

Mapping the Potential of the Economic Sector in Surabaya and Jayapura



Sishadiyati¹, Christina², Tantina Hariyati³, Dwi Sukma⁴

^{1,3,4}Faculty of Economics and Business, UPN Veteran East Java

²Faculty of Economics and Business, University of Otto Glesier Papua

ABSTRACT: This research will identify the determination of leading sectors in the cities of Surabaya and Jayapura, by looking at the comparison between the two cities on the superior potential in each sector by providing further explanations about the policies or strategies used in utilizing these leading sectors as a tool in improving the economy of the cities of Surabaya and Jayapura. The research will be conducted through all economic sectors in the cities of Surabaya and Jayapura using a combination of LQ analysis, Shift Share analysis, and Klassen typology which will show the leading sectors of the City of Surabaya and Jayapura which will then be further analyzed in determining strategies that can be carried out by the city governments of Surabaya and Jayapura using the Overlay Method. Level of Readiness The technology used in this study is included at level 3, namely: proving the concept of functions and / or important characteristics analytically and experimentally.

KEYWORDS: Featured Sector Potential, LQ, Shift Share, Klasen Typology, Surabaya and Jayapura

I. INTRODUCTION

Regional economic development can be achieved, one of which is through the process of increasing per capita income, because the increase shows the added value to people's income and the emergence of community welfare (Arsyad, 2015). The process of consistently increasing per capita income is the definition of economic growth. Increasing economic growth is when there is a tendency to increase per capita output derived from the economy itself (Chalid, 2015).

Efforts to see the achievement of a region's economic growth are through Gross Regional Domestic Product (GRDP). GRDP can be interpreted as the total value of production as a result of economic activities within a certain period of time (one year). GRDP is presented in two references, namely on the basis of constant prices and on the basis of prevailing prices. (Central Statistics Agency of Surabaya City, 2021).

When viewed from the development data above, it can be seen that Surabaya's GRDP value is very significant in the development of each sector. The development of leading sectors can contribute to increasing regional economic growth. However, there are still many regions in Indonesia with low economic growth rates caused by the low management of leading economic sectors. The leading sector is a sector that has more potential and is expected to encourage regional economic activity and can influence the movement of other sectors that are less superior (Sapriadi & Hasbiullah, 2015).

In the 2015-2019 RPJMN, Jayapura City is a medium city that acts as a center of economic growth, primary service center, and hub for Papua Island and Maluku Island in the form of a National Activity Center (PKN) as well as supporting the development of state border areas. The development of Jayapura City as a PKN is focused on developing trade and services (marketing outlets for food crop production, forest products, metals, and fisheries), industry (agricultural processing, plantations, forestry, fisheries, and mining), and developed as a transshipment point in Eastern Indonesia (KTI) and a center for administrative services for crossers of state boundaries (Indonesia-PNG-Palau border).

The cities of Surabaya and Jayapura have different regional characteristics, Surabaya is one of the cities that can be said to be a big city and is a large industrial center. Meanwhile, Jayapura is a city that is starting to develop both in the industrial, service, education, infrastructure and so on sectors. In 2020, the city of Jayapura will hold sports activities, namely PON XX. To accommodate these activities, the government made many changes to the city of Jayapura, so that the development of economic development in Jayapura city was very fast. So that with the acceleration of development carried out by the government, researchers see the problems that arise, namely changes in the potential of leading sectors in the city of Surabaya and the city of Jayapura as well as the economic competitiveness that will result from these changes.

Mapping the Potential of the Economic Sector in Surabaya and Jayapura

The purpose and objective of this study is to produce complete information about the superior potential of each sector, the root of the problem and the comparison of economic conditions in Surabaya and Jayapura. To achieve this goal, steps with short-term goals are needed, namely by identifying or mapping the potential of leading sectors and their competitiveness as well as changes and shifts in the economic sector in Surabaya and Jayapura.

II. LITERATURE REVIEW

A. Theory of Economic Growth

According to Sadono Sukirno (2000) in (Utari, 2016) the development of economic activities in an area will cause an increase in the quantity of regional production in a period is the meaning of economic growth. The result of the increase in production has led to an increase in the per capita income of each region so that the area has experienced economic growth and has an impact on improving people's welfare.

B. Featured Sectors and Featured Sector Criteria

According to Sambodo in (Takalumang et al., 2018) the leading sector is a sector whose role is strong in the process of growing and developing the economy of a region. The absorption of a large workforce, the increasingly sophisticated use of technology in the production process, and the accumulation of capital through investment make the leading sector play a role as a supporting sector for the regional economy.

Through the reference GRDP data, it can be known the leading sectors in an area based on several calculation methods. According to Rachbini in (Biky, 2019) an economic sector is said to be a leading economic sector at least it must meet four conditions, including:

1. An economic sector must be able to produce goods and services that have a fairly high demand.
2. The economic sector must be able to have the ability to adapt to advanced technological developments that can help improve the quality and quantity of goods and services produced.
3. Based on the production of the sector, it must be able to cause an additional investment from both the private sector and the government.
4. The economic sector must experience a development and be able to influence the growth of other sectors.

C. Economic Base Theory

Activity in the regional economy is classified into two sectors, namely base and non-base activities. Base activities are export-oriented activities (goods and services) outside the boundaries of the economic area concerned. Non-base activities are activities that provide goods and services needed by people who are within the boundaries of the economic area concerned.

To analyze the economic base of a region, one of the commonly used techniques is the location quotient (LQ). LQ is used to find out how much the level of specialization of the base or leading sectors (Leading Sectors) is. In the LQ technique, various modifiers (factors) can be used as indicators of regional growth, for example employment opportunities (labor) and gross regional domestic product (GRDP) of a region (Adisasmita, 2005).

III. RESEARCH METHODS

A. Research Location

The research locations used are the cities of Surabaya and Jayapura.

B. Data and Data Sources

The data used in this study is GRDP data per sector and the number of residents per regency/city in East Java Province and West Papua Province published by the Central Statistics Agency for the period 2016 - 2021 with 17 sectors to be used in this study. The sampling technique was carried out by collecting data directly from the GRDP of the Cities of Surabaya and Jayapura on the basis of constant prices according to business fields and LKPJ data from the Mayor of the Surabaya and Jayapura City Governments which is the data in this study obtained through the official website of the Central Statistics Agency (BPS) of the City of Surabaya and Jayapura, BPS East Java and BPS Jayapura.

C. Data Analysis

Data analysis in this study was carried out using quantitative analysis methods. Quantitative analysis is used for:

- 1) comparative advantage analysis through Location Quotient Analysis (LQ);
- 2) analysis of competitive advantage through Shift-Share Analysis;
- 3) analysis of competitiveness and development of sector potential through Klassen Typology.

Mapping the Potential of the Economic Sector in Surabaya and Jayapura

D. Location Quotient (LQ) Analysis

LQ is an index for comparing the share of sub-regions in a given activity with the share of that total activity in total regional activity (Blakely, 2002). Grouping into two forms of activities, namely base and non-base, is carried out by the base economic model whose determination is carried out based on the results of the location quotient calculation.

In this grouping, the LQ analysis will make comparisons on similar economic sectors within the regional scope and the national scope through the production capabilities of these sectors. In this study, the area in question was the City of Surabaya as a local scope and East Java Province as a national scope. Mathematically, the calculation of LQ analysis is as follows:

$$LQ = \frac{VAJ_i / VAL_i}{PDRBJ / PDRBI} \dots\dots\dots(\text{Sishadiyati \& Wahed, 2021})$$

Information:

LQ = Location Quotient sector i in the city

VAJ_i = GRDP value of sector i in the city

VAL_i = GRDP value of sector i at provincial level

GRDP = Total GRDP in the City

PDRBI = Total GRDP at the Provincial level

Where if $LQ < 1$ or $LQ = 1$, represents the result of the non-base sector of the city, while if $LQ > 1$, represents the result of the base sector of the City.

E. Shift Share Analysis

Shift Share analysis serves to show shifts in economic structure through depictions of the performance of economic sectors. According to (Sishadiyati & Wahed, 2021) The economic performance can be known through three components, namely:

1. National Growth Share, useful in showing the influence of the national economy on regional economic growth. If the results show positive values, it is expected that national economic growth will have a positive impact on regional economic growth.
2. Proportional Shift (Ps), able to describe the growth of the sector whether it is faster or slower against the broader regional level economy.
3. Differential Shift (Ds) will show the level of competitiveness or competitiveness of a sector within its area when compared to the growth of the sector nationally.

The calculations in the analysis of Shift Share mathematically are as follows:

$$\Delta Q_{ij}^t = Q_{ij}^0 \left\{ \frac{Y_t}{Y_0} - 1 \right\} + Q_{ij}^0 \left\{ \frac{Q_i^t}{Q_i^0} - \frac{Y_t}{Y_0} \right\} + Q_{ij}^0 \left\{ \frac{Q_{ij}^t}{Q_{ij}^0} - \frac{Q_i^t}{Q_i^0} \right\}$$

The calculation can be broken down by three main components that affect the analysis of *Shift Share*, into:

$$PR_{ij} = Q_{ij}^0 \left\{ \frac{Y_t}{Y_0} - 1 \right\}$$

$$PS_{ij} = Q_{ij}^0 \left\{ \frac{Q_i^t}{Q_i^0} - \frac{Y_t}{Y_0} \right\}$$

$$DS_{ij} = Q_{ij}^0 \left\{ \frac{Q_{ij}^t}{Q_{ij}^0} - \frac{Q_i^t}{Q_i^0} \right\}$$

Information:

Y_t = Provincial GRDP in year t

Y₀ = Provincial GRDP in base year

Q_i^t = Provincial GRDP sector i in year t

Q_i⁰ = Provincial GRDP sector i in the base year

Q_{ij}^t = City GRDP in year t

Q_{ij}⁰ = City GRDP in base year

Based on these calculations, conclusions will be drawn based on the following assumptions:

1. $PS < 0$, means that a sector shows slow growth to the total economy of the Province.
2. $PS > 0$, means that a sector shows rapid growth in the province's economy.

Mapping the Potential of the Economic Sector in Surabaya and Jayapura

3. $DS < 0$, means that the sector is less superior in the City or in other meanings the sector is superior at the Provincial level (it has no locational advantage)
4. $DS > 0$, describes a sector that is superior in the City and less superior in the Province (has a locational advantage).
5. $PR < \Delta Qtij$, meaning that the sector at the City level tends to provide support to the growth of the Province.
6. $PR > \Delta Qtij$, meaning that the sector at the City level is likely to hinder the growth of the Province.

F. Klassen Typology Analysis

The growth structure of the economic sector can be described by a klassen typology based on the comparison of the GRDP growth rate with the value of the GRDP contribution of a sector between the regional level and its reference region. Klassen typology analysis will provide results in the form of sector classification based on several criteria as follows:

1. Quadrant I, is a classification of advanced and fast-growing sectors. In this quadrant, the growth rate of a sector at the regional level (s_i) is greater than the Provincial level (s) and the sector's contribution to its area (s_{ki}) will be greater when compared to the Provincial level (s_k).
2. Quadrant II, is a classification of sectors that belong to advanced sectors but whose growth is depressed. The sector's growth rate looks larger at the provincial level but has a greater contribution at the regional level.
3. Quadrant III, containing emerging sectors. Sectors that are in the developing period will have greater growth at the regional level but the contribution looks smaller.
4. Quadrant IV, is a sector that is included in the underdeveloped sector. Sectors that are lagging behind will show a growth rate and contribution value that are both smaller when compared to the Provincial level. (Sjafrizal, 2008) in (Br Surbakti et al., 2021)

Table 1. Classification of economic sectors according to the klassen typology

| Classification | $sk > ski$ | $sk < ski$ |
|----------------|---------------------------------------|------------------------|
| $si > s$ | Developed and rapidly growing sectors | Fast growing sector |
| $si < s$ | Developed but depressed sectors | Underdeveloped sectors |

Source: Sjafrizal (2008)

Information:

s_i = GRDP growth rate in sector i City

s = Provincial GRDP growth rate

s_{ki} = Contribution of GRDP sector i City

s_k = Provincial GRDP Contribution

IV. RESULTS AND DISCUSSION

A. Location Quotient (LQ) Analysis

The results of the calculation of the Location Quotient (LQ) of the City of Surabaya, show that the City of Surabaya has 11 base sectors (B) and 6 non-base sectors (NB) in 2017 – 2021 which are shown in the table below.

Table 2. Surabaya city base sector and non-base sector in 2017 – 2021

| Base Sector (B) | Non-Base Sector (NB) |
|---|---|
| 1. Procurement of Electricity and Gas | 1. Agriculture, Forestry, and Fisheries |
| 2. Water Procurement, Waste Management, Waste and Recycling | 2. Mining and Quarrying |
| 3. Construction | 3. Processing Industry |
| 4. Large Trade and Retail; Car and Motorcycle Repair | 4. Government Administration, Defense, and Compulsory Social Security |
| 5. Transportation and Warehousing | 5. Education Services |
| 6. Provision of Accommodation and Food and Drink | 6. Other services. |
| 7. Information and Communication | |
| 8. Financial Services and Insurance | |
| 9. Real Estate | |
| 10. Company Services | |
| 11. Health Services and Social Activities | |

Source: Author, data processed 2022

Mapping the Potential of the Economic Sector in Surabaya and Jayapura

Meanwhile, the calculation of the Location Quotient (LQ) of Jayapura City, shows that Jayapura City has 15 base sectors (B) and 2 non-base sectors (NB) in 2017 - 2021 which are shown in the table below.

Table 3. Jayapura city base sector and non-base sector in 2017 - 2021

| Base Sector (B) | Non-Base Sector (NB) |
|--|---|
| <ol style="list-style-type: none"> 1. Processing Industry 2. Procurement of Electricity and Gas 3. Water Procurement, Waste Management, Waste and Recycling 4. Construction 5. Large Trade and Retail; Car and Motorcycle Repair 6. Transportation and Warehousing 7. Provision of Accommodation and Food and Drink 8. Information and Communication 9. Financial Services and Insurance 10. Real Estate 11. Company Services 12. Government Administration, Defense, and Compulsory Social Security 13. Education Services 14. Health Services and Social Activities 15. Other Services. | <ol style="list-style-type: none"> 1. Agriculture, Forestry, and Fisheries 2. Mining and Quarrying. |

Source: Author, data processed 2022

B. Shift Share Analysis

The calculation of the Surabaya City Shift Share analysis from 2017 – 2021 is shown in the table below.

Table 4. Surabaya city shift share analysis 2017 - 2021

| Proportional Regional (PR) | Proportional Shift (PS) | Differential Shift (DS) |
|---|--|---|
| <p>$PR > \Delta Q_{tj}$ which means that production growth in the city of Surabaya is able to provide support for the growth of East Java Province with contributions from 10 sectors including:</p> <ol style="list-style-type: none"> 1. Agriculture, Forestry, and Fisheries 2. Mining and Quarrying 3. Procurement of Electricity and Gas 4. Construction 5. Large Trade and Retail; Car and Motorcycle Repair 6. Provision of Accommodation and Food and Drink 7. Financial Services and Insurance 8. Company Services 9. Government Administration, Defense, and Compulsory Social Security 10. Other Services. | <p>There are 8 economic sectors in the city of Surabaya whose performance is growing faster than the economy of East Java Province. The sector is:</p> <ol style="list-style-type: none"> 1. Processing Industry 2. Water Procurement, Waste Management, Waste, and Recycling 3. Construction 4. Large Trade and Retail; Car and Motorcycle Repair 5. Information and Communication 6. Real Estate 7. Education Services 8. Health Services and Social Activities. | <p>There are 3 economic sectors in the city of Surabaya that have a locational advantage in 2017– 2021. These sectors are:</p> <ol style="list-style-type: none"> 1. Transportation and Warehousing 2. Company Services 3. Health Services and Social Activities |

Source: Author, data processed 2022

The calculation of the Jayapura City Shift Share analysis from 2017 – 2021 is shown in the table below.

Mapping the Potential of the Economic Sector in Surabaya and Jayapura

Table 5. Jayapura city shift share analysis 2017 - 2021

| Proportional Regional (PR) | Proportional Shift (PS) | Differential Shift (DS) |
|--|--|--|
| <p>PR < ΔQtij which means that production growth in the city of Jayapura is unable to provide support for the growth of Papua Province with contributions from 9 sectors including:</p> <ol style="list-style-type: none"> 1. Agriculture, Forestry, and Fisheries 2. Water Procurement, Waste Management, Waste, and Recycling 3. Construction 4. Transportation and Warehousing 5. Provision of Accommodation and Food and Drink 6. Financial Services and Insurance 7. Company Services 8. Government Administration, Defense, and Compulsory Social Security 9. Health Services and Social Activities. | <p>There are 10 economic sectors in the city of Jayapura whose performance is growing faster than the economy of Papua Province. The sector is:</p> <ol style="list-style-type: none"> 1. Construction 2. Large Trade and Retail; Car and Motorcycle Repair 3. Transportation and Warehousing 4. Provision of Accommodation and Food and Drink 5. Information and Communication 6. Financial Services and Insurance 7. Real Estate 8. Education Services 9. Health Services and Social Activities. 10. Other Services. | <p>There are 8 economic sectors in the city of Jayapura that have a locational advantage in 2017 – 2021. These sectors are:</p> <ol style="list-style-type: none"> 1. Agriculture, Forestry, and Fisheries 2. Processing Industry 3. Transportation and Warehousing 4. Financial Services and Insurance 5. Company Services 6. Government Administration, Defense, and Compulsory Social Security 7. Health Services and Social Activities. 8. Other Services. |

Source: Author, data processed 2022

C. Klassen Typology Analysis

Surabaya City's economic sector was divided into three quadrants based on the value of the contribution and growth rate. The classification of economic sectors based on the analysis of the Klassen Typology in the City of Surabaya in 2017 – 2021 is shown in the table below.

Table 6. Surabaya city klassen typology analysis 2017 - 2021

| | |
|--|---|
| <p>Quadrant II There is no economic sector in Surabaya City that is classified as quadrant II in 2017 – 2021.</p> | <p>Quadrant I In quadrant I consists of 2 economic sectors where these sectors are classified as developed and fast-growing sectors. These economic sectors are:</p> <ol style="list-style-type: none"> 1. Transportation and Warehousing 2. Health Services and Social Activities. |
| <p>Quadrant III In quadrant III or developing sectors there are 9 economic sectors, including:</p> <ol style="list-style-type: none"> 1. Procurement of Electricity and Gas 2. Water Procurement, Waste Management, Waste and Recycling 3. Construction 4. Large Trade and Retail, Car and Motorcycle Repair 5. Provision of Accommodation and Food and Drink 6. Information and Communication 7. Financial Services and Insurance 8. Real Estate 9. Company Services. | <p>Quadrant IV In quadrant IV consists of 6 economic sectors that are included in the underdeveloped sector, including:</p> <ol style="list-style-type: none"> 1. Agriculture, Forestry, and Fisheries 2. Mining and Quarrying 3. Processing Industry 4. Government Administration, Defense, and Compulsory Social Security 5. Jasa Education 6. Other Services. |

Source: Author, data processed 2022

Jayapura City's economic sector was divided into three quadrants based on the value of the contribution and growth rate. The classification of economic sectors based on the analysis of the Klassen Typology in the City of Jayapura in 2017 – 2021 is shown in the table below.

Mapping the Potential of the Economic Sector in Surabaya and Jayapura

Table 7. Jayapura city klassen typology analysis 2017 - 2021

| | |
|---|---|
| <p>Quadrant II In quadrant II, the developed but depressed sector consists of 2 economic sectors, including:</p> <ol style="list-style-type: none"> 1. Agriculture, Forestry, and Fisheries 2. Mining and Quarrying. | <p>Quadrant I In quadrant I consists of 7 economic sectors where these sectors are classified as developed and fast-growing sectors. These economic sectors are:</p> <ol style="list-style-type: none"> 1. Processing Industry 2. Water Procurement, Waste Management, Waste and Recycling 3. Transportation and Warehousing 4. Financial Services and Insurance 5. Company Services 6. Government Administration, Defense and Compulsory Social Security 7. Health Services and Social Activities. |
| <p>Quadrant III In quadrant III or developing sectors there are 8 economic sectors, including:</p> <ol style="list-style-type: none"> 1. Procurement of Electricity and Gas 2. Construction 3. Large Trade and Retail, Car and Motorcycle Repair 4. Provision of Accommodation and Food and Drink 5. Information and Communication 6. Real Estate 7. Education Services 8. Other Services. | <p>Quadrant IV There is no economic sector in Jayapura City that is classified as quadrant IV in 2017 – 2021.</p> |

Source: Author, data processed 2022

CONCLUSIONS

1. The superior sector of Surabaya City can be identified in the *Location Quotient* (LQ) analysis with more than one result criterion. There are 11 economic sectors that play a role as superior sectors in the city of Surabaya with the Corporate Services sector as the sector that has the highest average LQ results.
2. The superior sector of Jayapura City can be identified in the *Location Quotient* (LQ) analysis with more than one result criterion. There are 15 economic sectors that play a role as superior sectors in Jayapura City with the Corporate Services sector as the sector that has the highest average LQ yield.
3. There are 10 sectors that are able to help the improvement of the same sector at the East Java Province level when viewed in the results of the regional proportional component (PR), and the performance of the sector grows faster is in 8 economic sectors in the city of Surabaya according to the proportional shift (PS) component and the differential shift (DS) component, showing that there are 3 sectors in the city of Surabaya that have a locational advantage.
4. In the value of Jayapura PR, it is known that $PR < \Delta q_{tij}$, which can be interpreted to mean that the economic growth in Jayapura city cannot support economic development in Papua province, this can be seen from the 9 sectors whose PR is lower. So that these 9 sectors are not able to help the improvement of the same sector at the Papua Province level when viewed in the results of the regional proportional component (PR), and the performance of the sector grows faster in 10 economic sectors in Jayapura City according to the proportional shift (PS) component and the differential shift (DS) component, showing that there are 8 sectors in Jayapura City that have a locational advantage.
5. The city of Surabaya has 2 sectors that are classified as developed and fast-growing sectors, there are no sectors that are said to be sectors whose growth is depressed, 9 sectors that can still develop, and 6 sectors that are lagging behind. Meanwhile, in Jayapura city, there are no sectors that are left behind, but there are 2 sectors whose growth is emphasized.

REFERENCES

- 1) Arsyad, L. (2014). Development economics.
- 2) Chalid, P. (2015). Development Theory. Open University, 1–52. <http://repository.ut.ac.id/4601/>

Mapping the Potential of the Economic Sector in Surabaya and Jayapura

- 3) Huda, F. M., & Cahyono, H. (2021). Increasing Economic Growth through the Development of Leading Sectors in Jombang Regency. Independent: Journal of Economics, 1 Number 2(2798–5008), 76–91.
- 4) Sapriadi, & Hasbiullah. (2015). Analysis of Determination of the Leading Economic Sector of Bulukumba Regency. Journal of Iqtisaduna, 1(1), 71–86. <http://journal.uin-alauddin.ac.id/index.php/Iqtisaduna/article/download/1155/1121>
- 5) Central Statistics Agency of Surabaya City. (2021). Gross Regional Domestic Product of Kota Purba, B., Rahmadana, M. F., Basmar, E., & Sari, D. P. (2021). Development Economics. Yayasan Kita Tulis.Surabaya According to Business Field 2016 - 2020. Surabaya City Statistics Central Agency.
- 6) Syarifuddin, T., & Zulham, T. (2018). Analysis of Leading Sectors and Their Effect on Economic Growth in Nagan Raya Regency, Aceh Province. Scientific Journal of Development Economics Students, 3(4), 844–851. <http://www.jim.unsyiah.ac.id/EKP/article/view/10647>
- 7) Suryono, A. (2010). Dimensions - The Prime Dimensions of Development Theory. UB Press.
- 8) Utari, D. (2016). Analysis Affecting Economic Growth in Purbalingga Regency 2000 - 2015. Islamic University of Indonesia.
- 9) Ridwan. (2016). Regional Economic Development.
- 10) Takalumang, V. Y., Rumat, V. A., Lopian, A. L. C. P., Development, J. E., Economy, F., Sam, U., & Takalumang, V. (2018). Analysis of leading economic sectors in encouraging economic growth of Sangihe Regency/Islands. Scientific Periodical Journal of Efficiency, 18(01), 1–12.
- 11) Biky, M. A. (2019). Determination of Leading Sectors and Agricultural Structures in Tegal Regency. Muhammadiyah Purwokerto University.
- 12) Wardhani, M. K. (2016). Analysis of the Potential and Competitiveness of the Agricultural Sector in Blitas District. University of Muhammadiyah Malang.
- 13) Alhowaish, A., Alsharikh, M., Alasmal, M., & Alghamdi, Z. (2015). Location Quotient Technique and Economy Analysis of Regions: Tabuk Province of Saudi Arabia as a Case Study. International Journal of Science and Research (IJSR), 4(12), 1756-1761.
- 14) Morrissey, K. (2014). Producing regional production multipliers for Irish marine sector policy: A location quotient approach. Ocean & coastal management, 91, 58-64.
- 15) Wahed, M. (2019). Mapping of Sectoral Economic Potential and Estimation of Economic Growth in Pamekasan Regency. Journal of Economics and Business, 5(1), 1. <https://doi.org/10.35590/jeb.v5i1.685>
- 16) Sishadiyati & Wahed. (2021). Regional Economics of Empirical Theory and Evidence. Solok: Media Scholar Partner.
- 17) Sjafrizal. (2008). Regional Economics: Theory and Applications. Baduose Media.
- 18) Br Surbakti, L. S., Marseto, M., & Sishadiyati, S. (2021). Analysis of the Development of Leading Economic Sectors in Economic Growth in Medan City. Jambura Economic Education Journal, 3(2), 143–151. <https://doi.org/10.37479/jeej.v3i2.11055>
- 19) Hendra Perdana, D. A. N. S. (2019). OVERLAY ANALYSIS TO DETERMINE THE POTENTIAL OF LEADING ECONOMIC SECTORS IN REGIONAL DEVELOPMENT (Case Study with GRDP of Pontianak City). Bimaster: Scientific Bulletin of Mathematics, Statistics and Its Application, 8(4). <https://doi.org/10.26418/bbimst.v8i4.36746>



There is an Open Access article, distributed under the term of the Creative Commons Attribution – Non Commercial 4.0 International (CC BY-NC 4.0) (<https://creativecommons.org/licenses/by-nc/4.0/>), which permits remixing, adapting and building upon the work for non-commercial use, provided the original work is properly cited.