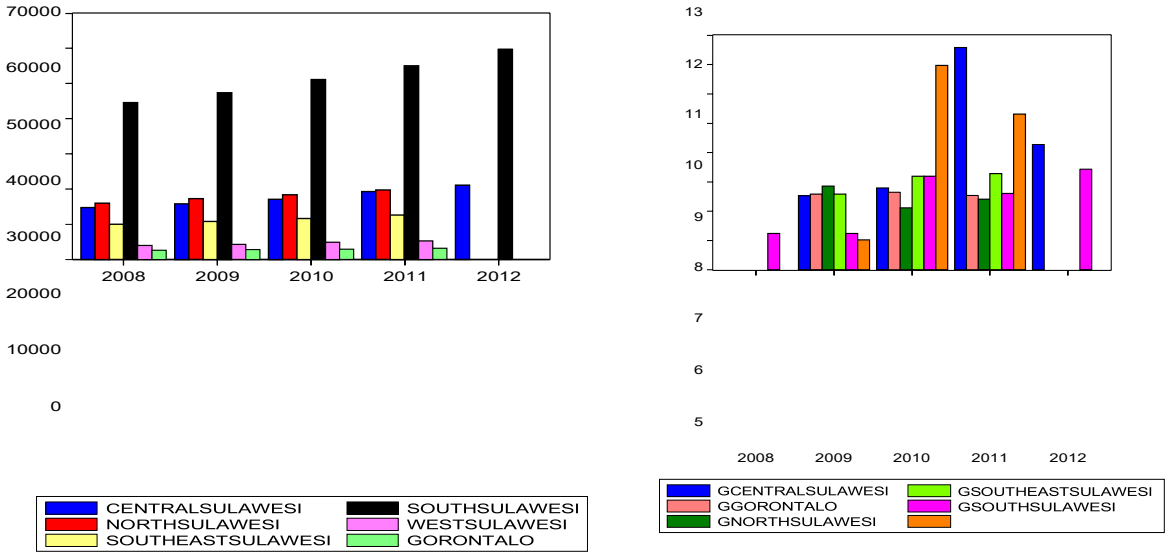
Sources: Central Bureau of Statistics, (on process)

The Development of Gross Regional Domestic Product in the Province of Sulawesi Island

The development of 6 provincial in the area of Sulawesi island in 2008 until 2012. The highest GRDP is South Sulawesi province, followed by North Sulawesi province and Central Sulawesi province. While, the lowest is the Gorontalo province. If seen by the growth rate of GRDP, the growth rate of GRDP on the 6 province on Sulawesi island in 2009 to 2012 in graph.4.3.b, showed that the growth rate of the highest GRDP is Central Sulawesi and

West Sulawesi province and is followed by South Sulawesi province, Southeast Sulawesi, North Sulawesi and Gorontalo. The average of GRDP growth is not too much different.

Graph 4.3: GRDP development in the province of Sulawesi Islands in year 2008 - 2012



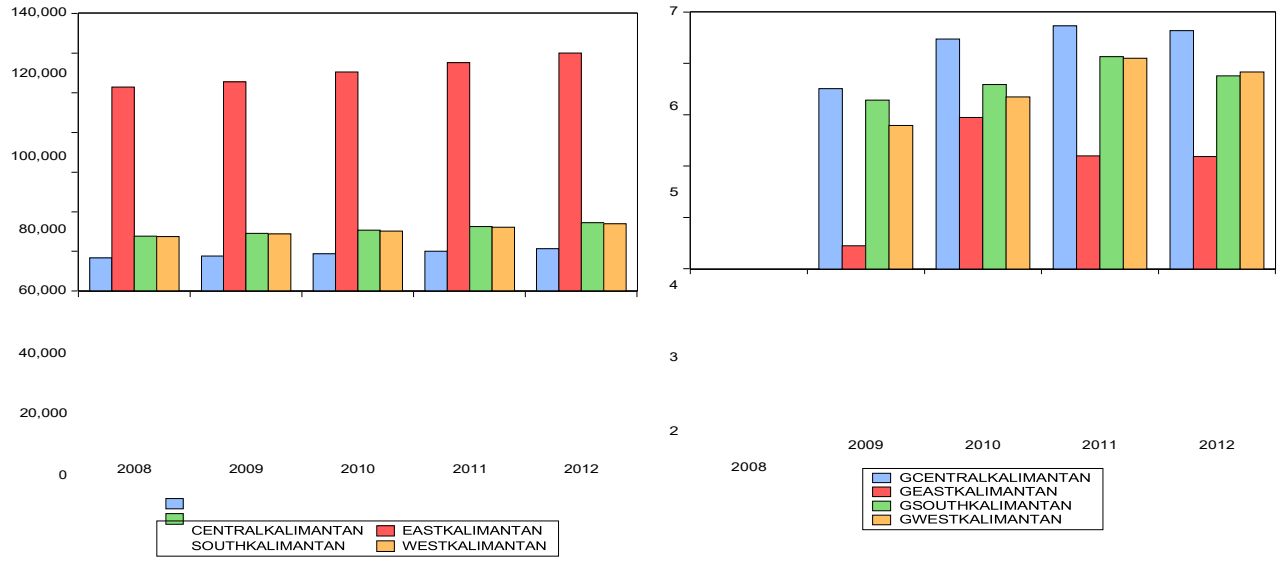
(a) (b)

Sources: Central Bureau of Statistics, (on process)

The Development of Gross Regional Domestic Product in the Province of Kalimantan Island

The development of 4 provincial in the area of Kalimantan island in 2008 until 2012. The highest GRDP is East Kalimantan Province, followed by West Kalimantan and South Kalimantan province. the lowest province is Central Kalimantan. If seen by the growth rate of GRDP on the of 4 provinces in 2009 to 2012 in Chart 4.4.b. showed the highest growth rate and the steady increase is Central Kalimantan province followed by South Kalimantan and West Kalimantan province. While, East Kalimantan province, the value of the percentage is less volatile and tend to decrease from year to year until 2012.

Graph 4.4: GRDP development in the province of Kalimantan Islands in year 2008 - 2012



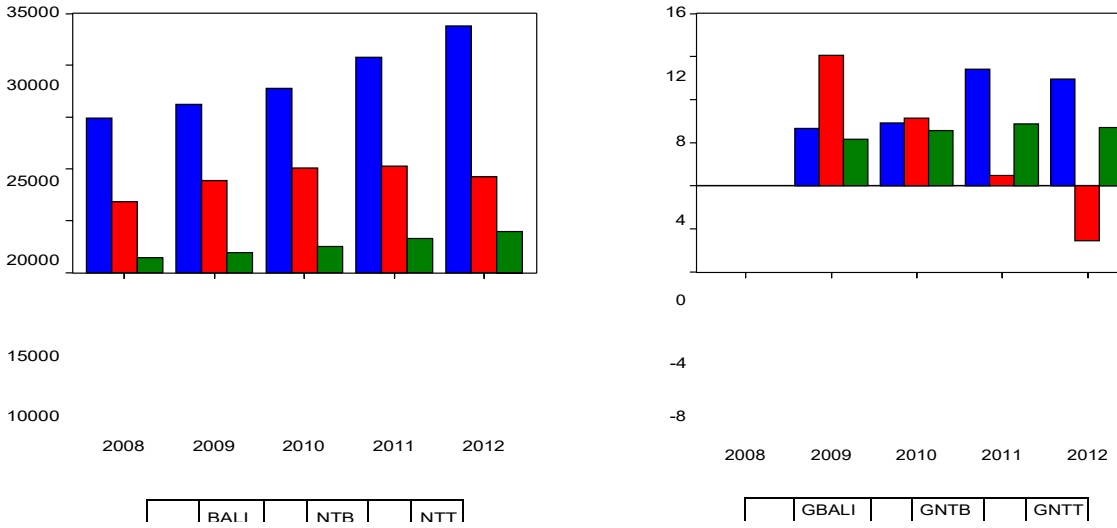
(a) (b)

Sources: Central Bureau of Statistics, (on process)

The Development of Gross Regional Domestic Product in the Province of Bali and Nusa Tenggara Island

The development of 3 area of Bali and Nusa Tenggara province in 2008 until 201, in the graph 4.5.a. shows that the two most high is Bali Province followed by West Nusa Tenggara province while the lowest is North Nusa Tenggara province. If seen by the growth rate of the province GRDP on the 3 in 2009 until 2012 in Chart 4.5.b. shows that the highest growth rate and stable of GRDP increased is the province of Bali followed East Nusa Tenggara province. Meanwhile, West Nusa Tenggara province, the percentage is too fluctuating value continues to decline from year to year and even reach negative growth in 2012.

Graph 4.5: GRDP development in the province of Bali and Nusa Tenggara Islands in year 2008 - 2012



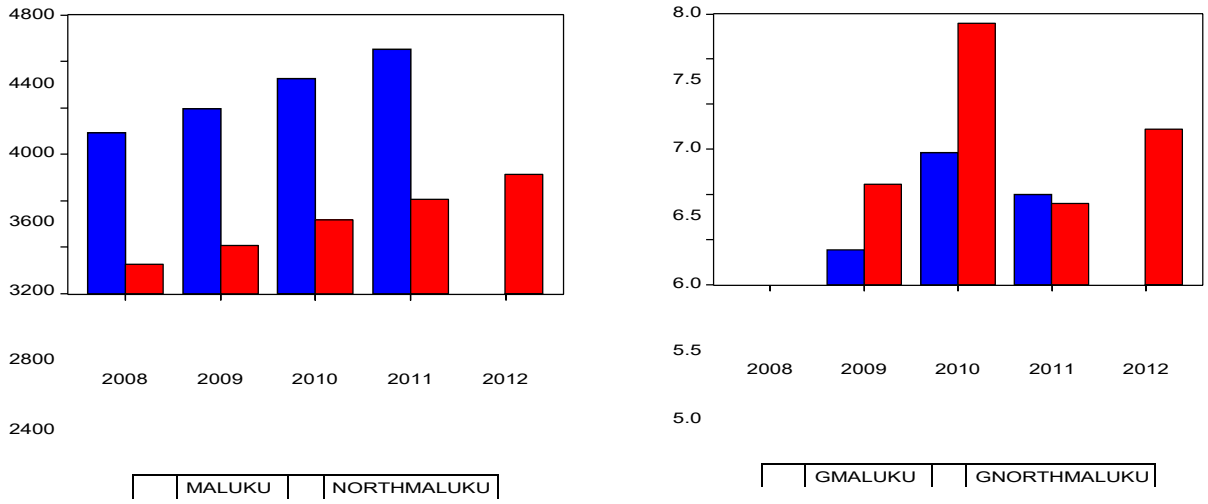
(a) (b)

Sources: Central Bureau of Statistics, (on process)

The Development of Gross Regional Domestic Product in the Province Maluku Island

The development of 2 provincial in the area of the Maluku islands in 2008 until 2012 in the graphs 4.6.a. shows that the highest is the Maluku Province while the lowest is the North Maluku province. If seen by GRDP growth rate of 2 provinces in 2009 until 2012 in chart 4.6.b. shows that the highest GRDP growth rate is the North Maluku province after the Maluku province.

Graph 4.6: GRDP development in the province of Maluku Islands in year 2008 - 2012



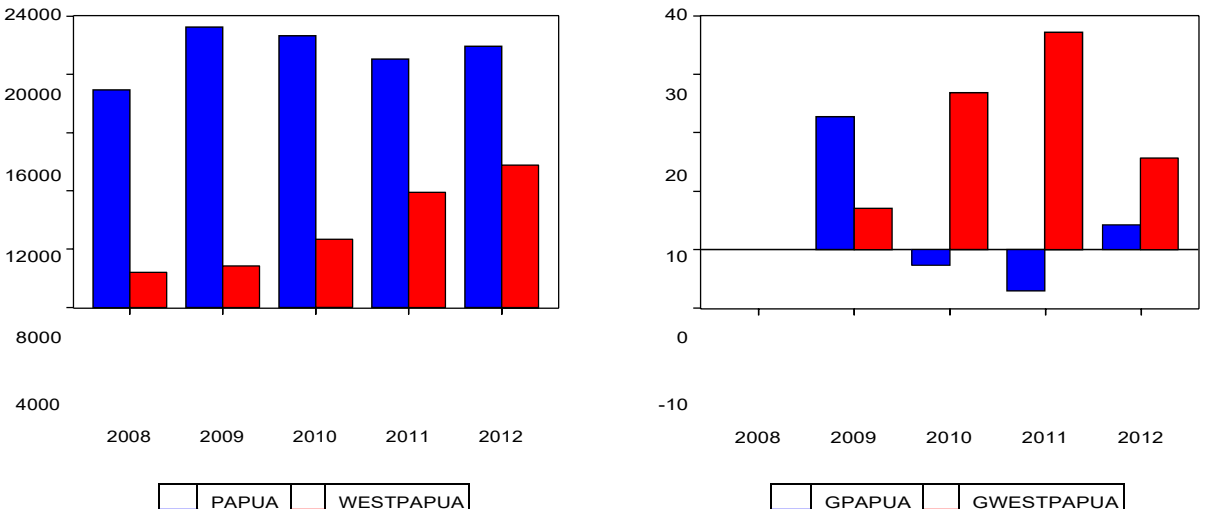
(a) (b)

Sources: Central Bureau of Statistics, (on process)

The Development of Gross Regional Domestic Product in the Province Papua Island

The development of 2 the province of Papua island in 2008 until 2012 in the graphs 4.7.a. shows the highest provinces is Papua , while the lowest was West Papua province. Based on the GRDP growth rate of 2 provinces in 2009 until 2012 in graph 4.7.b. shows that the highest GRDP growth rate is West Papua, although in 2012 has decreased. The growth rate of Papua province, very fluctuating even reached negative figures in 2010 and 2011.

Graph 4.7: GRDP development in the province of Papua Islands in year 2008 - 2012



(a) (b)

Sources: Central Bureau of Statistics, (on process)

This study shows that the economic development in 33 provinces the direction of progress, but some economic indicators are still showing weakness, especially with regard to the low value GRDP and percentage of GRDP growth, productivity and more oriented towards imports. Thus the policy direction for economic development for five years is to increase economic growth through increasing the productivity potential in the regions competitiveness so as to encourage the performance of sectors of the economy in a sustainable manner are packed in the core business, including agriculture, mining and quarrying sector processing of industry, construction sector, the sector of electricity, gas and water supply, trade, hotels and restaurant sector, transportation/communications sector, Bankingings/ financial and service sectors.

After knowing the economic development in 33 provinces in Indonesia, the average contribution of each sector of the province to the national average using the Location Quotient (LQ) it will be seen whether the contribution of the sector in the province is higher than the contribution of the sector nationally. By using this method it will obtain the seed sector and has the potential to be developed. To support the results of the methods Location Quotient, then used Klassen Typology method for mapping the sectors into four (4 categories) are: prime, potential, stagnant and not growing. Furthermore, specialization index used for the development of exports and imports in each sector contributes significantly to economic growth.

Commodity sector (Location Quotient) in 33 provinces in Indonesia

Refer to the previous results, the summary of the leading sectors based on calculations using the Location Quetient (LQ) in 33 provinces are:

In **Sumatra Island**, province of Aceh superior in publicities and water sector with a mean value of LQ 2.23; North Sumatra, West Sumatra, Jambi, Bengkulu, Lampung, Bangka Belitung excelled in the agricultural sector with the largest average value of LQ 2.89 in Bengkulu. While, Riau and South Sumatra excelled in mining with an average value of LQ in Riau. While in the Riau archipelago excels in manufacturing with a mean value of LQ 1.95 .

In **Jakarta and Java Islands**; DKI Jakarta winning the financial sector with a mean value of LQ 2.97. In West Java, East Java and Banten excelled at Publicities & Water sectors with the largest average value of LQ 5.17 is Banten province. For excelled sector in the central Java province is agriculture with LQ value of 1.42 and Yogyakarta in field service with average of LQ 1.81. As for the Bali islands excel in Publicities & Water with a mean value of LQ 2.03.

In **the islands of Kalimantan**; West Kalimantan and Central Kalimantan is excel in agriculture sector with a mean value of LQ 2.30, i.s. the highest LQ in Central Kalimantan. As for South Kalimantan and East Kalimantan excel in mining sector. The mean value of LQ 5.22 in East Kalimantan.

In the **islands of Sulawesi**, almost all the leading sectors are dominated by the agricultural sector ie in Central Sulawesi, South Sulawesi, Southeast Sulawesi, West Sulawesi and Gorontalo. The highest a mean value of LQ 3.52

is West Sulawesi province. As for the North Sulawesi provincial superior in the construction sector with a mean value of LQ 2.12.

In **Islands Nusa Tenggara**; Mining sector in West Nusa Tenggara is the highest resources with a mean value of LQ 2.97. In the East Nusa Tenggara, agriculture is the leading sectors with a mean value of LQ 2.84. In the Maluku islands; Maluku and North Maluku are both excelled in the Agriculture sector with the highest average value of LQ 2.63 in North Maluku. In the Papua Islands, dominated by the Mining sector with a value of LQ 5.03. In West Papua, Agriculture sector is superior to the value of LQ1.69.

The Rating of province dominated by the highest contribution of each sector compared nationally by using LQ, there are 20 provinces which make **the agriculture** as a leading sector. The highest provincial contribution in the agricultural sector ie first was West Sulawesi, and followed of Central Sulawesi, Lampung, Bengkulu and East Nusa Tenggara province. The most low-value national contribution is West Papua province. For **mining** sector, there are 13 provinces that dominate, and which has the highest contribution nationally namely Riau province followed by East Kalimantan, Papua, South Kalimantan, and the lowest ranking are South Sulawesi. There are five provinces that have contributed the leading sectors in **manufacturing**, the first rank is the Riau Archipelago followed by Banten, West Java province. The most low-value national contribution is West Papua and East Kalimantan province. While the leading sectors in **publicities, gas and water** there are 11 provinces. The highest contribution nationwide was Banten province followed by West Java, Aceh, Bali province and the lowest ranking are North Sulawesi.

In the **construction sector**, there are 15 provinces that have construction sector as a leading sector. The highest provincial contribution and was ranked first in North Sulawesi was followed by Jakarta, Yogyakarta Province. The most low-value contribution is North Sumatra province. As for **trade, hotel and restaurant** there are 17 provinces that have the highest contribution nationally. Bali province is the first ranking, followed by East Java province, North Maluku and the lowest ranking is West Sumatra. In the **transportation and communication sector**, there are 10 provinces which have superior sector. The highest contribution to the province and are in the first rank is West Sumatra, followed by South Kalimantan, North Sulawesi, Jakarta, and Bali province. The most low-value contribution is Banten province. For the **financial/Banking sector**, there are only two provinces that dominate this sector and which has the highest contribution nationally are Jakarta province, after that DI Yogyakarta province. While in the **service sector**, there are 22 provinces that dominate this sector. The highest contribution nationally namely East Nusa Tenggara province, after it followed by Gorontalo, Bengkulu, DI Yogyakarta, West Sumatra, while the lowest national contribution in the services sector is West Papua.

Analysis of Klassen Typology and Specialization Index of 33 provinces in Indonesia

After analysis of the leading sectors at the national level for each province, then it follows by using Method Klassen Typology obtained results which sectors are categorized as primary sector, potentially, stagnant or as a backward sector of each province. Klassen Typology mapping results, associated with planning activities for regional economic development in the future, among others, can be done in three phases, namely economic development priorities for the short term, medium term and long term.

In the previous explanation, for determine whether an area has specialized as an export or import of a commodity type, then the specialization index used in this study. the specialization index on exports and imports commodities for the 33 provinces in Indonesia are as follows:

Aceh Province

The results of mapping using Klassen Typology Method for the province of Aceh, that included prime sector is trade, hotel, restaurant and services. Most sectors of the economy in the province are grouped in potential and stagnant sectors namely manufacturing industry, electricity and water supply, transportation, communications and agriculture. While the remaining sectors of the economy compared to the same sector in Aceh province level is the mining, construction, and Bankinging / finance.

The development of exports and imports in each sector contributes significantly to the economic growth of the Aceh Province. The development of the value of exports and imports caused by an increase in volume (quantity and type of product) as well as an increase in the prices of exports and imports. The results using Index of Specialization showed the average value of the Aceh province has a purely export specialization in the agricultural sector, especially in the farm and forestry commodities and other commodities with specialization index positive. Industrial minerals and chemicals industry the average export specialization but not purely because of their export orientation change of commodity imports in 2008 into a commodity that is exported in 2009. For imports of pure, Aceh

province just specialize in the agricultural sector, especially forestry and fishery commodities commodities as the value of the index negative specialization.

The products are as a export commodities in the province Aceh in 2008 until 2012 include Urea, Anhydrous Ammonia, Iron Ores and Natural Rubber Latex. While the imported products are: Cereals, Salt sulfurs earths and stone, mineral fuels, In organics chemicals, Organic chemicals, Coffee mate, tea and spices, Fish and crustaceans Dairy products Oil seeds, and Sugar.

Nort Sumatera Province

The results of mapping for the province of North Sumatra shows that included prime sector are trade, hotel, restaurant and services. Most economic sectors are grouped in potential and stagnant sectors namely, manufacturing industry, electricity and water supply, transport communications and agriculture. While the remaining sectors of the economy compared to the same sector in the North Sumatra provincial level were mining, construction, and Bankinging / finance.

Based on the calculation with indexes specialization, North Sumatra province in the field of exports and imports according to the volume of export and import shows the North Sumatra province has specialized pure export on agricultural sector, especially in plantation commodities, the manufacturing sector, especially industrial metals as well as commodity other processing especially commodity chemicals and other commodities with positive index specialization result. To natural import, North Sumatra province has specializing in oil and gas, mining and quarrying, manufacturing sector and the metal industry especially, the commodity processing industry and the power sector, Gas and drinking water with a negative index values of specialization. Whereas the import of agricultural commodities especially not purely because, of the export orientation perubaan in 2008 to switch the orientation of imports in 2009 until 2012, and also the volume of imports is not too big.

The products are used as commodity exports and imports in the province of North Sumatra in 2008 until 2012 following; for Export products are Palm Oil, Natural Rubber Spec Technically, Crude Palm Oil, Coffee, Palm Kernel, Edible Mixtures, Cigarettes, Gloves and Vegetable. Commodity imports are: oil and gas, agriculture, mining and quarrying, Other industry.

West Sumatera Province

The results of mapping for the province of West Sumatra show that included the prime sector is transportation, communications and services. Most sectors of the economy in the province of West Sumatra are grouped in potential and stagnant sectors namely; construction, agriculture, processing industry; trade, hotels & restaurants and services. While the remaining sectors of the economy compared to the same sector in West Sumatra provincial level is the mining sector; electricity, gas and water as well as the Bankinging / finance.

The specialization index of West Sumatra province in the field of export and import according to the volume of export and import in 2008 until the year 2012. The export has specializes natural in the agricultural sector, especially in plantation commodities. In the manufacturing sector, especially commodity chemicals and other commodities with specialization index positive. ISP positive value and small for the manufacturing sector is especially; commodity chemicals and other commodities suggests that the change in orientation of the export volume of imports in 2008-2010 into 2011-2012. To natural import, West Sumatra just specialize in the agricultural sector, in particular animal husbandry, mining and quarrying sector in particular mineral, especially the manufacturing sector and the food commodity plastics as well as transport and communications sector because the specialization index of value is negative.

The products used as export commodities of West Sumatra province are: Palm oil, crude, natural rubber spec Technically, Palm Oil, Palm Kernel, Palm Kernel oil, Coal, Cocoa beans, nuts and palm oil cake industrial Mono carboxylic. The products used as commodity import are: Live Animals, Petroleum Products, Residual petroleum products and related materials, Carboxylic acids, and their hydroxides, Haldes, peroxides, Milk, Cream, and Milk products other than Butter or cheese, Other Plastics in Primary Forms, Ships, Boats and Floating Structures, and Article of Plastics.

Riau Province

The results of mapping for the province of Riau show that included prime sector is processing industry. Most sectors of the economy in the province of Riau are grouped in potential and stagnant sectors namely; construction, agriculture, mining; electricity, gas and water as well as Bankingings / financial; trade, hotels & restaurants and

services. At this province does not have a sector that is considered extremely underdeveloped, it shows the government is consistent growth and contribution of each sector in promoting economic growth regions.

The Specialization index of Riau province has a purely export specialization in the agricultural sector, especially in plantation commodities. the manufacturing sector, especially commodity chemicals and paper, as well as other commodities with specialization index positive. For natural import Riau province specializing in the agricultural sector, especially forestry and livestock commodities. In manufacturing sectors, especially mineral industry, plastics industry, electricity, gas and water as well as the building sector due to negative index values specialization.

The products are used as export commodities are: Palm oil, crude palm oil, chemical wood pulp, chemical products, paper and paperboard, industrial monocarboxylic, palm kernel/babasu oil, palm kernel/ babasu, crude oil and toilet/facial tissue stock. Imported products Riau province are: marine, machines/aircraft mechanic, pulp, fertilizers, grains oily, various chemical products, plastics and plastic goods, machinery/electrical equipment, salt, sulfur and lime, inorganic chemicals, fats and animal , vegetable oil, paper and cardboard, and milling results.

Jambi Province

The results of mapping for the province Jambi show that included prime sector is mining, trade, hotels and restaurants and the service sector. Most sectors of the economy in Jambi province are grouped in potential sectors and stagnant namely; electricity and water supply, construction, Bankingings / finance, agriculture and processing industry. While the remaining sectors of the economy compared to the same sector in Jambi province level is the service sector and the transportation / communication.

The Specialization Index of Jambi province especially in the agricultural sector are plantation commodities and forestry. In the manufacturing industry; especially mineral sector, the chemical industry and paper industry as well as other commodities with specialization index positive. The import of Jambi province only specializes in the agricultural sector, in particular animal husbandry and fishery commodities and the manufacturing sector especially food commodities due to negative index values specialization.

The products are used as an export commodity in the province Jambi is: Technically spec natural rubber, Coal, chemical wood pulp, coconut (copra) oil, crude toilet/facial tissue, palm kernel/babassu oil, Nut, Bituminous coal, and Plywood. Products made of imported commodities are: Milk, Cream, and Milk products other than butter or Cheese, Fish, fresh, Chilled or frozen, Fish, Dried salted or in Brine; Smoked fish, Other cereal meals and flours, Fruit and Nut; Fresh or Dried and Spices.

South Sumatera Province

The Mapping results for the province of South Sumatra show that included the prime sector when viewed from the average contribution and growth of the year 2008 until 2011 is a trade, hotels, restaurants and services. Most sectors of the economy in the province of South Sumatra are grouped in the power sector and water supply, construction, transportation/communication, Bankingings/finance, agriculture, mining, and processing industries. While the lagging economics sector in the province does not exist.

The specialization Index (ISP) of South Sumatra province have a purely export specialization in the agricultural sector in particular commodity plantations, mining and quarrying sector in particular mineral industry. In the manufacturing sector, particular is commodity chemicals with specialization index positive. ISP positive value and small for agricultural commodities show that the change in orientation of the volume of imports into exports and vice versa from 2008 until 2012. For pure imported South Sumatra province, specialize in the industrial sector, especially the processing of metal materials, the building sector due to negative index values specialization. For the transport and communications between 2008 and 2009 still specialize import but in 2010 specializing in exports and imports specialization back in 2011 and 2012. Especially for the dining industry in South Sumatra specialize imports in 2008 and 2009 specialized in export.

After classification, the export of their products are: Technically spec natural rubber, Palm Oil, Coal, bituminous coal, industrial Mono carboxylic, cake oil palm nuts, natural rubber, Urea Palm kernel, and compounded rubber. Products imported South Sumatra are: machinery and mechanical appliances, goods of iron and steel, machinery/electrical equipment, fertilizers, organic chemicals, salt, sulfur, lime, various chemical products, optical devices, sugar and confectionery and the results of milling.

Bengkulu Province

The mapping results for Bengkulu province show that included the primary sector when viewed from the average contribution and growth of the year 2008 until the year 2011 is the service sector. Most sectors of the economy in the province of Bengkulu are grouped in potential and stagnant sector is mining, and processing industries, electricity and water supply, construction, transportation/ communication, Bankinging finance, agriculture, trade, hotels and restaurants and services. While the lagging economic sector does not exist in the province.

The specialization Index (ISP) of Bengkulu province has a naturally export specialization in the agricultural sector, especially in forestry and agricultural commodities, mining and quarrying, as well as other commodities with specialization index positive. For purely import, Bengkulu province had specialized sector of electricity, gas and drinking water, as well as transport and communications sector due to negative index values specialization.

The export products as superior product is Bituminous Coal, Other Coal, Anthracite Coal, vegetable Products, Oil-Palm-nuts cake, Oil cake coconut/copra, oil cake Technically spec vegetable Products and natural rubber. Imported products of Bengkulu province is Sugar, Molasses, and Honey, Residual petroleum Products and Related Materials, Articles of the Articles of Rubbers, Tubes, Pipes, Hollow Profile, Pipe Fittings of Iron/Steel, Structures and parts of iron/Steel or Aluminum, Metal containers for storage and transportation, Rotating Electrics Plants and Parts, Civil Engineering and Contractor Plants and Equipment/Parts, Metal Working Machinery and Parts, also Ships, Boats and Floating Structures.

Propinsi Lampung

The results of mapping for the province of Lampung showed that 9 sectors that there is none that is included in the category of prime sector when viewed from the average contribution and growth in 2008 to 2011. The majority of economic sectors in the province of Lampung are grouped in potential sectors and stagnant i.e electricity and water supply sector, transport / communication, Bankingings / finance, services, agriculture, processing industry and trade, hotels and restaurants. While the remaining economic sectors are mining and construction.

The specialization Index (ISP) of Lampung province has specialized purely on the export of agricultural commodities, especially plantation and fishery commodities, the manufacturing sector, especially industrial minerals, and other commodities as indicated by the positive specialization index. For pure import Lampung province specializing in the agricultural sector, especially livestock, as well as the industrial sector and food processing industries in particular commodity as indicated by an index value of negative specialization.

After the export classification by sector using Specialization Index is Palm oil, crude, coffee not roasted, bituminous coal, Pepper, other than crude palm oil, chemical wood pulp, palm kernel/ babasu oil, shrimps and prawns, Pineapples, and Technically spec natural rubber. Imported products based on the index of specialization are: Milk, cream milk products of butter and cheese Fish, Rice meal and flour, Vegetables, Fruit, Sugar and cooper aluminum zinc.

Bangka Belitung Islands

The result of Mapping for the province of Bangka Belitung any one sector are not included in the category of excellence when viewed from the average contribution and growth in 2008 to 2011. The majority of economic sectors in the province of Bengkulu are grouped in potential sectors and stagnant namely mining sector, electricity and water, the building sector, the service sector, agriculture, manufacturing, and trade, hotels and restaurants. While the lagging economic sector is the transport sector/communication sector and Bankinging/finance.

The specialization of Bangka Belitung on the exports of fishery commodities, especially agricultural and plantation commodities, mining and quarrying sector in particular mineral industry, the manufacturing sector of the chemical industry and other commodities. To import Bangka Belitung province specialize purely sector on electricity, gas and water and transport and communications are indicated by an index value of negative specialization.

The export classification sector is Tin, Crude Palm Oil Natural Rubber, Pepper, Fish, Compound Rubber Iron Ores, Palm Kernel, Kaolin, and Cutter Fish. Import commodities are: Ships and floating buildings, machinery/mechanical appliances, Fertilizer machinery/electrical equipment, goods iron and steel, and materials albumin/adhesive, enzymes.

Riau Islands

The results of mapping for the province of Riau Islands show that included the prime sector when viewed from the average contribution and growth of the year 2008 until the year 2011 is the trade, hotels and restaurants. Most sectors of the economy in the province of Riau Islands are grouped in potential sectors and stagnant namely electricity and water supply sector, the construction sector, transportation sector, Bankingings/financial services sector, industry and processing. While the underdevelopment economic sectors in the province is agriculture and mining sectors.

Specialization Riau Islands province has a pure export specialization in the agricultural sector especially in commodities and commodity plantation forestry, manufacturing sector, especially the chemical and paper industry and other commodities. For pure import Riau Islands province specializing in the agricultural sector, especially livestock commodities as indicated by an index value of negative specialization.

After classification, export commodities are: Palm oil other than crude oil, Palm oil crude, chemical wood pulp, chemical products, paper and paperboard, industrial Mono carboxylic, Palm kernel/ babassu oil, palm kernel/babassu oil crude, and toilet/facial tissue, Product imports are: Meat of animals Boone, Tea and mate, Spices, Cocoa and cheese and curds.

DKI Jakarta Province

The Mapping results for the province of Jakarta shows that included the prime sector when viewed from the average contribution and growth of the year 2008 until the year 2011 is a trade, hotels and restaurants, transportation/communication and services sectors. Most sectors of the economy in the province of Jakarta are grouped in potential and stagnant sectors namely construction sector, the manufacturing sector and the Banking sector/finance. DKI Jakarta has underdeveloped sectors, namely agriculture, mining, and electricity and water sectors.

DKI Jakarta has a purely export specialization in the manufacturing sector, especially the shoe industry, transportation/communication and other commodities as indicated by the positive specialization index. For pure import Jakarta province specializing in the agricultural sector and livestock commodities, especially agricultural commodities and industrial sector and processing industries, especially food which is indicated by a negative value of the index of specialization.

The Classification of products used as export commodities are: Machines copying and facsimile printing of rubber tires for motorcycles, sports footwear, Vehicles, base stations for transmission/ reception of voice, video recording, cooper wire, other color reception apparatus for television. Imported products are: Live Animals other than Fish, Meat of Bovine Animals Fresh, Chilled or Frozen, Other meat, Offal of edible meat, fresh, chilled or Frozen, Wheat and Meslin, Unmilled and Rice.

West Java Province

The mapping results for the province of West Java shows that included the prime sector when viewed from the average contribution and growth in 2008 to 2012 is the trade, hotels and restaurants. Most sectors of the economy in the province of West Java are grouped in potential sectors and stagnant namely electricity and water supply sector, the construction sector, transport/communications, Banking/finance, the service sector, the agricultural sector and processing industry. While the remaining sectors of the economy is the mining sector.

Specialization index of West Java province has a purely export specialization in agricultural and plantation commodities, especially transport and communications sector, and other commodities as indicated by the positive specialization index. As for the processing industry especially commodity chemical industry has an average export specialization but not purely export since 2008 the province of West Java import of chemical industry products. To import pure West Java province specialized mining sector specifically indicated mineral industry with specialization index value is negative.

After the classification of export, the products are used export commodities are: isoprene, Oils, Iron/ steel, cocoa butter, fat and oils propene, parts of airplane, drilling for oil/gas, vinyl chloride and cocoa paste. Commodities imported products include: other chemical organics, stone sand and gravel, petroleum crude oil, and petroleum products.

Central Java Province

The mapping results for the province of Central Java show that included the prime sector when viewed from the average contribution and growth of the year 2008 until the year 2011 was the manufacturing sector, as well as trade, hotels and restaurants. Most sectors of the economy in the province of Central Java are grouped in potential sectors and stagnant namely electricity and water supply sector, the construction sector, transport/communications, Banking/finance, service sector, agriculture and mining sectors. While the lagging economic sector does not exist in the province.

The Specialization Index in Central Java province has a purely export specialization in the agricultural sector, especially commodities and commodity plantation forestry, manufacturing industry, especially textile industry and other industries, as well as electricity, gas and drinking water as indicated by the positive value of the index of specialization. To import pure Central Java province specializing in the industrial sector, especially the processing of industrial minerals and construction sector as indicated by an index value of negative specialization.

After the export classification, details of products are used export commodities namely: Palm oil, plywood, wooden furniture, men's/boy's shirts Yarn wood, seats of cane and Cables. Products imported commodities are: Iron/steel, rail/railway and tractor, construction, wire of iron/steel Cooper, Nickel and Aluminum.

DI Jogyakarta

The mapping results for DI Yogyakarta province shows that included the prime sector when viewed from the average contribution and growth of the year 2008 until the year 2011 was the manufacturing sector, trade, hotels and restaurants as well as the services sector. Most sectors of the economy in the province of Yogyakarta are grouped in potential and stagnant sectors namely construction sector, transport/communications, Banking/finance and agriculture. While the lagging economic sectors are mining and electricity and water sectors.

Specialization index in DI Yogyakarta province has a purely export specializes in the manufacturing sector, especially the paper industry and other commodities as indicated by the positive value of the index of specialization. To import pure DI Yogyakarta province specializing in the agricultural sector, especially industrial estates and manufacturing sectors, especially textile industry as indicated by an index value of negative specialization.

Export classification by sector using Specialization Index are: Paper of a kind used for h-hold/ sanitary purpose. While the commodity imports are: Vegetables, Fresh, Chilled, Frozen or Simple Preserved, Vegetables, Roots and Tubers, Prepared or Preserved Nes, Crude Vegetable Materials, Textile Yarns and Cotton Fabrics, Woven.

East Java Province

The mapping results for the province of East Java show that included the prime sector when viewed from the average contribution and growth in 2008 to 2012 is the trade sector. Most sectors of the economy in the province of East Java are grouped in potential and stagnant sectors namely construction sector, transport/communications, Banking/finance, agriculture, and manufacturing. While the lagging economic sector is mining, electricity and water supply sector, and service sectors.

East Java Province has a purely export specialization in the agricultural sector, especially the plantation commodities, commodity fishery and forestry commodities, the manufacturing sector, especially industrial minerals and paper industries, as well as other commodities as indicated by the positive value of the index of specialization. For pure imported from East Java Province specializes in food processing industry with specialization index negative.

After the export classification following are details of the products used as an export commodity; Palm Oil Gold, Waste and Scrap of precious metal, cathodes and sections of cathodes of refined copper, technically spec natural rubber, paper & paper board, lysine and its esters, shrimps and prawns, un wrought products of refined cooper and Wood. Products imported commodities are: Tea and mate, Spices, feeding stuff for animal, margarine and shortening and Wood.

Banten Provinve

The mapping results for the province of Banten show that included the prime sector when viewed from the average contribution and growth in 2008 to 2012 is the processing industry. Economic sectors in the province of Banten which are grouped in potential sectors and stagnant namely the transport sector/communications, Banking/finance,

and trade, hotels and restaurants. While the remaining sectors of the economy namely agriculture, mining, electricity and water supply sector, the construction sector and the services sector.
Specialization index Banten province has a purely export specialization in mining and quarrying sector in particular commodity gas as indicated by the positive value of the index of specialization. But there are also average export impure means that in some periods of observation are more orientation changes to imports and exports although the average value of the ISP is positive among other sectors of trade, hotels and restaurants as well as other commodities. Banten province for pure imported from 2008 to 2009 had an average specialize in the industrial sector, especially the processing of the food industry and transport and communications are indicated by an index value of negative specialization. As for the processing industry, especially the chemical industry is import-oriented, but small. The period 2008 to 2012 period there are changes in export orientation be imported.

After classification, the following are the details of the products are used export commodities Styrene, ethylene dichloride, paper & paper board, esters of acrylic acid, prefabricated structural components for building, ethyl acetate, slag, dross, and line pipe of a kind used for oil / gas. Products imported commodities are: Foodstuffs and live animals, food ingredients are not to be eaten, fuel pelicans, polishers and materials relating to chemicals and machinery and transportation equipment

Bali Province

The mapping results for the province of Bali show that included the prime sector when viewed from the average contribution and growth of the year 2008 until the year 2011 is the service sector. Most sectors of the economy in the province of Bali are grouped in potential sectors and stagnant is mining, construction, agriculture and trade, hotels and restaurants. While the lagging economic sectors in the province is pretty much that the manufacturing sector, electricity and water supply, transportation/ communication sector and Bankinging/finance.

Bali province has specialized purely on the exports of fishery commodities, especially agricultural sector as indicated by the positive value of the index of specialization. For other commodities the average ISP shows export specialization, but in 2010 the import-oriented value although small. To import pure Bali province specialized agricultural sector, especially commodities forestry and plantations, mining and quarrying sector in particular minerals industry, the manufacturing sector, especially industrial machinery and chemical industry, transportation/communication, and financial sector/rental which is indicated by an index value of specialization negative. For electricity, gas and drinking water, ISP shows the value of imports but specialization not pure imported in 2010 this is due to export specialization, but since 2012 the import-oriented.

After the export classification of the Bali provincial export commodities are: Yellow fin Tunas, Live Fish, Tunas, Skip jack and Bonito, Bigeye Tunas, Fresh or Chilled Fish and Electric Discharge Lamp. Commodity imports are: machinery/mechanic, Marine and Building Floating, Jewelry gems, Machinery/equipment, grains, optical devices, goods of leather, Organic Chemicals, objects of iron and steel, rubber and rubber goods, Gas Turbine, Bells, Watches and parts, Parts of Silver Jewellery, Silver semi-finished materials, equipment instruments and models part of the show, Sound Card and Video Card and New Pneumatic Tires.

West Kalimatan Province

The mapping results for the province of West Kalimantan show that included the prime sector when viewed from the average contribution and growth in 2008 to 2012 is the trade, hotels and restaurants and the service sector. Most sectors of the economy in the province of West Kalimantan are grouped in potential sectors and stagnant is mining, construction, utilities and transport/communications sector, Bankingings/finance, agriculture and processing industry. While the economic sector in the province is lagging sector of electricity, gas and water.

West Kalimantan Province has a purely export specialization in the agricultural sector, especially forestry and plantation commodities, mining and quarrying sector in particular mineral commodities and the manufacturing sector, especially food commodities showed with specialization index positive. While other commodities as well as electric, gas and water have specialized export but not purely because of the years of observation of this province also specialize import. To import pure West Kalimantan specialized agricultural sector, especially livestock commodities, and transport and communications sector showed with specialization index negative. The value of ISP import for commodity chemicals is small.

The commodity export in West Kalimantan is: Technically spec natural rubber, aluminum ores, Plywood, compound rubber, Iron ores, oil cake palm nuts, Edible matures, Wood, light vessels, Fruity, Wood and articles of wood, fats and oils of animal/ vegetable , fish and shrimp, salt, sulfur, lime, Ore crust and Abu Metals, Tobacco and variety of chemical products. Commodity imports are: Fuel Minerals, Machinery/Aircraft Mechanic, Marine, Fertilizer, Iron

and Steel, Grains oily, Machinery/Electrical Equipment, Vehicles and Parts, objects of iron and steel, as well as salt, sulfur, Lime.

Central Kalimantan Province

The mapping results for the province of Central Kalimantan show that included the prime sector when viewed from the average contribution and growth in 2008 to 2012 is the trade, hotels and restaurants and the service sector. Sectors that are grouped in potential sectors and stagnant in the province, is the mining, construction, utilities and Bankingings/financial, and agricultural sectors. While the economic sector in the province is lagging behind among manufacturing sector, electricity and water supply sector and the transportation/communications.

The Specialization index based Central Kalimantan province has a purely export specialization in the agricultural sector, especially the plantation commodities and forestry, the manufacturing sector, especially the mineral industry, chemical industry, as well as other commodities as indicated by the positive value of the index of specialization. For import, Central Kalimantan province purely specialize in the manufacturing sector, especially the plastics industry as indicated by an index value of negative specialization.

After classification of export, the products are used as an export commodity is Palm oil other than crude oil, crude palm oil, Plywood, iron ores, plywood veneered panels, and bituminous coal, plywood consisting solely, vegetables fats & oils, aluminum ores and Industrial Mono carboxylic. The excellent commodities for imported was synthetic Rubber Latex, other crude minerals, residual petroleum, tubes, pipes and hoses of plastics.

South Kalimantan Province

The mapping results for the province of South Kalimantan show that included the prime sector when viewed from the average contribution and growth in 2008 to 2012 is the trade, hotels and restaurants. Sectors that are grouped in potential sectors and stagnant in the province of South Kalimantan is electricity and water supply sector, the construction sector, transportation/communications, Bankingings/financial, service sector, agriculture, mining, and manufacturing industry sector. The high economic activity in all sectors so that no sector is obtained retarded.

The Specialization index in province of South Kalimantan has a purely export specialization for the agricultural sector, especially the plantation commodities and forestry, as well as mining and quarrying sector in particular mineral which is indicated by an index value of positive specialization. The purely import of South Kalimantan province was specialized in the manufacturing sector, especially chemicals industrial commodity, machinery industrial commodity and paper commodity. Transportation and communications sector showed with specialization index negative. While the agricultural sector, especially livestock commodities and other commodities have an average of little import from the period 2009 to 2012 because of changes in import export orientation became vice versa.

The export classification using Specialization Index are: natural rubber, wood, rattan, fish, coal, and oil palm. Import commodity classification are: Machinery Industry Specific/Special, Organic Chemistry, Industrial Machinery & Equipment, Motor Vehicles For Highways, Other Chemicals, Artificial Chemical Fertilizer Plant, and Paper, Cardboard & dairy

East Kalimantan Province

The mapping results for the province of East Kalimantan show that included the prime sector when viewed from the average contribution and growth in 2008 to 2012 is the mining sector. Sectors that are grouped in potential sectors and stagnant, in East Kalimantan province is agriculture, electricity and water supply, construction, trade, hotels and restaurants, hotels, transportation/communication sector Bankingings/financial services sector, and the manufacturing sector.

Based on the Specialization Index of East Kalimantan province has a purely export specialization in the agricultural sector, especially forestry commodities, as well as mining and quarrying sector in particular mineral which is indicated by an index value of positive specialization. But for the manufacturing sector, chemicals and other commodities has an average value of exports is small because between 2008 until 2012 there is a change of orientation of exports into imports vice versa. The purely import in East Kalimantan province specializing in the agricultural sector, especially the livestock industry, mining and quarrying sector in particular commodity oil, the manufacturing sector in particular commodity plastics, electricity, gas and water, construction, transport and communications as well as the service sector indicated by specialization index value is negative.

Export classification by sector with the specialization index, in the province of East Kalimantan is Bituminous Coal, Other Coal, Lignite, Anhydrous Ammonia, Urea, Floating/submersible drilling, palm oil, crude, Plywood, Methanol and Wood. While the products subject to import is Fuel Minerals, Machinery and mechanical equipment, ships, boats and floating structures, fertilizers, vehicles other than moving on railway or tramway, articles of iron or steel, rubber and articles thereof, instruments and apparatus optical, and explosives, pyrotechnic products and a variety of chemical products.

Nort Sulawesi Province

The results of mapping using Klassen Typology Method, for the province of North Sulawesi indicates that including the prime sector from the average contribution and growth of the year 2008 until the year 2011 is a trade, hotels and restaurants as well as the transportation/communications. The sectors which are grouped in potential and stagnant sectors are electricity and water utilities, Bankingings/ finance, agriculture, construction and service sectors. While the underdevelopment economics sectors in the province among other mining sector and the manufacturing sector.

Specialization Index (ISP) of North Sulawesi province has a purely export specialization in the agricultural sector, especially plantation and fishery commodities, the manufacturing sector, especially the chemical industry, as well as other commodities showed with specialization index positive. To import pure Central Kalimantan province specializing in agricultural commodities, electricity, gas and drinking water, as well as transport and communications sector showed with specialization index negative.

The export classification by using the index specialties are Coconut (copra) oil, Palm Oil, Tunas, skip jack and bonito, oil cake coconut/copra, smoked fish, palm kernel/babassu oil, palm kernel/babassu crude oil, oil cake palm nuts, Industrial and Mono carboxylic. While imports of North Sulawesi province is not specific Item.

Central Sulawesi Province

The results of mapping using Klassen Typology Method for Central Sulawesi province indicates that including prime sector of average contribution and growth in 2008 until 2012 is the trade sector. Sectors that are grouped in the sector and the potential is stagnant construction sector, transportation/ communications, agriculture, mining and services sectors. While the underdevelopment economic sectors in the province among other manufacturing sector is electricity and water supply sector and the Bankinging sector / finance.
Specialization index (IPS) of Central Sulawesi province has a purely export specialization in the sectors of manufacturing industry, especially industrial minerals and metal industries, as well as other commodities showed with specialization index positive. For the agricultural sector, especially commodity and commodity plantation forestry on average specialized on exports but not a pure export since 2008 to 2011 exports but in 2012 switched over much do the imports. To import pure Central Sulawesi province specializing in the fisheries sector, the manufacturing sector, especially the food industry, the sector of electricity, gas and water are shown with a negative index value of specialization.

The export classification by sector using the specialization Index are: nickel ores, cocoa beans, crude palm oil, doors and iron ores. While commodity import control are: fish and shrimp, the result of grinding, biki-bikian oily, lacquers, gums and resins, fats and animal/vegetable oil, cocoa beans, iron ore, crust and metal, mineral fuels, oils astiri, wooden goods and wooden goods , furniture home lighting, and refined flour.

South Sulawesi Province

The mapping results for the province of South Sulawesi that included the prime sector when viewed from the average contribution and growth in 2008 to 2012 is the trade sector. Sectors that are grouped in the sector and the potential and stagnant is water and electricity sectors, the construction sector, the sector of transportation/ communication, Bankinging/finance, agriculture, manufacturing, and service sectors. While the lagging economic sector in this province is the mining sector.

Specialization index (ISP) of South Sulawesi province has a purely export specialization in the agricultural sector, especially forestry commodities, plantation and fishery commodities; the manufacturing sector, especially industrial minerals, as well as other commodities indicated by an index value of positive specialization. To import pure South Sulawesi province specializing in the manufacturing sector, especially the food industry and the chemical industry, electricity, gas and water and transport and communications are indicated by an index value of negative specialization.

After the export classification following are details of the products used as export commodities in South Sulawesi province namely: Nickel Mattes, cocoa beans, seaweeds and other algae, shrimps and prawns, plywood, bran, sharps and other residues, coffee not roasted, fish fillets and other fish meat, Crab prepared/preserved and livers and roes of fish. Product imports are: Mineral fuels, grains, machinery/ mechanical appliances, pulp/rest of the food industry, marine, fertilizer, machinery/ electrical equipment, sugar and confectionery, inorganic chemicals, and salt, sulfur, lime.

Southeast Sulawesi Province

The mapping results for the province of Southeast Sulawesi shows that included the prime sector when viewed from the average contribution and growth of the year 2008 until the year 2011 is a trade, hotels and restaurants. Sectors that are grouped in potential and stagnant is the mining sector, the sector of electricity, gas and water supply, construction, utilities and transport/communications sector, Bankingings/finance, agriculture, and service sectors. While the lagging economic sectors in the province is the manufacturing sector.

The specialization index of Southeast Sulawesi province has a purely export specialization in mining and quarrying sector, in particular mineral commodities and other commodities. Specifically for the agricultural and fishery commodities on average have smaller export specialization since 2009 until 2012 changes the orientation of specialization imports into exports. For imports from 2008 to 2012, the average specialty is imported small due to changes in the orientation of imports in 2008 to 2010 to be exported in 2011 for plantation commodities, commodity forestry, agricultural commodities, commodity farms and processing industry.

Export classification by sector using Specialization Index is Nickel ores and concentrates, ferro-nickel, Bitumen & Asphalt, Chromium ores, Lignite and skip jack/stripe-bellied bonito. For commodity imports, not specified.

Gorontalo Province

The results of mapping using Klassen Typology Method for the province of Gorontalo indicated that included the prime sector when viewed from the average contribution and growth of the year 2008 until the year 2011 is a trade, hotels and restaurants. Sectors that are grouped in potential and stagnant is the mining sector, electricity, gas and water supply, construction, utilities and transportation/communications sector, Bankingings/finance, agriculture and service sectors. While the lagging economic sectors in this province is the manufacturing sector.

The specialization index of Gorontalo province has a purely export specialization in the agricultural sector, especially the plantation commodities which is indicated by an index value of positive specialization. To import pure Gorontalo province specializing in the agricultural sector, especially livestock and agricultural commodities, mining and quarrying in particular mineral commodity; the manufacturing sector, especially the food industry, plastic industry, and the textile industry, electricity, gas and water, the building sector, the sector transport and communications and other commodities as indicated by an index value of negative specialization.

The export classification by sector using Specialization Index are maize (corn), Cane Molasses, Wood, Oil Cake coconut / copra, Molasses, and Coconut (copra) crude oil. Commodity imports are: Fuel Mineral, Petroleum and distillates, Plastics and stuff like, yarn fabric is not woven, Goods from stone plaster, iron and steel, articles of iron and steel, equipment / tooling of metal, machines and machine parts , electrical machinery and equipment, motor vehicles for goods, automatic turbine and Sugar & Candy.

West Sulawesi Province

The results of mapping using Klassen Typology Method for the province of West Sulawesi indicated the prime sector when viewed from the average contribution and growth of the year 2008 until the year 2011 is the trade, hotels and restaurants and the service sector. Sectors that are grouped in potential and stagnant is the mining, manufacturing, electricity and water utilities, transportation / communication and agriculture. While the economic sector in the province is lagging behind other as well as construction and Bankinging/finance sector.

The specialization index of West Sulawesi province has a purely export specialization in the agricultural sector, especially tree crops, as indicated by the positive value of the index of specialization. To import pure West Sulawesi province specializing in the agricultural sector, especially forestry commodities, commodity fisheries and livestock commodities, the manufacturing sector in particular other industries, trade, hotels and restaurants and transport and communications sector showed with specialization index negative.

After the export classification by sector using the Specialization Index details of the products used as an export commodity is crude palm oil, manganese ores. While commodity imports are cement, wood, fish, rope former, Car, Motorcycle and Animals.

West Nusa Tenggara Province

The mapping results for the province of West Nusa Tenggara indicates that the average prime sector contributions and growth in 2008 to 2012 is the trade, hotels and restaurants and the service sector. Sectors that are grouped in potential and stagnant is manufacturing sector, electricity, gas and water supply, construction, utilities and transportation/communications sector, Bankingings/finance, agriculture, and mining sectors. Rapidly developing economic activities in the province are not found to cause the sectors that fall into the category of underdeveloped sector.

Pure export specialization in the manufacturing sector in particular mineral which is indicated by an index value of positive specialization. For pure import West Nusa Tenggara specialized in agricultural sector, especially the plantation commodities. Metal processing industry, chemical industry and other industries, electricity, gas and water, transport and communications sector showed with specialization index negative. While other commodities on average have specialized import small because of changes in import specialization into exports in 2009 to 2012.

Export classification using Specialization Index only cooper ores. While commodity imports are mineral fuels, machinery, mechanical appliances, vehicles and parts, rubber and rubber goods, objects of iron and steel, Explosives, machinery/electrical equipment, salt, sulfur and lime, organic chemicals, rubber and rubber products and fertilizers

East Nusa Tenggara Province

The mapping results for the province of East Nusa Tenggara indicated that included the prime sector of the average contribution and growth in 2008 to 2012 is the trade, hotels and restaurants and the service sector. Sectors that are grouped in potential and stagnant is the mining sector, the sector of electricity, gas and water supply, construction, utilities and transportation/communications sector, Bankingings/financial and agricultural sectors. While the undevelopment economic sectors in the province is the manufacturing sector.

The specialization index of East Nusa Tenggara province has a purely export specializes in the manufacturing sector, especially the mineral industry and other industries; transport and communications sector and the service sector as indicated by the positive value of the index of specialization. East Nusa Tenggara province to import pure specialize in plantation commodities, especially agricultural sector, the manufacturing sector, especially the mineral industry, heavy industry, metal industry, and electricity, gas and water are shown with a negative index value of specialization.

Export classification by sector using Specialization Index is a commodity: Manganese ores, Hydraulic Cements and Tar distilled from coal. While commodity imports are: Machinery/Electrical equipment, coffee, tea and spices, utensils and cutting tools and a wide range of basic metal goods.

Maluku Province

The mapping results for maluku province using Klassen Typology Method indicated that included prime sector is trade, hotels and restaurants and the service sector. Sectors that are grouped in potential and stagnant is the mining, construction, utilities and transportation / communication and agriculture. While the underdevelopment economic sectors in the province among other is manufacturing industry, electricity, gas and water supply, and the Bankinging/finance sector.

The specialization index of Maluku province have specialized purely on the export of agricultural commodities, especially agricultural commodities, fisheries and other commodities as indicated by the positive value of the index of specialization. For pure import Maluku province specializing in the agricultural sector, especially agricultural commodities and plantation commodities, the manufacturing sector, especially the food industry, textile industry, and consumer industries as indicated by an index value of negative specialization.

Export classification by sector using Specialization Index is Fish, Shrimp and Prawns, Cuttle Fish, Yellow fin tuna, Salmonide, fish fillets and Tunas. Commodity imports Maluku province is Rice, Cereal, Vegetables, feeding stuff for animal, old clothing, Perfumery, cosmetics and toilet preparation, Materials of Rubbers and Articles of Rubbers.

Propinsi Maluku Utara

The mapping results for the province of North Maluku indicated that the average of contribution and growth in 2008 until 2012 is the trade, hotels and restaurants and the service sector. Sectors that are grouped in this sector potential and stagnant is construction sector, transportation/communication, Bankinging/financial, services sector, agricultural sector and manufacturing sector. While the underdevelopment economic sectors in this province among other sectors is mining sector, electricity and water.

North Maluku province have specialized export processing industry, especially industrial minerals and other commodities to the value of specialization index positive. However, the volume of exports to other commodities do not occur in 2009. The only sustainable North Maluku do more import activity. To import pure North Maluku province specializing in the sector of electricity, gas and water, and transport and communications are indicated by an index value of negative specialization. While agriculture is not purely import because the province still export of agriculture.

Based on export classification by sector using Specialization Index are: Nickel Ores, Coconut Oil cake/copra, Copra. Imported commodities are: Stone, sand and gravel, Petroleum products, Materials of Rubbers, Articles of Rubbers, electric power machinery and parts and the motor vehicle for the transportation of goods.

Propinsi Papua Barat

The mapping results for the province of West Papua indicated that included prime sector is the manufacturing sector. Sectors that are grouped in potential sectors are not found in this province and stagnant sectors are agriculture and mining sectors. Generally, there are still many sectors in the province were classified as other economic sectors, the electricity and water sector, the construction sector, trade, hotels and restaurant sector, transportation / communication sector Bankingings / financial and service sectors.

Specialization index of West Papua province has specialized purely on the export of agricultural commodities, especially plantation and fishery commodities, the manufacturing sector, especially industrial minerals and other commodities to the value of specialization index positive. To purely import, West Papua province specializing in the agricultural sector, especially forestry commodities, the manufacturing sector, especially the chemical industry, electricity, gas and water utilities, as well as the building sector as indicated by an index value of negative specialization.

Based on export classification by sector using the Index Commodity specialization are: Coal, Bituminous Coal, Lignite, palm oil, shrimps and prawns, Nickel ores, Fish, and rock lobsters. Commodity imports of Papua Province west are: Polymers of ethylene in primary forms, Tubes and pipes, Materials of rubber, Articles of Rubbers, Heating and cooling equipment and parts and rotating electric and parts.

Propinsi Papua

The mapping results for the province of Papua indicated that included the prime sector from the average contribution and growth in 2008 until 2012 is the agricultural sector. Sectors that are grouped in potential and stagnant is manufacturing industrial sector, the sector of electricity, gas and water supply, construction, trade, hotels and restaurant, transportation/communication, Bankinging/ financial, services sector and the mining sector. Economic sector that remains are not found in this province.

Based on specialization Index of Papua province has specialized purely in agricultural export commodities, especially livestock, mining and quarrying sector in particular mineral commodity with a positive index values specialization. However, the export volume for forestry commodities and other commodities on average impure because of the transition from the export orientation of imports into exports. For pure imports of Papua province specializes in the manufacturing sector, especially commodity chemicals and commodity plastics, electricity, gas and water, transport and communications, and service sectors as indicated by an index value of negative specialization.

Export classification by sector using Specialization Index is: Cooper Ores & concentrates, Plywood, Fish, Wood, Hoop wood, and Salmonide. While commodity import is: Wood, Coal, Chemical, Mechanical and electrical appliances, vehicles other than moving on the tracks and trains and trams.

Conclusion

Based on the results of LQ and Klassen Typology Method recommended the province as the province with the leading sectors/potential for business development with the following criteria:

- Nationally as categorized seed sector
- Categorized in the primary sector, stagnant, and there is the potential and the sector is not expected to enter the category of backward
- Specializes export and import based on these criteria then there are 8 provinces are recommended i.e. Central Sulawesi, Gorontalo, Papua, West Sumatra, Riau, East Kalimantan, South Kalimantan and West Kalimantan because in 8 provinces, the contribution of each sector is very high as the pace of growth in the sector.

Reference

[1] Esteban, J. (2000). Regional convergence in Europe and the industry mix: a shift-share analysis. *Regional science and urban economics*, *30*(3), 353-364.

[2] Esteban-Marquillas, J. M. (1972). I. A reinterpretation of shift-share analysis. *Regional and urban economics*, *2*(3), 249-255.

[3] Fan, F. (2007). The Measurement of Regional Specialization, Economic Research Journal, 53, 71-83.

[4] Flegg A. T. and Webber C. D. (1997). On the Appropriate Use of Location Quotients in Generating Regional Input-Output Tables: Reply. Regional Studies, 31, 795-805.

[5] Richardson, H. W. (1973). Theory of the distribution of city sizes: Review and prospects. *Regional Studies*, *7*(3), 239-251.

[6] Jhingan, (1996), Economic Development and Planning, Raja Grafindo Persada, Jakarta.

[7] Kim, Sukkoo. (1995), "Expansion of markets and the geographic distribution of economic activities: the trends in US regional manufacturing structure, 1860-1987." *The Quarterly Journal of Economics page*: 881-908.

[8] Kuncoro, Mudrajad, (2004), Autonomy and Regional Development, Reform, Planning, Strategy and Opportunities, Erlangga publisher, Jakarta.

[9] Lin, Justin YifudanZhiqiang Liu. (2000), Fiscal Decentralization and Economic Growth in China.Economic Development and Cultural Change. Chicago. Vol 49.Hal: 1 – 21

[10] Lu, Zheng, and Xiang Deng, (2011). "Regional Specialization: A Measure Method and Trends in China". MPRA Paper No. 33867, November

[11] Ma, Meilin, Sandro Steinbach, and Junqian Wu."Asian Journal of Agriculture and Rural Development."*Asian Journal of Agriculture and Rural Development* 4.2 (2014): 113-127.

[12] Mayer, Robert R, (1985), Policy and Program Planning, A Developmental Perspective, Prentice-Hall Inc, New Jersey.

[13] Munir, Badrul, (2002), Planning for Regional Development in the Perspective of Regional Autonomy second edition.

[14] Nijkamp, P., P. Laschuit, F. Soeteman, (1991), Sustainable Development in a Regional System, Serie Research Memoranda, Faculteit der Economische Wetenschappen en Econometrie, vrije Universiteit, Amsterdam

[15] Rowland B.F Pasaribu, impact of Globalization in public life, https://rowlandpasaribu.files.wordpress,com (diakses, 10 November 2015)

[16] Statistics Financial Government District / City 2008-2012

[17] Syaifullah (2008), Analysis of Annual Regional Development Planning in Magelang, Thesis, University of Diponegoro, Semarang

[18] Sjafrizal, (1997), Growth and Regional Inequality Western Indonesia, Prism, March 3. Jakarta.

[19] Todaro, M.P. (2000). Economic Development in the Third World, 7th edition Jakarta, Indonesia: Erlangga.

[20] Law No. 32 of 2004 on Reform relationship between central and regional governments Law No. 22 of 1999 on Regional Government

[21] Yudhoyono, Susilo Bambang (2012), *Manifesto 2015 Sustainable Growth with Equity at The Centre for International Forestry Research (CIFOR)*, Bogor 13 June 2012, Sekretariat Kabinet Republik Indonesia, http://www.setkab.go.id/berita-4719-manifesto-2015-sustainable-growth-with-equity

No	Propinsi	Tipologi Klassen				Recomended Area
		Primary Sector	Potential Sector	Stagnan Sector	Underdevelop	
1	Aceh	Trade, Hotels & Restaurants, service	Manufacturing IndustryElectricity & Water Transportation/ Communication	Agriculture	Mining Construction Bankinging/Finance	
2	North Sumatera	Trade, Hotels & Restaurants	Construction Transportation/Communications Bankinging/Finance and service	Agriculutre and Manufacturing Industry	Mining Electricity, gas & water	
3	West Sumatera	Transportation & Communications and service	Construction	Agriculture manufacturing industry Trade, Hotels & Restaurants and service	Mining Electricity, gas & water Bankinging / Finance	comended Area
4	Riau	Manufacturing Industry	Electricity & water Construction, Trade, Hotels & Restaurants, service, Transportation	Agriculture, Mining Bankinging/Finance		comended Area
5	Jambi	Mining, Trade, Hotels & Restaurants and service	Electricity & water, construction, Bankinging/Finance	Agriculutre and Manufacturing Industry	Transportation/ Communications and service	
6	South Sumatera	Trade, Hotels & Restaurants, service	Electricity & water, Construction Transportation/ Communications Bankinging/Finance	Agriculutre, Mining and Manufacturing Industry		
7	Bengkulu	Service	Mining, Manufacturing industry Electricity & water, Construction Transportation/Communications Bankinging/Finance	Agriculture, Trade, Hotels & Restaurants and service		
8	Lampung		Electricity & water Transportation / Communications Bankinging/Finance and service	Agriculture, manufacturing industry Trade, Hotel, Restaurant	Mining and construction	
9	Bangka Belitung Island		Mining, Electricity & waterConstruction and service	Agriculture Manufacturing Industry Trade, Hotel, Restaurant	Transportation/ Communications Bankinging/Finance	
10	Riau Island	Trade, Hotel, Restaurant	Electricity & water Construction Transportation Bankinging/Finance service	Manufacturing Industry	Agriculture Mining	
Sumatera						
11	DKI Jakarta	Trade, Hotel, Restaurant Transportation / Communications, service	Construction	Manufacturing Industry Banking / Finance	Agriculture, Mining, Electricity & water	
12	West Java	Trade, Hotel, Restaurant	Electricity & water Construction	Agriculture Manufacturing Industry	Mining	

No	Propinsi	Tipologi Klassen				Recomended Area
		Primary Sector	Potential Sector	Stagnan Sector	Underdevelop	
			Transportation / Communications Banking/Finance and service			
13	Central Java	Manufacturing Industry Trading	Electricity & water, Construction Transportation / Communications Banking/ Finance and service	Agriculture and Mining		
14	DIYogyakarta	Manufacturing Industry Trading service	Construction Transportation/Communications Banking/Finance	Agriculture	Mining Electricity & water	
15	East Java	Trading	Construction Transportation/Communications Banking/Finance	Agriculture Manufacturing Industry	Mining Electricity & water service	
16	Banten	Manufacturing Industry	Transportation/communications Banking/finance	Trade, Hotel, Restaurant	Agriculture, Mining Electricity & Water Construction and service	
Java						
17	Bali	Service	Mining and construction	Agriculture Trade, Hotel, Restaurant	Manufacturing Industry Electricity & water Transportation/ Communications Banking/finance	
Bali						
18	West Kalimantan	Trade, hotel, restaurantservice	Mining, Construction Transportation / Communications Bankinging / Finance	Agriculture Manufacturing Industry	Electricity & water	Recomended
19	Central Kalimantan	Trade, hotel, restaurantservice	Mining, Construction Banking/Finance	Agriculture	Manufacturing Industry Electricity & water Transportation/ communications	
20	South Kalimantan	Trade, hotel, restaurant	Electricity & water Construction Transportation/Communications Bankinging/finance and service	AgricultureMining Manufacturing Industry		Recomended Area
21	East Kalimantan	Mining	Agriculture Electricity & water Construction, Trading Transportation/Communications Banking/finance and service	Manufacturing Industry		Recomended Area
Kalimantan						
22	North Sulawesi	Trading Transportation/ Communication	Electricity & water Banking/finance	Agriculture Construction and service	Mining Manufacturing Industry	

No	Propinsi	Tipologi Klassen				Recomended Area
		Primary Sector	Potential Sector	Stagnan Sector	Underdevelop	
23	Central Sulawesi	Trading	Construction Transportation/Communication	Agriculture, Mining, service		Recomended Area
24	South Sulawesi	Trading	Electricity & water Construction Transportation/communications Bankinging Finance	Agriculture Manufacturing Industry Service	Mining	
25	Sulawesi Tenggara	Trade, hotel, restaurant	Mining, Electricity & water Construction, Transportation/communications Banking/Finance	Agriculture and service	Manufacturing Industry	
26	Gorontalo	Trade, hotel, restaurant	Mining, Electricity & water Construction Transportation/communications Banking/Finance	Agriculture and service	Manufacturing Industry	Recomended Area
27	West Sulawesi	Trade, hotel, restaurant and service	Mining, Electricity & water Construction Transportation/communications Banking/Finance	Agriculture	Construction, Banking and Finance	
Sulawesi						
28	West Nusa Tenggara	Trade, hotel, restaurant and service	Manufacturing Industry Electricity & water, Construction Transportation/Communications Banking/finance	Agriculture and Mining		
29	East Nusa Tenggara	Trade, hotel, restaurant and service	Mining, Electricity & water Construction, Transportation/Communications Banking/finance	Agriculture		
Nusa Tenggara						
30	Maluku	Trade, hotel, restaurant and service	Mining, Construction Transportation/Communication	Agriculture	Manufacturing Industry Electricity & water Banking/Finance	
31	North Maluku	Trade	Construction, Transportation and Comunication, Banking/Finance and Service	Agriculture and Manufacturing industry	Pertambangan Listrik & air bersih	
Maluku						
32	West Papua	Manufacturing industry	Agriculture and Mining	Electricity & water Construction Trade, hotels & restaurants Transportation/ Communications		

No	Propinsi	Tipologi Klassen			
		Primary Sector	Potential Sector	Stagnan Sector	Underdevelop
				Banking/ Finance service	
33	Papua	Agriculture	Manufacturing Industry Electricity & water, ConstructionTrade, hotels & restaurants Transportation/Communications Banking/Finance and service	Mining	

Exchange Rates and Financial Performance Effect on Conventional Bank Third Party Funds in Indonesia

Dini Hariyanti[1], Soeharjoto[2], Debbie Aryani Tribudhi[3]
{dinihariyanti@trisakti.ac.id[1], soeharjoto@trisakti.ac.id[2], debbie.aryani@trisakti.ac.id[3]}

Faculty of Economics and Business, Universitas Trisakti, Indonesia[1,2,3]

Abstract. Banks are intermediary institutions that help economic activities require cheap funds from Third Party Funds. Based on Business Activities IV book in Conventional Banks, commercial banks can still compete in the financial market, but with the volatility of Exchange Rates and Financial Performance will affect people's decisions in save their funds in the bank. Aims of this study is to find out the factors that affect Third Party Funds. Used monthly data from 2017-2020, with Error Correction Model as analysis regression method. Third Party Funds is dependent variables and Return on Assets (-1), Loan to Deposit Ratio, Interest, Net Interest Margin, and Exchange Rate are independent variable. Results shown, in short and long term, Exchange Rate has a positive and significant impact on Third Party Funds. In short terms, Net Interest Margin has a positive and significant effect on Third Party Funds, but not in the long term. Loan to Deposit Ratio negatively and significantly affects Third Party Funds in the short term but not in the long term. Return on Assets (-1) and Interest have no effect on Third Party Funds in the short and long term. Peoples who save their funds in the bank, think rationally, it is more concerned with the profit obtained with a small risk. Banks, governments, and international banking institutions need to maintain public trust by coordinating and cooperating intensively.

Keywords: Third Party Funds; Exchange Rate; Financial Performance

1 Introduction

Banking is the driving force in supporting the success of development in Indonesia [1]. As an intermediary institution, it helps smooth the transaction of economic activity, also to accelerate economic growth [2]. However, banking as a business entity has an interest in profit [3]. Therefore, in its activities trying to obtain a large profit but quickly, with a small risk by using funds derived from the bank and its customers [4].

In order to facilitate their activities, banks strive to collect Third Party Funds optimally [5]. The funds are important for banks because it obtains cheap funds from the public, which is

used to increase profit, by lending Third Party Funds to businesses, thus gain the benefit from the spread between loan interest rates and savings [6]. Banks seeks various ways and systems in order to gain the trust of fund owners, in order to seize increasingly fierce interbank competition [7] Competition between banks are increasing, to have an impact, Indonesia uses dual banking system [8]. Sharia banking as a newcomer, has performed well, especially in the growth of Third Party Funds and financing [9]. This condition is strengthened by having a

LePALISSHE 2021, August 03, Malang, Indonesia

DOI 10.4108/eai.3-8-2021.2315092

Capital Adequacy Ratio above the decree of the financial services authority [10]. However, its existence nominally is still under conventional banking. Because of the existence of conventional banking is longer so that its assets, products, and marketing strategies become more established.

International banking management are impact by global economic crisis, in order to avoid the failure of systemic-impacting banks, Basel Committee on Banking Supervision, making Basel III agreement [11]. Indonesian banks follow this agreement, especially Commercial Banks who at Business Groups III and IV category. The most established banks in conventional banking entered into Commercial Banks by Business Group IV category, and sharia banking entered to Commercial Banks based on Business Group III category. This makes conventional banking category of Commercial Banks based on Group IV still the main choice for fund owners. As for the impact, during 2017-2020, Third Party Funds growth average is 12.55 at commercial banks based on Group IV with an increasing trend. The growth is still in the low category considering its large market share, so it needs to be improved again in order to optimize profit, in order to increase investor confidence.

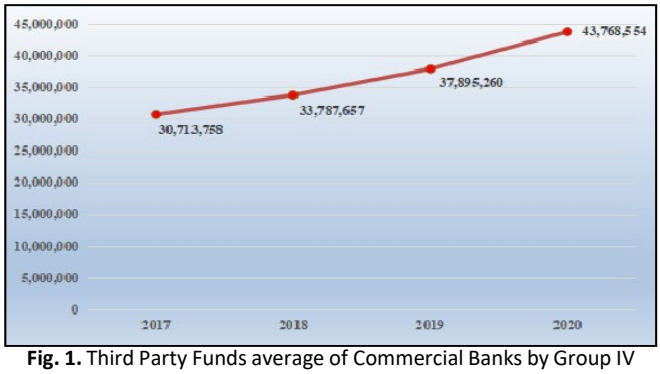


Fig. 1. Third Party Funds average of Commercial Banks by Group IV in 2017-2020 (Billion Rupiah).

Source: Research processed data, 2021.

Conventional banks are still able to compete in the financial markets. Due to the high public confidence in its performance. However, increase of opening economic system resulted in Exchange Rate changes on macro-economic turmoil that have a big impact on the national economy. In its activities, people behave rationally, so as to secure and develop their assets by considering the Banking Performance in the form of Interest, Return on Assets (-1), Net Interest Margin, and Loan to Deposit Ratio. Public confidence in conventional banking is still high, so bank can optimize its ability to raise public funds to support its activities. Nevertheless, public remains cautious in efforts to develop their funds in the banking industry that given them facing liquidity risks. Therefore, it is necessary to conduct research on the determination of conventional banks Third Party Funds in Indonesia.

2 Theoritical Review

Mainstream economic theory considers every human being to behave homoeconomicly, so that in his activities it is done rationally[12]. As for the assumption, man in acting seeks to obtain optimal benefits (utility maximization) and the individual is an agent that can take into

account the consequences of any alternative of his actions [13] Therefore, rational decision-making is at the heart of the utility theory of homoeconomic behavior [14].

Ramsey with consumer optimization developed it into an exogenous savings rate model [15]. In this model, households strive to optimize the use of their income for consumption and saving between times. The obstacles faced by the limited funds owned. However, the increasing number of household members due to obtaining offspring, leads to increasing household needs to infinity. This will increase per capita consumption over time. Household seeks to allocate funds to be invested by reducing its consumption, when there is an opportunity to obtain a high return from capital. It can be realized by increasing public knowledge and information, so it will increase public awareness investing. Company will be easier to obtain additional capital from banks to develop its business, that can increase production and labor absorption, which has implications for increasing national income.

Facing financial problems, customer looking for as much information as possible and analyzed with their knowledge before they make a decision, so make it easier for customers to choose several saving options. After choose it, customer will make a saving decision. When a customer has become a certain bank customer, customer will respond if there is a change in the information and knowledge they have to become regular customer or switch to another bank. Community behaves rationally to gain profit but still pays attention to the risks it faces when carrying out this action. Therefore, Ramsey theory can be used as the basic for customer decision making at saving by paying attention to macroeconomic conditions in the form of Exchange Rate and Banking Performance in the form of the company's ability to profit in the previous year in the form of Return on Assets (-1), efficiency in the form of Net Interest Margin, risks faced in the form of Loan to Deposit Ratio, and Interest profit that will be received.

Research on factors that affect Third Party Funds has been conducted several studies with mixed results. [16]revealed that Exchange Rate affects Third Party Funds, but [17], obtained Exchange Rate results have no effect on Third Party Funds. [18], was obtained that Interest has a positive and significant effect on Third Party Funds, while [19], find that Interest had no effect on Third Party Funds. [20], obtained that Return on Assets positively affects Third Party Funds. [21], with the findings of Financing to Deposit Ratio affects Third Party Funds, but [22], obtained that Financing to Deposit Ratio has no effect on Third Party Funds. [23], with efficiency findings have a positive and significant influence on Third Party Funds.

2.1 Hypothesis Development

a) The relationship between Exchange Rates and Third Party Funds

Macroeconomic conditions play a major role in national economy. This can happen due to changes in the Exchange Rate that can result in a decrease in purchasing power, so people strive to secure the real value of their money by making various investment alternatives but still calculate the risks that facing them. Bank has been anticipated this condition by offering more benefits to keep liquid funds. Fund owner earn twice as much as the difference in Exchange Rates and offers higher Interest Rates from banks with minimal risk. This situation is in accordance with 16. Therefore, the hypothesis is Exchange Rate has a positive and significant effect on Third Party Funds.

b) Relationship between Interest Rates and Third Party Funds

People keep their funds in banks with the aim of obtaining gain from Interest income. However, in making their investments, fund owners have a variety of investment alternatives, so they do an analysis of their information and knowledge. This situation makes bank seek to attract fund owners Interests by providing them high rates so that liquidity increases that can improve the performance of the bank. Its accordance with the research results of 18. Therefore, the hypothesis is Interest Rates have a positive effect on Third Party Funds.

c) Return on Assets (-1) relationship with Third Party Funds

A well performing bank can increase its assets through Return on Assets. Publics still considering the principle of prudence when they keeps their funds by paying attention to the banks historical performance in the past period. Increasing of Return on Assets (-1) indicates the bank's ability to grow its business to be more flexible and its assets will increase. This has an impact on the investors and customers increasing confidence at banking. This condition is in accordance with the 20. Therefore, it can be hypotheses that Return on Assets (-1) positively affects Third Party Funds.

d) Net Interest Margin Influence to Third Party Funds

Net Interest Margin can describe bank's operations efficiency. This is inseparable from Net Interest Margin which is a spread between savings rates and loan interest rates. Efficient banking can increase its spreads so the increasing profits that can be used to improve customer services. The situation is in accordance with 23. Therefore, the hypotheses is Net Interest Margin has a positive effect on Third Party Funds.

e) Relationship between Loan to Deposit Ratio with Third Party Funds

Banking is a trust institution, so it is necessary to maintain its liquidity through the performance of the Loan to Deposit Ratio. Aim of the investors are to make profit with the information and knowledge they have and pay attention to the risks that will occur especially related to banking liquidity reflected in the Loan to Deposit Ratio. This is accordance with 21. The hypotheses that Loan to Deposit Ratio negatively affects Third Party Funds.

3 Research Method

This study was conducted to determine the factors that affect Third Party Funds in conventional banks in Indonesia. Time series monthly data from 2017-2020 from the financial services authority and Bank Indonesia. Research method uses Error Correction Model (ECM) regression analysis. Third Party Funds are dependent variables and Exchange Rate, Interest, Return on Asset (-1), Net Interest Margin, and Loan to Deposit Ratio are independent variables. As for the similarities:

$$TPF_t = \beta_1 + \beta_2 ER + \beta_2 Interest_t + \beta_3 ROA(-1)_t + \beta_4 NIM_t + \beta_5 LDR_t + \varepsilon_t \quad (1)$$

Information:

TPF = Third Party Funds.
ER = Exchange Rate.

Interest = Interest Rate.
ROA(-1) = Return to Asset (-1).
NIM = Net Interest Margin.
LDR = Loan to Deposit Ratio.

Root unit test is to find out that used data is already stationer and then co-integration test can be implemented, and if both test pass, it can be used to estimate factors that affect Third Party Funds using time series data with error correction model analysis regression method. Data should be stationer and co integrated. If the value is probability ADF<0.05 at level or probability ADF<0.05 on 1st difference, it is stationary data. Furthermore, a co-integration test is conducted, provided that if probability ECT (Residual)<0.05 at the integrated data level. After the stationary test and co-integration, continued by making a regression test error correction model analysis to obtain long-term and short-term equations. Normality and classical assumptions in the form of autocorrelation, multicollinearity, and heteroscedasticities used in order to have a model that can be predict powerfully.

4 Results, Analysis, and Discussion

Third Party Funds, Return on Assets (-1), Loan to Deposit Ratio, Interest, Net Interest Margin, and Exchange Rate have diverse data with fluctuating trends. Average value of Third Party Funds is 3045109 billion rupiah with a standard deviation of 436382 billion rupiah, whose maximum value in 2020.12 amounted to 3897941 billion rupiah and the minimum in 2017.1 amounted to 2288114 billion rupiah. Average value Return on Assets (-1) is 2.93 percent with a standard deviation of 0.33 percent, whose maximum value in 2019.2 is 3.29 percent and the minimum in 2020.12 is 1.96 percent. Average value of Loan to Deposit Ratio is 87.87 percent with a standard deviation of 3.28 percent, whose maximum value in 2019.1 is 92.69 percent and the minimum in 2020.12 is 80.11 percent. Average Value of Interest is 1.45 percent with a standard deviation of 0.50 percent, whose maximum value in 2018.1 is 3.32 percent and the minimum in 2020.11 and 2020.12 is 0.66 percent. Average value of Net Interest Margin is 5.58 percent with a standard deviation of 0.41 percent, whose maximum value in 2017.1 and 2017.3 was 6.08 percent and the minimum in 2020.4 was 4.63 percent. Average value of Exchange Rate is 14095 rupiah per 1 US dollar with a standard deviation of 592 rupiah per 1 US dollar, whose maximum value in 2020.4 is 13297 rupiah per 1 US dollar and minimum in 2017.6 of 15867 rupiah per 1 US dollar.

Table 1. TPF, ROA (-1), LDR, Interest, NIM, and ER Descriptive

	TPF	ROA (-1)	LDR	Interest	NIM	ER
AVG	3045109	2.93	87.87	1.45	5.58	14095
MAX	3897941	3.29	92.69	2.32	6.08	13297
MIN	2288114	1.96	80.11	0.66	4.63	15867
STD. DEV.	436382	0.33	3.28	0.50	0.41	592

Source: Processed data research 2021

Probability value of Exchange Rate is 0.3400>0.05 and value 0.0000<0.05 on first difference. Probability of interest is 0.8624>0.05 and on first difference probability is 0.0000<0.05. Probability of Loan to Deposit Ratio is 0.7145>0.05 and on first difference probability is 0.0002<0.05. Probability of Net Interest Margin is 0.9195>0.05 and probability value on first difference is 0.0000<0.05. Return on Assets (-1) has a probability level at

0.9756>0.05 and at first difference has probability point 0.0000<0.05. Third Party Funds has a probability level 0.9999>0.05 and probability 0.0130<0.05 at the 1st difference. In the co-integration test obtained results with probability value. 0.0004<0.0004, so the data is integrated. This research has passed the stationary test and co-integration, so it can be used to estimate with the error correction model (ECM) analysis regression method.

4.1 Long-term model

Result of this study obtained the value of Adj. R-Squared is 0.890812 for long term, which means that 89.0812 percent of Third Party Funds can be explained Return on Assets (-1), Loan to Deposit Ratio, Interest, Net Interest Margin, Exchange Rate and the remaining 10.9188 percent is influenced by other variables that are not included in the model. Based on long-term estimation results, probability value. F-statistics are generated at 0.00000<0.05, which means that at least one of the Return on Assets (-1), Loan to Deposit Ratio, Interest, Net Interest Margin, Exchange Rate in the long term can affect Third Party Funds.

Table 2. Long Term Regression Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4723029.	1786539.	2.643676	0.0116
ROA (-1)	-164830.9	146448.9	-1.125518	0.2669
LDR	5333.206	12144.46	0.439147	0.6629
Interest	-259274.9	74455.40	-3.482285	0.0012
NIM	-539315.7	157207.6	-3.430595	0.0014
ER	122.3835	63.27979	1.934006	0.0600

R-squared	0.902680	Mean dependent var	3061215
Adjusted R-squared	0.890812	S.D. dependent var	426434.7
S.E. of regression	140909.4	Akaike info criterion	26.66837
Sum squared resid	8.14E+11	Schwarz criterion	26.90455
Log likelihood	-620.7066	Hannan-Quinn criter.	26.75725
F-statistic	76.05834	Durbin-Watson stat	1.243789
Prob(F-statistic)	0.000000		

Source: Processed data by Research 2021

t-test results can be used to determine individually in the long term from Return on Assets (1), Loan to Deposit Ratio, Interest, Net Interest Margin, Exchange Rate that can be influential and significant to Third Party Funds. Return on Assets (-1) returns the t-value probability 0.2669/2 = 0.13345>0.05 with a coefficient value of -164830.9, means Return on Assets (-1) has no effect on Third Party Funds in the long term. Results are contrary to [20]. Loan to Deposit Ratio generates t value probability 0.6629/2 = 0.331345>0.05 with a coefficient value of 5333.206, means that the Loan to Deposit Ratio does not affect Third Party Funds in the long term. Similar to [22]. Interest generates a t-value probability 0.0012/2 = 0.0006<0.05 with a coefficient value of -259274.9, means Interest has no effect on Third Party Funds in the long term. The situation is accordance with [19]. Net Interest Margin generates a Prob value. t of 0.0014/2 = 0.0007<0.05 with a coefficient value of -539315.7, means at long run, Net Interest Margin has no effect on Third Party Funds. This is not in accordance with [23]. Exchange Rate generates a Probability value t of 0.0600/2 = 0.0300<0.05 with a coefficient value of 122.3835, means at the long run, Exchange Rate has a positive and significant effect on Third Party Funds. This condition, in accordance with [16].

4.2 Short-Term Model

Results of this study obtained amount of Adj value. R-Squared from short-term is 0.425115, which means that 42.5115 percent of Third Party Funds can be explained Return on Assets (-1), Loan to Deposit Ratio, Interest, Net Interest Margin, Exchange Rate and the remaining 57.4885 percent are affected by other variables not included in the model. Based on long-term estimates, F-statistics probability value 0.000077<0.05, means that at least one of the Return on Assets (-1), Loan to Deposit Ratio, Interest, Net Interest Margin, Exchange Rate in short term may affect Third Party Funds. The ECT coefficient (-1) is obtained at -0.12941 with prob. t amounted to 0.0397, which means at short term, ECT (-1) variable negatively and significantly affects Third Party Funds, so at short term can be used the ECM model.

Table 3. Short Term Regression

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	27899.37	6893.131	4.047416	0.0002
D (ROA (-1))	-71389.74	50072.63	-1.425724	0.1619
D (LDR)	-27024.59	7693.174	-3.512801	0.0011
D (Interest)	15325.64	44028.64	0.348083	0.7296
D (NIM)	153454.4	49430.81	3.104427	0.0035
D (ER)	59.24907	22.99070	2.577089	0.0139
ECT (-1)	-0.129411	0.060808	-2.128199	0.0397
R-squared	0.501767	Mean dependent var		31162.74
Adjusted R-squared	0.425115	S.D. dependent var		58172.75
S.E. of regression	44107.25	Akaike info criterion		24.36590
Sum squared resid	7.59E+10	Schwarz criterion		24.64418
Log likelihood	-553.4158	Hannan-Quinn criter.		24.47015
F-statistic	6.546093	Durbin-Watson stat		2.258908
Prob(F-statistic)	0.000077			

Sources: Processed Data by Research, 2021

At short term, t-test results can be used to determine individually of Return on Assets (-1), Loan to Deposit Ratio, Interest, Net Interest Margin, Exchange Rate which can be influential and significant to Third Party Funds. Return on Assets (-1) generates a probability value t amounted to 0.1619/2 = 0.08095>0.05 with a coefficient value of -27024.59, means that at short term, Return on Assets (-1) has no effect on Third Party Funds. This is contrary to [20]. Loan to Deposit Ratio generates a t Probability value amounted to 0.0011/2=0.00055<0.05 with a coefficient value of -27024.59, means at short term, Loan to Deposit Ratio negatively and significantly affects Third Party Funds, accordance with [21]. Interest generates a probability value of 0.7296 /2 = 0.3648>0.05 with a coefficient value of 15325.64, means that in short term, Interest does not affect Third Party Funds. This accordance with of [19]. Net Interest Margin returns the t value Prob. 0.0035/2 = 0.00175< 0.05 with a coefficient of 153454, means that at short term, Net Interest Margin has a positive and significant effect on Third Party Funds. It is same to [23]. Exchange Rate returns the t value probability of 0.0397/2 = 0.01985<0.05 with a coefficient value of 59.24907, means that in the short term, the Variable Exchange Rate has a positive and significant impact on Third Party Funds. Results of this study is accordance with [16].

This model can be used optimally when normality and assumption tests have been conducted. Normality test result obtained normally distributed data. All VIF values are below 10, namely Return on Assets (-1) of 6.506135, Net Interest Margin of 9.386692, Loan to

Deposit Ratio of 3.743448, Exchange Rate of 3.207432, and Interest of 3.230266, so that the model is free from multicollinearity. The run test result obtained R-Square value in the model of 0.541479>0.05, so that the model is free from autocorrelation problems. Glesjer test obtained prob F-stat value of 0.0690 and Obs*R-squared of 0.0734 greater than 0.05, so the model is free from heteroscedasticity problems. The results of the classic assumption testing proved the model can be used powerfully.

At digital age, world's economy is become limitless. World macro-economic turmoil will result in changes at Exchange Rate that eventually impact the national economy, so government and banks needs to anticipated this situation quickly in order to make conditions more conducive. People who think rationally with their information and knowledge will become increasingly critical in making policies to save their funds. The results of this study were obtained factors that affect Third Party Funds, namely Exchange Rate that has a positive influence in the short and long term, Net Interest Margin positively influenced in the short term, and Loan to Deposit Ratio negatively and significantly in the short term. Return on Assets (-1) is the other factors that do not affect Third Party Funds and interest does not have affect to Third Party Funds in the short and long term, while Net Interest Margin and Loan to Deposit Ratio have no effect in the long term. Accordance with Ramsey theory that humans think rationally with the information and knowledge they have is used to analyze and make decisions to invest by reducing their consumption [15]. However, they considering the risks while make a decision. Peoples who keep their funds in the bank have tendencies to prioritize the security of their funds rather than gaining large profits with great risk. Governments, banks, and international banking institutions need to maintain public trust by coordinating and cooperating intensively, so with conducive conditions Third Party Funds which stored at banks will increase and national economic growth can rapidly increase.

5 Conclusions, Limitations, and Recommendations

Macroeconomics and financial performance play a role in improving Third Party Funds. All of them, inseparable from human nature as social beings who think rationally, so every action taken utilizes information and knowledge that has to be analyzed in order to obtain optimal profit, but still pay attention to the risks. This, makes capital owner trust to deposit their funds at bank. When stored their assets at banks, fund owner pay attention to several factors, especially macro-economic (Exchange Rate) and financial ratio (Return on Asset (-1)), Loan to Deposit Ratio, Net Interest Margin, and Interest. This research was conducted to determine the factors that affect Third Party Funds in conventional banks in Indonesia, with the method of regression analysis of error correction model in 2017-2020. Long term result of Exchange Rate has a positive and significant impact on Third Party Funds, but Return on Assets (-1), Loan to Deposits Ratio, Interest, Net Interest Margin has no effect on Third Party Funds. Exchange Rate and Net Interest Margin have a positive and significant effect on Third Party Funds at short term, while Loan to Deposit Ratio negatively and significantly affects Third Party Funds, but Return on Assets (-1) and Interest have no effect on Third Party Funds. Limitations of this research are due to the transition period of the Covid-19 pandemic, so the result is a tendency from fund owners to prioritize the security of their funds rather than the profits gained so that there are many financial ratios related to the profits that will be gained by the owner of the fund is not significant. In further research, we recommend using dummy variables before and after the Covid-19 pandemic and include other macroeconomic variables.

References

[1] Soeharjoto, Tribudhi, D. A., Hariyanti, D. & Tajib, E. Internal and External Factor that Influence Liquidity: Case of Conventional Banks in Indonesia. *Int. J. Sci. Technol. Res.* **9**, 7066–7070 (2020).

[2] Petkovski, M. & Kjosevski, J. Does Banking Sector Development Promote Economic Growth? An Empirical Analysis for Selected Countries in Central and South Eastern Europe. *Econ. Res. Istraz.* **27**, 55–66 (2014).

[3] Peshkova, E. ., Kyurdzhiev, S. P. & Martazanov, A. A. *Strategy for Forming Financial Resources in the Context of a Conflict of Interests Between an Economic Entity and Its Creditors*. Proceding of the International Science and Technology Conference "FarEastCon 2020" Smart Innovation, Systems and Technology, 227. Spinger. Singapore (2020).

[4] Werner, R. A. Can Banks Individually Create Money Out of Nothing? - the Theories and the Empirical Evidence. *Int. Rev. Financ. Anal.* **36**, 1–19 (2014).

[5] Hasna, D. P., Ariyani, D. S., Ula, L. F., Putri, R. S. & Prayitno, Y. H. The Effect Of Third-Party Funds And Liquidity (LDR) On Banking Profitability (ROA) (Case Study of BUMN Banks Listed on the Indonesia Stock Exchange From 2012 To 2019). *Palarch's J. Archaeol. Egypt/Egyptology* **17**, 2914–2927 (2020).

[6] Septya, P. R., Taufik, P. A. & Yusuf, Z. The Effect of Service Quality and Marketing Programs on Third Party Funds. *Ilomata Int. J. Manag.* **1**, 8–12 (2019).

[7] Khan, M. M. & Fasih, M. Impact of Service Quality on Customer Satisfaction and Customer Loyalty: Evidence from Banking Sector. *Pakistan J. Commer. Soc. Sci.* **8**, 331–354 (2014).

[8] Nugroho, L., Utami, W., Sukmadilaga, C. & Fitrijanti, T. The Urgency of Allignment Islamic Bank to Increasing the Outreach (Indonesia Evidence). *Int. J. Econ. Financ. Issues* **7**, 283–291 (2017).

[9] Nugroho, L., Mastur, A. A., Ulfa, Wahyono, T. & Soeharjoto. Comparative Analysis of the Determinant Factors of Return on Assets between Islamic Commercial Banks (BUS) and Islamic Business Units (UUS). *J. Econ.* **17**, 124–140 (2021).

[10] Chairunesia, W. Analysis of the Bank's Health Level and Its Effects on the Profitability of Sharia General Banks Listed in Indonesia's Financial Services Authority Period 2015-2018. *Asian J. Econ. Bus. Account.* **17**, 38–53 (2020).

[11] Bunea, M. & Dinu, V. The Basel III Impact on the Romanian Banks's Solvency. *Montenegrin J. Econ.* **15**, 189–199 (2019).

[12] Simon, H. A Behavioral Model of Rational Choice. *Q. J. Econ.* **69**, 99–118 (1955).

[13] Simon, H. A. *Models of Bounded Rationality*. (MIT Press, 1982).

[14] Bernoulli, D. Exposition of a New Theory on the Measurement of Risk. *Econometrica* **22**, 23–36 (1954).

[15] Attanasio, O. P. Frank Ramsey's a Mathematical Theory of Saving. *Econ. J.* **125**, 269–294 (2015).

[16] Maulayati, R. R., Bahril, M. 'Adilah, Najiatun & Herianingrum, S. Effect of Macroeconomic Variables on Third- Party Funds in Islamic Commercial Banks in Indonesia. *J. Islam. Econ. Lariba* **6**, 19–40 (2020).

[17] Anik & Prastiwi, I. E. Macro Economic Challenges and Third Party Funds of Islamic Commercial Banks in Indonesia. *Shirkah J. Econ. Bus.* **3**, 127–152 (2018).

[18] Amaliawiati, L., Hendayana, Y. & Sarumpaet, T. L. The Impact of Macroeconomics towards Islamic Banking Third Party Funds in Indonesia. *Int. J. Innov. Creat. Chang.*

6, 291–303 (2019).
[19] Indiastary, D., Suprayogi, N. & Indrawan, I. W. a Meta-Analysis of the Determinant ofThird Party Fund on Islamic Banking in Indonesia. *J. Ekon. dan Bisnis Islam (Journal Islam. Econ. Business)* **6**, 175–188 (2020).
[20] Firdausi, I. Analisis Pengaruh Kinerja Perbankan terhadap Dana Pihak Ketiga Bank Persero. *J. Keuang. dan Perbank.* **20**, 487–495 (2016).
[21] Harahap, D. Determinan Dana Pihak Ketiga Bank Syariah di Indonesia: Model Vector Autoregresive. *IQTISHADIA* **10**, 178–194 (2017).
[22] Hidayat, A. & Sunarsi, D. Faktor-Faktor yang Mempengaruhi Dana Pihak Ketiga dan Dampaknya terhadap Profitabilitas. 1–12 (2017).
[23] Al Arif, M. N. R. A. & Hanifah, H. Determinan Deposito Pada Bank Umum Syariah: Model Regresi Panel. *J. Ekon. Kuantitatif Terap.* **10**, 39–46 (2017).