



The influence of regional potential on the increase of regional income in Subulussalam city, Aceh province

Renol Riandy ^{1*}, Satia Negara Lubis ², Evawany Yunita Aritonang ³

¹ Students, Department of Rural Area Development, Universitas Sumatera Utara, Indonesia

²⁻³ Lecturer Department of Rural Area Development, Universitas Sumatera Utara, Indonesia

* Corresponding Author: **Renol Riandy**

Article Info

ISSN (online): 2582-7138

Volume: 04

Issue: 03

May-June 2023

Received: 25-04-2023;

Accepted: 18-05-2023

Page No: 827-832

Abstract

The objective of this research is to measure the influence of regional potential on the increase of regional income in Subulussalam City Subulussalam City, Aceh Province. The research adopts a descriptive quantitative approach, utilizing primary and secondary data. The study examines various indicators, including inflation, population, gross domestic product (GDP), and Regional income (RI). Analytical tools employed encompass Location Quotient (LQ), Shift-Share analysis, Klassen Typology, and multiple linear regression. Findings from the LQ analysis reveal significant regional potential in Subulussalam City, encompassing manufacturing, construction, motor vehicle repair, and financial and insurance activities. Moreover, the Shift-Share analysis indicates that the manufacturing industry, construction sector, and financial and insurance activity services serve as base sectors. Multiple linear regression analysis demonstrates that inflation, population, and GRDP have a significant impact on increasing RI in Subulussalam City, Aceh Province.

DOI: <https://doi.org/10.54660/IJMRGE.2023.4.3.827-832>

Keywords: Regional Potential, Inflation, Total Population, Gross Regional Domestic Product (GRDP), Regional income (RI)

Introduction

National development aimed at regional development is based on Law Number 1 of 2022 concerning Financial Relations between the Central Government and Local Governments. This law regulates a system for the implementation of financial rights and obligations between the central government and local governments, which should be conducted fairly, transparently, accountably, and in accordance with the law. In this context, the participation of both the government and the community is crucial in optimizing and integrating the potential of the regions, aligned with the future economic development goals that require well-structured, accurate planning in line with development objectives, aiming to enhance long-term economic growth (Pratomo, 2011) ^[9]. It also raises awareness of the potential possessed by the regions, enabling them to harness and utilize their local resources effectively (Endah, 2020) ^[4].

Each region possesses different leading sectors due to variations in geographical location, land fertility levels, and human resources. It is crucial to identify and clarify the leading sectors in each region to categorize them into base, developing, potential, and lagging sectors based on their activities. This determination is made using a prioritization scale to identify which sector serves as the main focus for the region in implementing its autonomy (Aryanti, 2009) ^[3].

Regional income (RI) is one of the financial sources available to local governments. RI is derived from various local income sources, including local taxes, local levies, and profits from regional enterprises, which also include other non-tax and non-levy income (Handoko, 2012) ^[6]. In order to analyze the financial capacity of a region, it is important to consider the fundamental provisions regarding the sources of income and financing for local governments based on Law Number 1 of 2022 concerning Financial Relations between the Central Government and Local Governments (CGALG).

Subulussalam City is a municipality in the province of Aceh, Indonesia. It was established based on Law Number 8 of 2007.

The city is a result of the division from Aceh Singkil Regency, which was originally part of South Aceh. Subulussalam City is comprised of 5 districts, 8 mukims, and 82 villages. Sultan Daulat District is the largest district, covering an area of approximately 602 km², while Penanggalan District is the smallest with an area of around 93 km². According to the data, the amount of Subulussalam City's regional income from 2019 to 2022 has experienced both increases and decreases. In 2019, the city's regional income was Rp 62,117,222,713.52, and it increased to Rp 85,663,296,301 in 2022. The income is derived from both tax and non-tax sources.

Generally, the residents of Subulussalam City work in the plantation sector, particularly in oil palm, rubber, cocoa, and betel nut plantations. In 2020, the total area of oil palm plantations that were already productive reached 11,878 hectares, with a harvest production of 35,729 tons. Additionally, the livestock sector has also experienced growth. In 2020, the large livestock population in Subulussalam City consisted of beef cattle, water buffalo, and horses, with respective populations of 2,484 head, 63 head, and 5 head.

The Gross Regional Domestic Product (GRDP) of Subulussalam City based on current prices (GRDP BOCUP) experienced an increase from 1,803.68 billion rupiahs in 2020 to 2,122.90 billion rupiahs in 2021. This increase is attributed to the growth in production across several fields of business and the presence of inflation. The Gross Regional Domestic Product of Subulussalam City based on constant prices (GRDP BOCOP) during the same period also experienced an increase from 1,385.41 billion rupiahs in 2020 to 1,439.00 billion rupiahs in 2021. In 2021, the Agriculture, Forestry, and Fisheries sector made the largest contribution to the GRDP, accounting for 21.79% of the total, followed by the Manufacturing sector at 19.53%, and Wholesale and Retail Trade, Motor Vehicle, and Motorcycle Repairs sector at 16.83%. The highest growth rate of the GRDP was achieved by the Transportation and Warehousing sector, which reached 15.44%.

The objectives of this study are as follows: (1) to analyze the potential of the Subulussalam City region in increasing its regional income in the Province of Aceh, particularly in relation to existing sectors of business; (2) to analyze the factors that influence the increase in Subulussalam City's regional income in the Province of Aceh; and (3) to determine the significant role of Subulussalam City government policies in enhancing the regional income (RI).

Literature

Referring to Law Number 1 of 2022, regional income (RI) is defined as the revenue obtained by the region collected based on Regional Regulations in accordance with legislation. Regional income (RI) is the accumulation of tax revenue, which includes local taxes, revenue from regional fees, non-tax revenue consisting of income from regional-owned enterprises, investment income, and natural resource management. According to Abdul Halim (2007) ^[5], regional income (RI) encompasses all the region's revenues derived from local economic sources, while Mardiasmo (2013) ^[10] defines it as the revenue obtained from local taxes, regional fees, income from regional-owned enterprises, income from the management of separated regional wealth, and other legitimate regional income. The optimization of regional income should be supported by efforts from local

governments to enhance the quality of public services. Excessive exploitation of regional income can burden the community and pose a threat to the economy.

Regional income consists of local taxes, regional fees, income from the management of separated regional wealth, and other legitimate regional income. Widhiyanti (2018) concludes that local income is crucial for regional governments to support regional development and finance various short-term and long-term government objectives. According to Mardiasmo (2013) ^[10], local taxes are collected by provinces, regencies, and municipalities based on their respective regional regulations, and the collected funds are used for regional household financing. Local taxes collected by regional governments include Motor Vehicle Tax/PKB, Motor Vehicle Ownership Transfer Fee BBNKB, Heavy Equipment Tax/PAB, Motor Vehicle Fuel Tax/PBBKB, Surface Water Tax/PAP, Cigarette Tax, and Non-Metallic and Rock Mineral Tax/MBLB. Meanwhile, taxes collected by district/city governments consist of Rural and Urban Land and Building Tax/PBB-P2, Land and Building Acquisition Duty /BPHTB, Specific Goods and Services Tax/PBJT, Advertising Tax, Groundwater Tax/PAT, Non-Metallic and Rock Mineral Tax/MBLB, Swiftlet Bird Nest Tax, Motor Vehicle Tax/PKB, and Motor Vehicle Ownership Transfer Fee/BBNKB.

Another important source of regional income is local levies or retribution. Retribution is a form of local collection imposed as payment for the use, services, works, or governmental services provided directly or indirectly by the local government and state-owned enterprises to interested parties (Adisasmita, 2011) ^[11]. It is categorized into three main types: retribution for general services, retribution for business services, and specific licensing retribution, which includes building permits, the use of foreign labor, and management of small-scale mining operations. These retribution fees contribute significantly to the financial resources of the local government, serving as a means to support the maintenance and development of public facilities and services, while also ensuring the sustainable provision of services to the community.

The funds derived from regional income (RI) are a crucial factor in fulfilling the local government's obligation to finance regional development. RI serves as a means to generate as much revenue as possible for the local treasury, supporting the implementation of regional development projects and improving the socio-economic conditions of the services provided. It plays a vital role in managing and enhancing the socio-economic well-being associated with the utilization of these services. The income generated through RI contributes significantly to the overall financial capacity of the local government, enabling them to meet the financial requirements of various developmental initiatives and effectively address the needs of the local community.

Kameo *et al.* (2014) conducted a study on the development of Investment Potential Mapping and Investment Promotion Material Design in Temanggung Regency. The study revealed three prominent sectors or products based on pure Input-Output Analysis (IOA) and Location Quotient Analysis (LQA): wood, tobacco, and coconut. The Forward Linkage Index (FLI) accounted for 24.6% of the total, while the Backward Linkage Index (BLI) accounted for 22.7%, resulting in a total linkage index of 47.3%. In the external analysis, it was found that the wood sector exhibited the highest competitiveness, followed by coconut and tobacco.

Furthermore, the findings from the analysis of the region's potential were integrated into an overview of investment potential, aligning it with the spatial planning design of Temanggung Regency (Draft Regional Spatial Planning or RTRW). This integration aimed to provide a comprehensive understanding of the investment opportunities and guide future investment decisions in the region.

Permana (2014) ^[8] conducted an analysis on the Potential Sectors and Regional Development of Districts/Cities in the Special Region of Yogyakarta Province for the period 2007-2012. The study employed Location Quotient (LQ), shift-share, and Klassen Typology analyses. The findings based on the LQ analysis indicated that the agricultural sector, mining and quarrying sector, manufacturing sector, and services sector were the dominant base sectors in the Special Region of Yogyakarta. Similarly, Viloni (2006) ^[14], who analyzed the economic sector growth in Pasaman District, West Sumatra Province during the period of regional autonomy from 2000 to 2004, found that sectors with a rapid growth rate (PP>0) included the electricity and water supply sector, agricultural sector, transportation and communication sector, financial sector, rental and business services sector, and construction sector.

Putra (2013) conducted an analysis on the economic potential of districts and cities in the Special Region of Yogyakarta Province for the period 2005-2010 using LQ analysis, Growth Ratio Model, Klassen Typology, and shift-share analysis. The research findings indicated that based on these analytical tools, priority development sectors for each district/city could be determined. The first priority for the agricultural sector was given to Gunung Kidul District. The mining and quarrying sector had priority in Bantul and Gunung Kidul Districts. The manufacturing sector was prioritized in Sleman District. The electricity, gas, and clean water sector were prioritized in Yogyakarta City. The construction sector was given priority in Bantul District. The trade, hotel, and restaurant sector were prioritized in Yogyakarta City. The transportation and communication sector were prioritized in Yogyakarta City. The financial, rental, and business services sector were given priority in Yogyakarta City. Lastly, the services sector was prioritized for development in Sleman District and Yogyakarta City.

Research Method

The scope of this research is to analyze the influence of regional potential on the increase of local income (regional income, RI) in Subulussalam City, Aceh Province. The research design used is descriptive quantitative, which aims to systematically describe, present factual and accurate information about a specific area regarding cause-and-effect relationships based on observations of existing effects, and then speculate on the factors that cause them through a quantitative approach, specifically the increase in regional

income (RI) in Subulussalam City from 2019 to 2022. The research will be empirically tested with the study location in Subulussalam City, Aceh Province. Administratively, Subulussalam City consists of 5 districts, 8 sub-districts, and 82 villages.

Data collection was conducted according to the type of data, where primary data was gathered through interviews and survey methods. Meanwhile, secondary data was collected from various official data sources and other products issued by relevant institutions related to the research subject.

The data analysis employed in this study utilizes Location Quotient (LQ) analysis, which is a method used to analyze the economic base model. LQ analysis classifies the economic activities within a region into two categories: (i) Basic industries, which serve both the local and external markets, and (ii) Non-basic or local industries, which solely cater to the local market. Moreover, to determine the factors influencing the increase in regional income, multiple regression analysis was conducted using the following model:

$$Y = a + b_1 X_1 + b_2 X_2 + b_3 X_3 + \dots + b_n X_n$$

Information

Y = Regional income (RI) Subulussalam City

X₁ = Inflation

X₂ = Total population

X₃ = GRDP

b = regression coefficient

a = constant (Y value if X₁, X₂, X₃ = 0)

e = error/residual value

Results and Discussion

To assess the potential in a specific region, the analysis tool utilized is the Location Quotients (LQ), which compares the contribution of each sector to the total value of sectors in Subulussalam City with the total value of sectors in Aceh Province. If the LQ value is greater than 1 (LQ > 1), the sector is considered a basic sector. Conversely, if the LQ value is less than 1 (LQ < 1), the sector is classified as a non-basic sector.

Based on the analysis of Location Quotients (LQ) for the values of 17 sectors in Subulussalam City from 2019 to 2022, it was found that four sectors exhibited LQ values greater than one. These sectors include Manufacturing Industry, Construction, Wholesale and Retail Trade, Repair of Motor Vehicles and Motorcycles, and Financial and Insurance Services. Sectors with LQ values exceeding one are considered basic sectors, indicating their ability to meet the local needs of the region. On the other hand, sectors with LQ values below one indicate their inability to meet the local demands within the area. The detailed LQ values are presented in Table 1 below:

Table 1: Calculation of LQ Data for 2019-2022

Code	Sector	SLQ Value	SLQ Value
A	Agriculture, Forestry, and Fishing	0,72	NON BASE
B	Mining and Quarrying	0,26	NON BASE
C	Manufacturing	3,43	BASE
D	Electricity and Gas	0,66	NON BASE
E	Water Supply; Sewerage, Waste Management, and Remediation Activities	0,33	NON BASE
F	Construction	1,64	BASE
G	Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles	1,22	BASE
H	Transportation and Storage	0,89	NON BASE

I	Accommodation and Food Service Activities	0,58	NON BASE
J	Information and Communication	0,92	NON BASE
K	Financial and Insurance Activities	1,02	BASE
L	Real Estate Activities	0,82	NON BASE
M,N	Business Activities	0,47	NON BASE
O	Public Administration and Defence; Compulsory Social Security	0,70	NON BASE
P	Education	0,83	NON BASE
Q	Human Health and Social Work Activities	0,61	NON BASE
R,S,T,U	Other Services Activities	0,43	NON BASE

Source: Data Processed, 2023

The calculated average LQ values (> 1) for the sectors are as follows: the Manufacturing Industry sector (LQ = 3.43), the Construction sector (LQ = 1.64), the Wholesale and Retail Trade and Repair of Motor Vehicles and Motorcycles sector (LQ = 1.22), and the Financial and Insurance Services sector (LQ = 1.02). Therefore, these four sectors can be considered as basic sectors. The sectors of Agriculture, Plantation, and Fisheries are not classified as basic sectors since the local government of Subulussalam City does not have the authority to measure regional income according to Law Number 01 of 2022 concerning Financial Relations between the Central

Government and Local Governments. According to Sjafrizal (2018) in his book on regional economics, basic sectors serve as the backbone of the regional economy due to their relatively high competitive advantage, while non-basic sectors refer to other sectors that are less potential but function as supporting sectors for the basic sectors.

The development of sector values in Subulussalam City based on the Shift Share analysis from 2019 to 2022 is influenced by several components. The impact of the national growth component (national share) on the overall sectors has a positive effect in adding value, as shown in Table 2.

Table 2: Calculation Analysis Shift – Share

Code	Sector	KPN	KPP	KPPW	PE
A	Agriculture, Forestry, and Fishing	0,2899	0,00	0,08	0,37
B	Mining and Quarrying	0,2899	1,39	-1,62	0,06
C	Manufacturing	0,2899	0,11	0,52	0,92
D	Electricity and Gas	0,2899	-0,24	0,04	0,10
E	Water Supply; Sewerage, Waste Management, and Remediation Activities	0,2899	-0,17	0,03	0,15
F	Construction	0,2899	-0,08	0,10	0,30
G	Wholesale and Retail Trade; Repair of Motor Vehicles and Motorcycles	0,2899	-0,14	0,03	0,18
H	Transportation and Storage	0,2899	-0,20	0,09	0,18
I	Accommodation and Food Service Activities	0,2899	0,00	-0,01	0,27
J	Information and Communication	0,2899	0,04	0,01	0,34
K	Financial and Insurance Activities	0,2899	-0,26	0,01	0,05
L	Real Estate Activities	0,2899	-0,15	-0,03	0,11
M,N	Business Activities	0,2899	-0,03	-0,04	0,22
O	Public Administration and Defence; Compulsory Social Security	0,2899	-0,18	0,09	0,20
P	Education	0,2899	-0,11	0,01	0,19
Q	Human Health and Social Work Activities	0,2899	0,18	-0,04	0,43
R,S,T,U	Other Services Activities	0,2899	-0,04	-0,01	0,24

Source: Data Processed 2023

The component of proportional share has a negative effect on almost all sectors, starting from the electricity and gas sector, water supply sector, construction sector, wholesale trade sector, transportation and warehousing sector, financial and insurance services sector, real estate sector, business services sector, government administration sector, education services sector, and other services sector. This results in slow growth of the value of these sectors compared to the same sectors at the provincial level. Meanwhile, other sectors such as manufacturing industry, construction, and financial and insurance services experience rapid growth. These sectors have a positive influence from the component of competitive advantage (differential shift), with most sectors showing positive values.

The calculation results of the DLQ (Dynamic Location Quotient) and Klassen Typology further confirm and clarify the composition of the basic sectors, which consist of three initial sectors. The DLQ calculation indicates that the Manufacturing Industry sector falls under the prospective category, as well as the Construction and Financial and Insurance Services sectors. Interestingly, while the

Wholesale and Retail Trade sector is categorized as basic according to the LQ calculation, the DLQ calculation indicates that it is not prospective. These calculations are supplemented by the equations of the Klassen Typology, which classify the three aforementioned sectors as advanced and rapidly developing sectors, while the other sectors are classified as underdeveloped and relatively lagging sectors.

In this research, a multiple linear regression analysis was conducted to analyze the determinants of the increase in regional income (RI). The processed data yielded the following results:

Table 3: Multiple Linear Regression Analysis

Variable	Regression Coefficient	Standar Error	t-count	Significance
Constanta	1,141	0,336	3,396	0,002
Inflation	-0,001	0,014	-0,292	0,0773
Total population	0,015	0,021	1,113	0,0277
GRDP	0,010	0,014	0,814	0,0424

Where R = 0.83; F = 16.84

Source: Data Processed 2023

Based on the table above, the processed data resulted in the following multiple linear regression equation:

$$Y = 1.141 - 0.001X_1 + 0.015X_2 + 0.010X_3 + \varepsilon$$

The inflation variable (X_1) has a regression coefficient of -0.001, indicating a negative relationship. Assuming a one-unit increase in inflation, the regional income (RI) will decrease by 0.001 significantly. Similarly, a one-unit decrease in inflation will result in a decrease of RI by 0.001. On the other hand, the population variable (X_2) has a positive regression coefficient of 0.015. Assuming a one-unit increase in the population, the RI will increase significantly by 0.015. The research findings also indicate that the Gross Regional Domestic Product (GRDP) variable (X_3) has a positive and significant slope. A one-unit increase in GRDP will increase the RI by 0.010, although the significance level is not very high.

The results of this study regarding the influence of inflation on regional income (RI) indicate that the calculated t-value of 0.292 is less than the critical t-value of 1.68830, based on the partial significance test. Therefore, it can be concluded that inflation has a significant effect on the regional income in Subulussalam City. An increase in inflation in City Subulussalam leads to a decrease in the level of regional income. These findings differ from a previous study conducted by Triani and Kuntari (2010) ^[13]. On the other hand, the research findings regarding the population variable and its impact on regional income are consistent with a previous study conducted by Triani and Kuntari (2010) ^[13]. Moreover, Santosa and Rahayu (2005) suggest that a high population growth accompanied by technological changes stimulates savings and the use of economies of scale in production. The increase in population is considered a necessary factor rather than a problem, as it plays a vital role in driving development and economic growth. The size of income is undoubtedly influenced by the population. If the population increases, the income that can be generated also increases.

The findings of this study regarding the relationship between Gross Regional Domestic Product (GRDP) and regional income (RI) show a positive association between the two variables, consistent with Aryanti's (2009) ^[3] study titled "The Influence of Macroeconomic Variables on regional income from 2000 to 2009 in Semarang City". Aryanti's study explains that Gross Regional Domestic Product has a positive and significant effect on the realization of regional income (RI), indicating that a higher GRDP received corresponds to a higher level of Regional income received by a district/city. From the findings and results of the study, it is evident how crucial the role of local government policies is in enhancing regional income (RI) and improving the financial position of the region. The local government of Kota Subulussalam can finance the implementation of regional autonomy in accordance with its financial capacity. The capacity and authority to explore financial sources, manage, and utilize their own funds to govern effectively are key attributes of a region capable of adopting regional autonomy. Reliance on government support should be minimized as much as possible. One characteristic of a region's ability to implement regional autonomy lies in its capacity to manage its finances. Local governments must possess the authority and capability to tap into their own financial resources, manage and utilize

them to finance governance and regional development.

The demand for increasing regional income (RI) has grown significantly in line with the increasing devolution of governmental authority to the regions, including personnel, equipment, financing, and documentation, on a substantial scale. Meanwhile, although intergovernmental transfers, which are financial transfers from the central government to the regions to support the implementation of regional autonomy, have been relatively adequate in terms of amount, local governments need to be more creative in enhancing their RI.

Local governments must maximize their efforts to explore potential sources of regional income (RI) within the framework of applicable laws and regulations. However, any increase in RI should address existing issues. The following are some interesting findings that the author can provide to the Regional Financial and Asset Management Agency (RFAMA) of Subulussalam City, Aceh Province: (a) RFAMA can engage in a re-identification of the organization's mission and mandate to address the current challenges effectively. The strategic re-identification of the mission and mandate should involve developing a more concrete organizational mission related to efforts to enhance RI. (b) RFAMA can continuously pursue innovative approaches to increase RI and modernize services to improve skills and capabilities in tackling future challenges. This will involve adapting to new obstacles by fostering innovation and enhancing the ability to provide efficient and effective services.

Conclusion and Recommendations

The analysis of Location Quotient (LQ) for 17 sectors in Subulussalam City from 2019 to 2022 indicates that 4 sectors have LQ values greater than one. These sectors are Manufacturing, Construction, Wholesale and Retail Trade, Repair of Motor Vehicles and Motorcycles, and Financial and Insurance Services. Sectors with LQ values exceeding one are considered base sectors, meaning they can meet the local demand within the region. On the other hand, sectors with LQ values below one are unable to meet the local demand within their own region. Furthermore, the factors influencing the increase in regional income (RI) in Subulussalam City, Aceh Province, are identified as inflation, population size, and Gross Regional Domestic Product (GRDP).

The government needs to enhance the utilization of each region's potential to optimize economic growth. In doing so, it is crucial for the government to identify the key economic sectors and assess the condition of a region by comparing it with others. This knowledge will enable the government to formulate effective policies that cater to the specific strengths and needs of each region.

Another recommended policy is for the Regional Financial and Asset Management Agency (RFAMA) to conduct a re-identification of its mission and organizational mandate to address the current challenges. This process involves developing a more concrete organizational mission that is directly linked to efforts in increasing regional income (RI). Additionally, RFAMA should consistently pursue innovation to enhance RI, modernize services, and improve the skills and necessary capabilities to tackle future obstacles.

References

1. Adisasmita R. Regional Government Management. Yogyakarta: Graha Ilmu Publisher, 2011.

2. Adnyana P. The Effect of Managerial Ownership on the Relationship Between Performance and Firm Value. *E-Journal of Universitas Udayana*, 2013, 5(3).
3. Aryanti II. The Influence of Macro Variables on Regional income in the Period of 2000-2009 in Semarang City. *Jurnal Sekolah Tinggi Ilmu Ekonomi Widya Manggala*, 2009.
4. Endah. Exploring the Potential of Villages. *Jurnal Ilmiah Ilmu Pemerintahan*. Ciamis: Universitas Galuh, 2020; 6(1):1.
5. Halim A. *Public Sector Accounting: Local Government Financial Accounting*. Jakarta: Salemba Empat, 2007.
6. Handoko TH. *Personnel Management and Human Resources*. Yogyakarta: BPFE, 2012.
7. Jhingan ML. *Ekonomi Pembangunan dan Perencanaan*. (D. Guritno, Trans.). 1st Edition, 10th Printing. Jakarta: PT. Raja Grafindo Persada, 2004.
8. Permana AI. *Analysis of Market Retribution income in Semarang City*. Semarang: Universitas Diponegoro, 2014.
9. Pratomo D. *Analysis of Factors Affecting Employment Absorption in Surakarta Residency, 2000-2008*. Surakarta: Universitas Sebelas Maret, 2011.
10. Mardiasmo. *Perpajakan (Revised Edition 2013)*. Yogyakarta: Andi, 2013.
11. Samuelson PA, Nordhaus WD. *Ilmu Makro Ekonomi*. Jakarta: PT. Media Edukasi, 2001.
12. Sjafrijal. *Regional Economic Analysis and Its Application in Indonesia*. Jakarta: Rajawali Pers, 2018.
13. Triani, Yeni Kuntari. The Influence of Macro Variables on the Regional Regional income in Karanganyar Regency. *ASET Journal of Economics*. 2010; 12(1):87-94.
14. Vilona H. *Analysis of Economic Sector Growth in Pasaman Regency, West Sumatra Province, during the Regional Autonomy Period of 2000-2004*, 2006. Retrieved from <http://repository.ipb.ac.id/bitstream/handle/123456789/2356/A08mgh.pdf?sequence=4>. Accessed June 10, 2015.