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Sectoral Linkages in Pangandaran Regency's Regional Development

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Article Info

Abstract

Pangandaran District is a newly formed region in West Java Province. Effective and competitive regional development requires support from the potential leading sectors in a region. Prioritization is needed because of limited resources that cannot facilitate the development of all sectors simultaneously. This analysis aims to identify leading sectors, sector interconnections, and multiplier effects on the economy of Pangandaran Regency. The results are that there are 5 (five) sectors that are comparatively and competitively superior, namely: (1) Accommodation, Food and Drink Providers, (2) Agriculture, Forestry and Fisheries (3) Transportation and Warehousing, (4) Wholesale and retail trade , Repair and (5) Real Estate. The largest backward linkages are achieved by the "other services" sector. This sector becomes a lever for the development of its own sector. Meanwhile, the largest forward linkages are agriculture, forestry, and fisheries. The output from the agricultural sector is widely used as an input by other sectors. Agriculture, forestry and fisheries sectors are key sectors. This is because agriculture, forestry, and fisheries have the largest intersectoral linkages and dispersal index. The "Other services" sector is the largest output multiplier. The sector with the largest GRDP multiplier is agriculture, forestry and fisheries. Proper allocation of resources can be done by prioritizing the leading sectors to improve the regional development of the Pangandaran District.

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INTRODUCTION

The Pangandaran Regency is a newly formed region in West Java Province that is separated from the Ciamis Regency according to the Law of the Republic of Indonesia Number 21 of 2012. In 2020, the largest contribution in the formation of Pangandaran's GRDP was still generated by the Agriculture, Forestry and Fisheries Sector, which was 27.34% (BPS, 2021).

Strategic issues that arise in Pangandaran Regency include the support of the agricultural sector in the economy of Pangandaran Regency which contributes to the largest GRDP, but includes a slow-growing sector. The growth rate of the agricultural sector in Pangandaran Regency in 2020 of 2.79 percent tends to be slow compared to other sectors (BPS, 2021). The accommodation and food and drink sectors, which include tourism activities, are still unable to contribute optimally to GRDP. Based on these conditions, several regional issues emerged including the low leverage of Pangandaran Regency's economic performance in responding to opportunities to accelerate regional development and the many potential resources that have not been managed optimally.

Sectoral-based regional development in its implementation does not simultaneously develop all sectors, but focuses on sectors that have competitiveness and a broad spread impact on other sectors, so that limited resources can be allocated appropriately and efficiently (Purnama et al. 2019). This analysis is expected to provide accurate information about the leading sectors in Pangandaran Regency. Analysis of leading sectors and their relationship with other sectors is needed for the direction of regional development policies in Pangandaran Regency and the allocation of appropriate resource utilization.

An analysis of the leading sectors and their linkages with other sectors is needed for policy directions for the development of the Pangandaran Regency area. Based on the formulation of the problem, the purpose of this research is to find out leading sectors in Pangandaran Regency, how are the inter-sectoral linkages in the development of the region and how the multiplier effect on the economic development of the Pangandaran Regency area.

METHODS

This research was conducted in Pangandaran Regency, West Java Province. The research was conducted from June 2022 to December 2022.

The secondary data used in the form of GRDP for 2013-2020 was obtained from BPS Pangandaran Regency. Data processing in this study used Excel and Qgis software. The method used consists of Location Quotient (LQ) and Shift Share Analysis (SSA) to determine the leading sector in Pangandaran Regency, as well as Input-Output analysis as a method of analyzing the linkages between sectors and the multiplier impact on the economy of the Pangandaran Regency region. Some previous research used LQ and SSA to determine the leading sector were Hendriany et al. (2023), Noviyanti et al. (2020), Hudang (2018), and Siska et al. (2015), while some previous research applying Input-Output analysis for identify sectoral linkage and multiplier effect in regional development such as Silvia et al. (2019), Rahmawan and Angraini (2021), Arifah and Sunarjo (2021), Marlianti et al. (2017), Suryani (2023), Malba and Taher (2016), and Widyawati (2017).

Determination of Leading Sectors

The economic condition of a region is reflected, by the value contribution of the Gross Regional Domestic Product (GRDP). The economic structure of a region is used as a picture that shows the direction of development that takes place in a certain period of time. The economic activity of a region produces gross value added from goods and services (Darlen et al., 2015). The determination of the leading sector in Pangandaran Regency uses LQ and SSA, the GRDP value used is based on constant prices.

To improve the welfare of people in a region, economic stability is needed which can be obtained from accelerating the rate of economic growth (Anggraeni et al., 2020). This can be obtained through the establishment of leading sectors that can support regional development through GRDP contributions and create jobs (Darlen et al., 2015). Through LQ analysis, the advantages and potential of a sector in a region can be identified by comparing certain sectors within the coverage area above it (broader). This is useful in determining the direction and focus of development, prioritizing sectors with the most potential, and identifying areas that need support and intervention (Monika, 2020).

Competitive advantage is defined as the ability of certain sectors in a region to develop and obtain sustainable growth, this can be analyzed using the SSA method. A sector can be included in the leading criteria if it has a value of LQ> 1 which means that there is a concentration of activities in that area, as well as a shift in activity resulting from the SSA analysis by referring

to the Differential Shift (DS) value. DS value> 0 (positive) indicates growth.

The LQ value indicates the location of the concentration of the base sector, the ability to export in the economy of a region and the ability of local production to meet the demand for goods or services in a region(Hamri et al., 2016). Determining the leading sector using LQ analysis is carried out based on the PDRB data of Pangandaran Regency and the GRDP of West Java Province in 2020. Where the criteria for LQ> 1 results indicate a sector is a base sector. Meanwhile, if the LQ <1 then a sector is not a basis. Location Quotient (LQ) can be expressed through the equation:

$LQ_{IJ} = X_{IJ} / X_{I.}$
$X_{.j}/X_{..}$

where:
X_{IJ} = Total GRDP in certain sectors in the Regency Pangandaran
$X_{I.}$ = Total GRDP of Pangandaran Regency
$X_{.j}$ = Total GRDP in certain sectors in West Java Province
$X_{..}$ = Total GRDP of West Java Province

Shift Share Analysis (SSA)

SSA method is used to determine the decomposition of growth of a particular economic sector. The data used are data on the GRDP of Pangandaran Regency and the GRDP of West Java Province in 2015 and 2020.

$$SSA = \underbrace{\left(\frac{X_{..(t1)}}{X_{..(t0)}} - 1\right)}_{a} + \underbrace{\left(\frac{X_{i.(t1)}}{X_{i.(t0)}} - \frac{X_{..(t1)}}{X_{..(t0)}}\right)}_{b} + \underbrace{\left(\frac{X_{ij(t1)}}{X_{ij(t0)}} - \frac{X_{i.(t1)}}{X_{i.(t0)}}\right)}_{c}$$

a: Regional Share (RS)
b: Proportional Shift (PS)
c: Differential Shift (DS)
X..: Total value of activities/sectors in total area (West Java Province
X^i: Value of the i-th sector in the total area (West Java Province)
X^{ij}: Value of the i-th sector in the j-th unit area (Pangandaran Regency)
t^1: End/final year
t^0: Early year

Inter-Sectoral Linkages

Regional development in the process goes hand in hand with the development of leading sectors. Leading sectors that are developing can have an influence on other sectors which in a sustainable manner will create linkages between sectors. The linkages between these sectors greatly

support the realization of regional development. Input-Output (IO) analysis is useful for identifying the condition of the regional economic structure as indicated by the contribution distribution of each sector and the linkages between sectors in the regional economy (Rustiadi et al. 2011).

The production activities of a sector which are analyzed by Input-Output can have an economic influence on other sectors. Because the Pangandaran Regency IO table was not available, an update was made to the West Java Province Input-Output table in 2016 to produce Pangandaran Regency IO in 2020 using the RAS method. There are several similarities in the economic structure of Pangandaran Regency and West Java Province which are the assumptions for the RAS method.

The results of updating the IO for West Java Province in 2016 are the IO table for West Java 2020. In compiling the Input-Output Table for Pangandaran Regency the 2020 GRDP data conversion method is used to determine the total input based on the proportionality of GRDP and the total input for West Java Province.

Direct backward linkage

Is a value that indicates the demand for a sector that has an impact on the level of production of other sectors that directly allocates intermediate inputs for that sector. This value is obtained from the sum of each column aij in each column j (Rustiadi et al. 2011).

$$B_j = \sum_{i=1}^{n} a_{ij}$$

α_{ij} = element of the technological engineering coefficient matrix
n = number of sectors

Comparison with other sectors is carried out using normalized Bj*, namely a comparison between the direct backward linkage of sector j and the average value of the backward linkage of other sectors. Normalized Bj* is formulated in the equation:

$$B_j^* = \frac{B_j}{\frac{1}{n}\Sigma_j B_j} = \frac{n.B_j}{\Sigma_j B_j}$$

Where:
Bj> 1 means that there is a strong link between sector j and the upstream sector. In another sense, it has a stronger influence on the growth of the sector that allocates input to sector j

Direct forward linkage provides information on how much of a sector's output is allocated to other sector inputs.

$$F_i = \sum_{j=1}^{n} a_{ij}$$

$$F_i^* = \frac{F_i}{\frac{1}{n}\sum_i F_i} = \frac{n.F_j}{\sum_i F_i}$$

Where: Normalized F_i^* is the relative value of the comparison between the direct forward linkage of sector i (direct forward linkage of sector i) and the average forward linkage of other sectors.

The indirect effect that arises due to an increase in final demand of 1 unit for a sector which causes an increase in the total output of all sectors in a regional economy is an indication of direct and indirect backward linkage.

Direct and indirect forward linkage, is the role of certain sectors to meet the final demand of all economic sectors. Backward spread is a measure of the strength of the average final demand owned by a sector to support the increase in total production of all economic sectors (Yudiansyah et al., 2019).

Analyzing the Impact of the Output Multiplier Value on the Regional Economy

The multiplier effect is an effect that appears in various regional economic activities. This arises because of changes in exogenous economic variables, either directly or indirectly. The purpose of the analysis is to provide input in regional development planning in order to set regional economic development achievement targets (Pratama et al., 2019).

The multiplier effects studied are: (1) the output multiplier, namely the impact of the output multiplier value which shows the strength of a sector in its role as a production lever in all sectors, and (2) the GRDP multiplier (total value added multiplier). The GRDP multiplier reflects the added value obtained by economic actors, while the output multiplier reflects the economic size of a region in which it can reflect economic linkages.

output multiplier, namely the magnitude of the effect of an increase in the final demand of a sector on the total output of all sectors in the study area. It can be formulated in terms of the relationship between output and final demand where, Fd = diagonal matrix of the final demand coefficient.

$$x = (I - A)^{-1}.F^d$$

The GRDP multiplier is the effect of an increase in the final demand of a sector on an increase in GRDP. In this analysis, GRDP is assu-

med to be connected linearly with output.

$$v = \tilde{V}X$$

V is the Gross Value Added (NTB) or GRDP matrix, $\tilde{V}$ is the diagonal matrix of the NTB coefficient and X is the output matrix, $X = (I - A)^{-1}.F^d$

RESULTS AND DISCUSSION

The Leading Sector of Pangandaran Regency and Its Regional Position in West Java Province

The value of LQ > 1 produced by each sector in Pangandaran Regency indicates that this sector can fulfill demand in the region. In addition, it also shows the potential for exports outside the region. These advantages make Pangandaran Regency have regional competitiveness and position in West Java Province. In 2020 there are nine sectors that have an LQ> 1 result, namely (1) the Agriculture, Forestry and Fisheries Sector, in general these sectors are superior in every newly developing region in Indonesia; (2) Accommodation and Food and Drink Sector. In this sector, Pangandaran Regency which has superior potential in the field of tourism, (3) Real Estate Sector which shows quite massive development in Pangandaran Regency is a natural thing for new expansion areas, so that the real estate business/sector in 2020 occupies the third largest position after the agriculture, forestry and fisheries sectors, as well as the provision of food and drink accommodation. The results of the analysis using the SSA method, the Differential Shift number> 0 (positive) indicates a decomposition of the growth of the sectors. Sectors that experienced growth (DS> 0) in the 2015-2020 period were (1) Agriculture, Forestry and Fisheries, (2) Processing Industry, (3) Electricity and Gas Procurement, (4) Water Supply, Waste Management, Waste and Recycling, (5) Wholesale and Retail Trade; Car and Motorcycle Repair, (6) Transportation and Warehousing, (7) Provision of Accommodation and Food and Drink, (8) Real Estate, and (9) Other Services. forestry and fisheries, as well as the provision of food and drink accommodation. The results of the analysis using the SSA method, the Differential Shift number> 0 (positive) indicates a decomposition of the growth of the sectors. Sectors that experienced growth (DS> 0) in the 2015-2020 period were (1) Agriculture, Forestry and Fisheries, (2) Processing Industry, (3) Electricity and Gas Procurement, (4) Water Supply, Waste Management, Waste and Recycling, (5) Wholesale and Retail Trade;

Car and Motorcycle Repair, (6) Transportation and Warehousing, (7) Provision of Accommodation and Food and Drink, (8) Real Estate, and (9) Other Services.

Figure 1. Distribution of LQ values > 1 for the agricultural sector in West Java Province

Forestry and fisheries, as well as the provision of food and drink accommodation. The results of the analysis using the SSA method, the Differential Shift number> 0 (positive) indicates a decomposition of the growth of the sectors. Sectors that experienced growth (DS> 0) in the 2015-2020 period were (1) Agriculture, Forestry and Fisheries, (2) Processing Industry, (3) Electricity and Gas Procurement, (4) Water Supply, Waste Management, Waste and Recycling, (5) Wholesale and Retail Trade; Car and Motorcycle Repair, (6) Transportation and Warehousing, (7) Provision of Accommodation and Food and Drink, (8) Real Estate, and (9) Other Services.

Sectors that experienced growth (DS> 0) in the 2015-2020 period were (1) Agriculture, Forestry and Fisheries, (2) Processing Industry, (3) Electricity and Gas Procurement, (4) Water Supply, Waste Management, Waste and Recycling, (5) Wholesale and Retail Trade; Car and Motorcycle Repair, (6) Transportation and Warehousing, (7) Provision of Accommodation and Food and Drink, (8) Real Estate, and (9) Other Services. Sectors that experienced growth (DS> 0) in the 2015-2020 period were (1) Agriculture, Forestry and Fisheries, (2) Processing Industry, (3) Electricity and Gas Procurement, (4) Water Supply, Waste Management, Waste and Recycling, (5) Wholesale and Retail Trade; Car and Motorcycle Repair, (6) Transportation and Warehousing, (7) Provision of Accommodation and Food and Drink, (8) Real Estate, and (9) Other Services.

In an area, the determination of the leading sector is based on the category if the sector has an LQ> 1 result and a Differential Shift (DS) value of > 0, which means that the sector is superior comparatively and competitively. The results of the analysis of LQ and SSA, in Pangandaran Regency there are 5 (five) leading sectors (table 1).

Table 1. Superior Sector   Pangandaran Regency

Sector	LQ	DS
Provision of Accommodation and Food and Drink	3,40	0.11
Agriculture, Forestry and Fisheries	3,32	0.03
Real Estate	2.68	0.11
Transportation and Warehousing	2.48	0.06
Wholesale and Retail Trade; Car and Motorcycle Repair	1.45	0.02

Source: Processed data, 2022

Regional Position of Pangandaran Regency in West Java Province Based on LQ Value

LQ analysis based on GRDP data for 2020, obtained a sequence of 5 (five) major regencies that produced LQ> 1 in the Agriculture, Forestry and Fisheries Sectors in West Java Province (Figure 1), namely: Tasikmalaya Regency 4.78; Garut Regency 4.48; Cianjur Regency 4.04; Subang Regency 3.67; and Pangandaran Regency 3.32. The position of Pangandaran Regency for the Agriculture, Forestry and Fisheries sector is in the fifth highest LQ score in West Java Province.

Based on data from BPS Pangandaran Regency, among the categories of agriculture, forestry and fisheries, the largest contribution was made by the agriculture category, this is due to the greater coverage of sub-sectors compared to forestry and fisheries, namely consisting of sub-categories of agriculture, livestock, hunting and agricultural services. Apart from being supported by agricultural potential in general, Pangandaran Regency is also supported by natural resources in the form of the sea which adds strength to the fisheries sub-sector, both capture and cultivation. Capture fisheries in Pangandaran Regency from 2014 to 2018 contributed to the total GRDP with an average value of 0.97%. This means that the role of the capture fisheries sector in the economy of Pangandaran Regency still tends to be low (Kartika, et al., 2020).

The role of the agricultural sector in Pangandaran Regency in absorbing labor in 2020 based on population data by field of business in Pangandaran Regency, out of a total population of 426,483 people there are 67,703 (people) who work as farmers (agriculture, plantation and fis-

heries) or 15.87 % and is the sector that absorbs the largest number of workers in Pangandaran Regency (Bappeda, 2020).

Pangandaran Regency achieved the highest LQ score in West Java for the accommodation and food and drink (tourism) sector. This is because Pangandaran Regency is the main tourist area in West Java Province. The Pangandaran area is very popular as a beach tourism destination for tourists from various regions, including national ones. The development of tourism in this area is predicted to continue to move towards mass tourism (Bappeda Jabar, 2015).

The number of tourists coming to Pangandaran Regency from 2008 to 2019 in general tends to increase every year. However, it experienced a decline in 2020 due to measures to limit community activities to overcome the Covid-19 pandemic. Tourist visitors in Pangandaran Regency in 2019 for domestic tourists reached 2,842,022 people and for foreign tourists as many as 88,484 people. Tourism is one of the main earners of regional original income (PAD) in Pangandaran Regency. In 2019, the amount reached IDR 18,472,858,000 and in 2020, it decreased to IDR 13,786,568,250. Fulfillment of food and drink accommodation in tourism activities in Pangandaran Regency is supported by the presence of around 280 restaurants and hotels which have increased to 383 hotels in 2020 (Bappeda, 2020).

Sectoral Linkages in Pangandaran Regency

The IO model explains how economic integration occurs. The occurrence of economic integration causes dependence where changes in output in one sector have an impact on the output of other sectors. Hirschman (1958) in Daryanto et al., (2010), describes inter-sector linkages through: (1) direct linkages backwards, (2) direct linkages forwards, (3) power to spread forward, (4) power to spread behind.

The backward linkage is an illustration of the driving force of a certain sector on the production growth of other sectors whose output is allocated for input in the production of that sector. This linkage arises when the increased output of a sector causes an increase in demand for the output of another sector which is used as an intermediate input for that sector directly. Indirect backward linkage is the magnitude of the linkage which can be seen from the sum total of all backward linkages and is the sum of the direct and indirect effects. The total backward linkage value is obtained from the magnitude of the numbers in certain sector columns in the Leontief inverse matrix.

Figure 2. Distribution of LQ>1 Value in the Tourism Sector in West Java Province

The greatest backward linkage was achieved by 3 sectors namely: Other services at 15.11; Agriculture, Forestry and Fisheries 5.62; and Real Estate at 4.70. The largest linkage value is in the Other Services Sector, which means that an increase of 1 million rupiah in the output of that sector will cause an increase in total inputs of IDR 15,110,000 from the sector itself and other sectors that provide input.

Based on the Indonesian Business Field Standard Classification (KBLI), the other service sector is a combination of four categories with a very wide range of activities, including: the arts, entertainment, recreation, computer repair, and products for personal and household needs. This includes serving household needs through individual services. Other service sectors in Pangandaran Regency are included in sectors that are experiencing accelerated economic growth. The Other Services Sector will experience a positive growth of 1.86% in 2021. According to data from BPS (2021), the contribution of the other service sector to the GRDP of Pangandaran Regency tends to remain in the range of 1.56%.

Forward Linkages

This analysis aims to identify the development of certain sectors whose output is allocated for use by other sectors. There are three sectors that have the greatest forward linkages, namely agriculture, forestry and fisheries with a value of 22.41; the wholesale and retail trade sector, car and motorcycle repair at 11.96; and the transportation and warehousing sector with 5.49. The agriculture, forestry and fisheries sectors have the largest forward linkage value, which is 22.41. The resulting figure gives an indication that if the final demand increases by 1 million rupiah, it will affect the output allocation of the agriculture, forestry and fisheries sector for other sectors inclu-

ding the agriculture, forestry and fisheries sector which will also increase by Rp.22,410,000.

The high forward linkages of the Pangandaran Regency economic structure indicate that this sector has great potential to be developed. This occurs because the agricultural, forestry and fisheries sectors have high linkages with the sectors that use their products. The priority for the development of the agricultural sector can improve people's welfare and improve the economy of Pangandaran Regency, while at the same time contributing to the development of other sectors related to the agricultural sector. This can be done by increasing the utilization of agricultural, forestry and fishery products such as agro-industry.

Analysis of Power Distribution and Power Sensitivity

The value of spreading power is a measure of the capacity of a sector to encourage the growth of its upstream industry. The higher the value generated by a sector, the more influential it will be on the growth of other sectors. The Spreading Power Index (IDP) is a value that measures how a certain sector of the economy affects other sectors of the economy. In Figure 3, the highest IDP score is in the Other Services sector (3.77) indicating that other service sectors have the greatest impact on the economy as a whole. This means that if there is an increase in demand for 1 unit of Other Services, it will result in an increase in the output of other sectors of 3.7700 units.

Sensitivity Index (IDK) is an index that measures how certain economic sectors react to changes in other economic sectors. Economic sectors with an IDK value > 1 have a high degree of sensitivity, meaning that they react strongly to changes in other sectors in the economy. Conversely, sectors with IDK < 1 have a low degree of sensitivity, which means they react weakly to changes in other sectors.

The highest IDK value was produced by the Agriculture, Forestry and Fisheries sector (5.99) indicating that this sector has a high level of sensitivity to changes in other economic sectors. This means that an increase in output from all sectors can grow the Agriculture, Forestry and Fisheries sectors. Each increase in output by 1 unit will increase the demand for this sector by 5.99 units. This means that changes in other sectors greatly affect this sector.

In line with the conditions put forward by Daryanto et al. (2010) that in the economy of a region, it is not easy to find a sector with equally strong spreadability and sensitivity. This is due to differences in behavior between aggregate supply and demand. Some sectors have high spreadability, but low sensitivity, and vice versa. This condition indicates that the sectors in the economy interact with each other and have different roles in influencing regional economic growth.
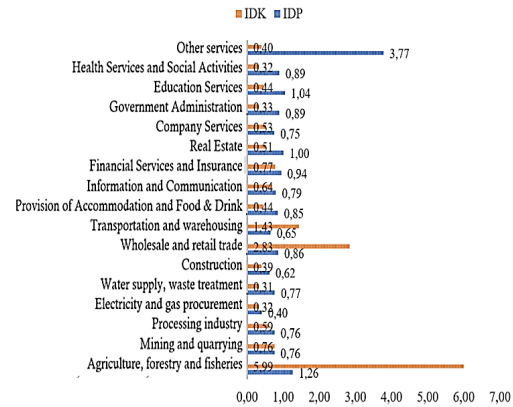

Figure 3. IDP and IDK in economic sectors in Pangandaran Regency Source: Data processed, 2022

Table 2. IDK and IDP linkage matrix

Low (IDK<1)		Forward (IDK)	
		High (IDK>1)	
High (IDP >1)		QUADRANT II Real Estate Education Services Other Services	QUADRANT I Agriculture, Forestry, and Fisheries
Backward (IDP)	Low (IDP <1)	QUADRANT IV Construction Mining and Quarrying Information and Communication Corporate Services Procurement of Electricity and GasDefense and Compulsory Social Security Provision of Accommodation and Food & Drink Health Services and Social Activities Financial Services and Insurance Water Procurement, Management	QUADRANT III Wholesale and Retail Trade; Car and Motorcycle Repair Transportation and Warehousing

The results of the calculation of IDP and IDK obtained a matrix of linkages for each sec-

tor in the economy in Pangandaran Regency. In Tabel 2, the agriculture, forestry and fisheries sectors are included in quadrant I indicating that these sectors have high linkages both forward and backward linkages. This position indicates that sectors in quadrant 1 play a very large role in attracting other sectors to develop. The recapitulation results show that the primary sector has the highest attractiveness index and degree of sensitivity. This means that to spur regional economic growth, the main priority is aimed at the primary sector. However, the secondary sector is also important to note because it can become a lever sector for economic growth and improve people's welfare.

The Impact of the Multiplier Value for the Economy of Pangandaran Regency

The value of the output multiplier indicates the magnitude of the influence of certain sectors on other sectors in the economy. The magnitude of the output multiplier determines the size of the influence on regional economic growth. There are three business fields or sectors with the highest output multiplier, namely: other service sectors of 14.44; agriculture, forestry and fishery sector of 4.83; and the education services sector of 3.97. Thus these sectors become a priority for development and play a bigger role in advancing the regional economy.

The highest output multiplier value was in other service sectors of 14.44 indicating the major influence that this sector has on regional economic growth. If there is an increase in demand in other service sectors, it will spread and affect other sectors, increasing output by 14.44 times the total increase in demand in other service sectors. Especially for Pangandaran Regency as a tourist area, other services also include entrance tickets for tourism objects and sea tourism services.

The results of the analysis of the GRDP multiplier effect show the effect caused by an increase in the final demand of certain sectors which causes changes in the increase in GRDP achievements. There are five sectors that have the highest GRDP multiplier values, namely the agriculture, forestry and fisheries sector, the wholesale and retail trade sector, the accommodation and food and drink provision sector, transportation and warehousing, and education services. The agriculture, forestry and fisheries sectors have the largest GRDP multiplier impact values. This means that if the sector experiences a change in final demand of Rp. 1 million, the PDRB of Pangandaran Regency will increase by Rp.15,142,027,187. This indicates that the agricultural sector, Forestry

and fisheries play an important role in the economic development of the Pangandaran Regency region and have great potential to determine the increase in GRDP for the region. This condition is in line with the achievement data for Pangandaran Regency's GRDP from 2013 to 2020, the largest contribution was made from the agriculture, forestry and fisheries sectors (BPS, 2021).

CONCLUSIONS

The leading sector of Pangandaran Regency consists of (1) Accommodation, Food, and Drink Providers, (2) Agriculture, Forestry, and Fisheries (3) Transportation and Warehousing, (4) Wholesale and retail trade, Repair and (5) Real Estate. The agriculture, forestry, and fisheries sectors entered in the top 5 LQ values in West Java Province. Pangandaran Regency has the highest LQ results for the tourism sector in West Java Province. This is because Pangandaran Regency is a superior tourist area in West Java Province.

The linkages between sectors in Pangandaran Regency indicate that the greatest backward linkages are achieved by other service sectors. This linkage illustrates that other services are a lever for the development of the upstream sector. Meanwhile, the biggest future linkages belong to the agriculture, forestry and fisheries sectors. This sector produces output that is mostly allocated for input in other sectors. The agriculture, forestry and fisheries sectors are also key sectors in Pangandaran Regency, because these sectors have the largest linkage index and distribution index. The largest multiplier figure is owned by other service sectors. Meanwhile, the largest GRDP multiplier is in the agriculture, forestry and fisheries sectors.

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