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Economic agglomeration potential and base: A location quotient, shift-share, and intersectoral backward-forward linkage analysis

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ABSTRACT

Background: Agglomeration economy not only occurs in metropolitan cities but can also developing in various other regions that have potential economy. Every area own potential for form agglomeration economy as effort create centers industry new. **Methods:** This study uses secondary data in the form of 2010 ADHK GRDP according to Business Fields 2019-2023 and Indonesia's Input-Output based on Transaction Domestic Based on Producer Prices According to Business Sector in 2016 and 2020. The GRDP variable is used for count Location Quotient (LQ) and Shift Share, while Input-Output data is used for analyzing Backward-Forward Linkage. Data analysis using device RStudio software. **Findings:** Period 2019-2023 shows transformation gradually going to economy agglomeration economy in the former region Banyumas Residency, with Purbalingga as the fastest diversification engine, Banyumas as knot service public and finance, Cilacap on logistics and accommodation which is increasingly strong, and Banjarnegara stable in agriculture with acceleration tourism. Furthermore, the analysis of sectoral linkages identifies a significant potential for current non-progressive sectors to transition into dynamic-base classifications through enhanced value-added integration. **Conclusion:** This study concludes that the Former Banyumas Residency is transitioning into a functional economic agglomeration where Purbalingga and Banjarnegara serve as essential upstream agricultural bases, while Cilacap and Banyumas act as downstream hubs for manufacturing and services. **Novelty/Originality of this article:** Novelty study This namely integration three method analysis regional economy. Temporal analysis of post-pandemic economic shift. Focus research in non-metropolitan areas, namely Former Residency Banyumas. Approach new in evaluate potential agglomeration sectoral.

KEYWORDS: economic agglomeration; location quotient (LQ); shift-share and linkage analysis.

1. Introduction

Growth economy is one of the determinant main success a country or area in realize welfare society. As indicator comprehensive macroeconomics, level growth economy reflect ability an area in increase capacity production and distribution goods as well as service in a way sustainable. For the government, information about growth economy becomes base important in formulation policy fiscal, planning acceptance, as well as direction development area during the period upcoming. Meanwhile, for perpetrator business, growth economy plays a role strategic as reference in taking decision related investment and development source Power.

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Success performance government area in increase welfare public can measured through Product Gross Regional Domestic Product (GRDP), which describes the total value plus on goods and services produced by all economic units in an area during a period certain. With Thus, growth economy in essence reflects improvement income or the output produced in period time One year (Hendrayanti & Nafi'ah, 2023; Nur & Asraf, 2025). The main purpose of development is to increase growth economy and welfare society. One of the areas that places development economy as priority strategic is Central Java Province. Province This including in the top five contributor main economy national with contribution around 8.15 percent to Product Indonesia's Gross Domestic Product (GDP) in 2022 (BPS Central Java Province, 2022).

In the same year, the economy of Central Java showed improvement with rate growth of 5.31 percent. This figure experience increase compared to with recorded in 2021 by 3.33 percent. Growth the economy in 2021 also shows significant improvement compared to with condition in 2020, when Central Java's economy is experiencing contraction by -2.65 percent consequence impact COVID-19 pandemic (BPS Central Java Province, 2022).

Central Java Province shows ability For rise from downturn economy consequence the COVID-19 pandemic, which is reflected from improvement rate growth economy during period 2020 to 2022. Conditions indicates that Central Java has potential sufficient economy big in support development area as well as improvement growth economy sustainable. Governor of Central Java, Ahmad Luthfi, in Deliberation Regional Development Planning (Musrenbangwil) conveys that as follows.

> *"We will get up Agglomeration Banyumas. Can't Banjarnegara or Cilacap walk alone. Must synergize, economy new grow past collaboration cross area"* (Effendi, 2025).

Statement confirms the importance of synergy inter - regional push growth inclusive and sustainable regional economy. The governor also highlighted various potential the economy owned by the incorporated regions in Ex Banyumas Residency, which includes Regency Banjarnegara, Purbalingga, Banyumas, and Cilacap. These areas have diverse potential superiors, including potential village, sector tourism, as well as management source Power environment like processing waste. Potentials the expected can become driving force main in strengthen development economy region.

Agglomeration is grouping company in a geographic area certain. Concept agglomeration economy explains the mechanism that drives concentration companies and workforce work on one location same geographical area. Agglomeration economy gives various benefits for growth economy, including increasing efficiency through use infrastructure together, declining cost transportation, formation gathering power more work large and specialized, and creation exchange knowledge intercompany and workforce mutual work Study One each other (Bolter, 2020).

Agglomeration economy not only occurs in metropolitan cities but can also developing in various other regions that have potential economy. Every area has opportunity for form agglomeration economy as effort create centers in industry new. Agglomeration economy proven give influence positive to growth economy area (Setianingsih & Khoirunurrofik, 2025). That matter reinforced by research (Peng et al., 2023; Rosenthal & Strange, 2020; Nurlestari & Oktavilia, 2023) which shows existence positive between agglomeration economy with growth economic development infrastructure, improvement quality source Power humans, as well as current exchange knowledge. In addition, the level of productivity generated through agglomeration of the economy also shows sufficient development significant in cities of developing countries. The increase productivity reaching 19 percent in China, 12 percent in India, and 17 percent in several countries in Africa, far taller compared to with cities in developed countries that only range between 4 to 6 percent (Grover et al., 2023). Furthermore, research conducted by (Liu et al., 2024) also suggests that the process of urbanization and the formation of agglomeration economy has had positive effect on the push of growth of the regional economy sustainable.

Research results previously show that agglomeration economy has significant impact to growth economics. Findings indicate that agglomeration economy is one of the development strategies effective economy in push improvement activity regional economy. Planning agglomeration economy in the former region Residency Banyumas needs thorough preparation to be able to produce optimal impact. Therefore, research that focuses on identification sectors' economy featured, analysis growth sectoral, as well as determination sectors and linkages between sectors in the former Residency Banyumas.

Relatedness between sectors plays a very important role, both as input providers as well as as user output from sectors. Progress is something sector No can achieved without existence support and interaction with other sectors that are interconnected related. Each region has limitations source Power in fulfil input requirements for produce output in a independent. Therefore, the relationship between regions becomes crucial in creating each other dependence driving economy improvement regional productivity and growth (Subanti et al., 2020).

Based on background behind said, research focuses on study entitled *"Economic agglomeration potential and base: A location quotient, shift-share, and intersectoral backward-forward linkage analysis."* Study This aim for analyze basic sectors, growth sectoral, as well as relatedness between sectors in the former region Residency Banyumas. Research results This expected can give benefit for stakeholders policy in formulate planning development economy areas, especially in the former region Banyumas Residency, as area potential for formation agglomeration economy new.

2. Methods

This study is carried out in the Ex- region Banyumas Residency, Central Java Province. This area is former administrative area during the reign of The Dutch East Indies which includes Regency Banjarnegara, Purbalingga, Banyumas, and Cilacap. Former Residency Banyumas own various potential for develop become functional area, with connection close economics, mobility power high work, network integrated transportation, as well as relatedness between sector strong industry. This region has potential characteristics for reviewed in context development agglomeration economy in the non-metropolitan western part of Central Java. Through development of the agglomeration economy, it is hoped created growth is sustainable in the region development.

Study This is type study descriptive with a quantitative approach, which aims analyze and describe potential sector economy, shift sector economy, and interconnectedness between One sector with the other sector through numerical approach and statistical data. Types of data used is secondary data sourced from from publication official Central Statistics Agency/*Badan Pusat Statistik (BPS)* Central Java, Regency Banjarnegara, Purbalingga, Banyumas, and Cilacap. The data used in the form of panel data (cross-section) which includes four districts in the former region Banyumas Residency, namely Regency Banjarnegara, Purbalingga, Banyumas, and Cilacap during period 2019 - 2023.

Data collection techniques use non-survey methods, through search documents and publications official who has available. Documents and publications officially used include Product data Gross Regional Domestic Product (GRDP) at Constant Prices 2010 According to Regency Business Fields Ex Residency Banyumas and Central Java 2019 to 2023. In addition, using Input -Output (IO) data for Central Java Province based on Transaction Domestic Based on Producer Prices According to the 2016 Business Sector, as well as Input-Output data (IO) Indonesia based on Transaction Domestic Based on Producer Prices According to Business Sector in 2016 and 2020. The GRDP variable is used for count Location Quotient (LQ) and Shift Share (Rahadiantino & Fathurrohman, 2021), while Input-Output data is used for analyzing Backward-Forward Linkage (Martínez-Alpañez et al., 2023). This study uses GRDP data in range 2019 to 2023. Election five- year period the based on considerations that term time the capable describe change structural and dynamic sector economy at the level district. In addition, the period also includes conditions during

and after the COVID-19 pandemic, so that can give comprehensive overview about regional base sectors.

Temporary that is, Input-Output (IO) data is used in study This refers to 2016, because IO data is not available published every year by the Central Statistics Agency (BPS). Therefore that, research This also uses Indonesian Input-Output data for 2016 and 2020 as reference comparator for get a more approach representative to condition economy latest. In research this, data processing is carried out with use device RStudio software, namely A environment computing statistics-based Language R programming. RStudio was chosen Because own ability tall in do analysis quantitative and econometrics in a way systematic and reproducible (Verzani, 2012). The analysis process covering Location Quotient (LQ) calculation for identify economic base sector, Shift–Share analysis for evaluate contribution growth sectoral, as well as Backward and Forward Linkage analysis to measure relatedness between sector in economy area. All stages processing done through structured R script, so produce accurate, consistent, and easy analysis output replicated in the period or research area others (Dege & Brüggemann, 2024).

Location Quotient (LQ) for analyzing contribution sectors that exist in an area compared to with something more areas wide so that can know dominant sector (basic sector) and non - dominant sector dominant (non-basic) in a area (Kastaman et al., 2023). Location Quotient analysis technique has assumptions that all residents in a area have pattern same request with pattern request national (regional) productivity each Work The same with productivity worker in industry national. LQ analysis method in general general formulated as follows (Osly et al., 2020; Aprylasari & Toyibulah, 2025; Rahadiantino & Fathurrohman, 2021).

$$LQ_i^{r|p} = \frac{\frac{PDRB_{i,r}}{\sum_j PDRB_{j,r}}}{\frac{PDRB_{i,p}}{\sum_j PDRB_{j,p}}} \quad \text{(Eq. 1)}$$

The Location Quotient (LQ) analysis in this study involves several GRDP (Gross Regional Domestic Product) variables based on constant prices for the same year. These variables include $GRDP_{j,r}$ which indicates the GRDP value of sector i in district r, and $\sum_j GRDP_{j,r}$, which represents the total GRDP in district r. These district-level values are then compared with provincial-level variables, namely $GRDP_{i,p}$ as the GRDP of sector i in province p, and $\sum_j GRDP_{j,p}$, which is the total GRDP in province p

According to Sausan et al. (2022), the results of the index calculation are interpreted into three LQ value categories. The first result is a value of LQ > 1, indicating that the sector is a base or flagship sector because it is more dominant in the local area compared to the average of the broader region (province/national), thus having potential for export outside the region. Second, a value of LQ = 1 indicates a neutral sector, where the sector has the same level of importance or contribution at both the local and national levels. Finally, a value of LQ < 1signifies a non-base sector, i.e., a sector whose growth is underdeveloped in that region compared to the national average and thus is only capable of serving the local market. The Shift Share (SS) analysis technique (Azaki, 2024; Harjanti et al., 2021) was used. For identify change in structure economy an area, with use structure economy more regional big as comparison. Shift-Share based on district and provincial GRDP.

$$E_{i0}^r = PDRB_{i,r,t0}, E_{i1}^{(r)} = PDRB_{i,r,t1} \quad \text{(Eq. 2)}$$

$$E_{i0}^p = PDRB_{i,r,t0}, E_{i1}^{(p)} = PDRB_{i,p,t1} \quad \text{(Eq. 3)}$$

Growth rate (real) as follows.

$$r_p = \frac{\sum_i E_{i1}^p}{\sum_i E_{i0}^p} - 1,\ r_i^{(p)} = \frac{E_{i1}^{(p)}}{E_{i0}^{(p)}} - 1,\ r_{ri} = \frac{E_{i1}^{(r)}}{E_{i0}^{(r)}} - 1 \quad \text{(Eq. 4)}$$

Shift-Share Components as follows

$$\Delta E_i^{(r)} = N\ S_i + I\ M_i + C\ E_i \quad \text{(Eq. 5)}$$

The components of economic change in this analysis are measured using three key indicators. The first is NS (Provincial/National Share), which explains the magnitude of changes in a region's economic value that are solely influenced by the overall growth rate at the provincial or national level. The second is IM (Industry Mix), which reflects the impact of industrial structure to determine whether sector i falls into the category of fast-growing sectors or, conversely, is experiencing slow growth at the provincial level.

$$N\ S_i = E_{i0}^{(r)}.r_p \quad \text{(Eq. 6)}$$
$$I\ M_i = E_{i0}^{(r)}.(r_i^{(p)} - r_p \quad \text{(Eq. 7)}$$
$$C\ E_i = E_{i0}^{(r)}.(r_{ri} - r_i^{(p)}) \quad \text{(Eq. 8)}$$
$$\Delta E_i^{(r)} = E_{i1}^{(r)} - E_{i0}^{(r)} \quad \text{(Eq. 9)}$$

Finally, the CE (Competitive Effect) variable is used to measure the competitive strengths or weaknesses at the local district level for sector i when compared to trends at the provincial level. Consistency test in Eq. 11 as follows.

$$\Delta E_i^{(r)} = N\ S_i + I\ M_i + C\ E_i \quad \text{(Eq. 11)}$$

Backward and Forward linkage analysis techniques from Input-Output data of Provinces and Indonesia in 2016 and 2020. Backward Linkage Analysis (linkage) to back this For see how much big input demand for sector j to other sectors as following (Du & Vanino, 2021; Huda et al., 2025; Tsirimokos, 2025).

$$B\ L_j = \sum_{i=1}^{n} \quad L_{ij} \quad \text{(Eq. 12)}$$

Forward Linkage (linkage) to front) namely how much big provision of sector output i to other sectors:

$$F\ L_i = \sum_{j=1}^{n} \quad L_{ij} \quad \text{(Eq. 13)}$$

Rasmussen normalization (optional, makes comparison easier):

$$B\tilde{}L_j = \frac{B\ L_j}{\frac{1}{n}\sum_k BL_k},\ B\tilde{}L_i = \frac{B\ L_i}{\frac{1}{n}\sum_k FL_k} \quad \text{(Eq. 14)}$$

In this analysis of inter-sectoral linkages, data interpretation is based on the average value of the coefficient index, which is 1, where values greater than 1 (>1) indicate a correlation above the average. This model is constructed from several key components, starting with the variable x_{ij} which represents the amount of input from sector i used by sector i, with rows acting as suppliers and columns acting as users. This variable is then linked to x_j, which indicates the total output of sector a From the relationship between these two variables, the component a is derived, which measures the intensity of input requirements per unit of output, as well as the component L, which reflects the total overall requirements, both direct and indirect.

Furthermore, the results of this analysis can map the macroeconomic impact of a sector through two linkage indicators. A sector with a high BL (Backward Linkage) value is interpreted as a "driver to back" because it has a significant capacity to absorb inputs from various industries upstream. Conversely, a sector with a high FL (Forward Linkage) value

indicates that the sector is a "driver to the front," meaning its output plays a crucial role as an input for the growth of other sectors.

3. Results and Discussion

In the section This served results analysis regional economy which includes identification basic sector through Location Quotient (LQ) approach, analysis contribution growth sectoral with Shift–Share method (Montanía et al., 2021), as well as measurement relatedness between industry use Backward and Forward Linkage approaches (Flegg et al., 2021). Results the Then analyzed for give description about the role and potential of each sector in economy Region. Output data is presented annually so that can look at the sector's basis per region and period time certain.

3.1 Analysis of location quotient (LQ), shift share (SS, backward and forward linkage in 2019

In 2019, the sector procurement of electricity and gas (D) LQ value 12.81 still become a stagnant base. Agricultural sector (A) and processing industry (C) plays a role as key sector downstream, showing relatedness tall with other sectors. The financial sector (K) with an LQ value of 0.65 is classified as non- progressive. with growth positive *Shift Share +56.80* \, indicating potential for growth. Most sector services like transportation (H) and education (P) are still not basic but show direction growth that begins improving. Administration Sector Government, Defense and Security Social (O) LQ value of 31.89 should be is basic sector but in information no base, high LQ No always means contribute big in a way economy but show imbalance structure sectoral (Pominova et al., 2021). From the results analysis of the data, in general Regency Banyumas show shift going to strengthening sector services and finance, although still depending on the energy sector.

Table 1. Output of LQ, SS, backward-forward linkage analysis 2019

Regency	sector	LQ	SS	Backward Linkage	Forward Linkage	Information
Banyumas	A	0.01	+9.83	1.04	2.19	Key sectors downstream
Banyumas	B	0.43	+40.47	1.03	0.38	Non-base progressive
Banyumas	C	0.01	+8.14	1.04	5.73	Key sectors downstream
Banyumas	D	12.81	-13.19	1.05	0.98	Stagnant/declining base
Banyumas	E	33.71	+67.26	0.95	0.02	No base
Banyumas	G	0.09	-25.27	1.01	1.91	No base
Banyumas	H	0.34	-27.99	1.03	0.83	No base
Banyumas	I	0.01	-1.62	1.04	0.24	No base
Banyumas	J	0.01	-2.57	0.87	1.46	No base
Banyumas	K	0.65	+56.80	0.97	0.88	Non-base progressive
Banyumas	O	31.89	+6030.57	NA	NA	No base
Banyumas	P	0.59	-78.83	1.02	0.07	No base
Banyumas	Q	6.2	-289.44	1	0.09	Stagnant/declining base
Cilacap	A	0.26	-171.69	1.04	2.19	No base
Cilacap	B	0.57	+17.74	1.03	0.38	Non-base progressive
Cilacap	C	0.95	-2764.00	1.04	5.73	No base
Cilacap	D	0.34	+0.14	1.05	0.98	Non-base progressive
Cilacap	E	0.26	+0.20	0.95	0.02	Non-base progressive
Cilacap	F	0.24	+46.41	1.02	0.62	Non-base progressive
Cilacap	G	0.18	-53.61	1.01	1.91	No base
Cilacap	H	0.39	-31.14	1.03	0.83	No base
Cilacap	I	0.16	-4.10	1.04	0.24	No base
Cilacap	J	0.22	+137.20	0.87	1.46	Key sectors downstream
Cilacap	K	0.15	+8.25	0.97	0.88	Non-base progressive
Cilacap	L	2.38	+10.40	0.94	0.18	No base
Cilacap	M N	0.2	-1548.09	0.97	0.31	No base
Cilacap	O	1.93	+913.99	NA	NA	No base
Cilacap	P	0.19	+7.91	1.02	0.07	Non-base progressive

Cilacap	Q	0.21	-0.46	1	0.09	No base
Cilacap	R, S, T, U	0.23	+12.01	1.03	0.13	Non-base progressive
Purbalingga	A	0.25	-388065.87	1.04	2.19	No base
Purbalingga	B	2.31	+780.06	1.03	0.38	Featured currently
Purbalingga	C	0.96	+9610.80	1.04	5.73	Key sectors downstream
Purbalingga	D	0.71	+1.81	1.05	0.98	Non-base progressive
Purbalingga	E	2.24	+21.36	0.95	0.02	No base
Purbalingga	F	0.75	+1351.73	1.02	0.62	Non-base progressive
Purbalingga	G	1.19	+1222.05	1.01	1.91	Basic and strategic sectors
Purbalingga	H	1.33	+379.90	1.03	0.83	Featured currently
Purbalingga	I	0.99	+421.33	1.04	0.24	Non-base progressive
Purbalingga	J	0.67	+10.78	0.87	1.46	Key sectors downstream
Purbalingga	K	1	+46.97	0.97	0.88	Non-base progressive
Purbalingga	L	8.18	+30.78	0.94	0.18	No base
Purbalingga	O	12.74	+40578.53	NA	NA	No base
Purbalingga	P	1.73	+47.22	1.02	0.07	Featured currently
Purbalingga	Q	1.6	+49.64	1	0.09	No base
Purbalingga	R, S, T, U	1.59	+71.71	1.03	0.13	Featured currently
Banjarnegara	A	1.08	+86.81	1.04	2.19	Basic and strategic sectors
Banjarnegara	B	1.15	-0.80	1.03	0.38	Stagnant/declining base
Banjarnegara	C	0.19	+43.22	1.04	5.73	Key sectors downstream
Banjarnegara	D	0.16	+0.04	1.05	0.98	Non-base progressive
Banjarnegara	E	0.32	-0.01	0.95	0.02	No base
Banjarnegara	F	0.32	+3.65	1.02	0.62	Non-base progressive
Banjarnegara	G	0.56	+4.45	1.01	1.91	Key sectors downstream
Banjarnegara	H	0.6	-9.13	1.03	0.83	No base
Banjarnegara	I	0.32	+0.14	1.04	0.24	Non-base progressive
Banjarnegara	J	0.4	-3.09	0.87	1.46	No base
Banjarnegara	K	0.49	-0.64	0.97	0.88	No base
Banjarnegara	L	4.51	-1.77	0.94	0.18	Stagnant/declining base
Banjarnegara	M N	0.5	-572.22	0.97	0.31	No base
Banjarnegara	O	6.29	+453.07	NA	NA	No base
Banjarnegara	P	0.72	+0.43	1.02	0.07	Non-base progressive
Banjarnegara	Q	0.75	+0.51	1	0.09	Non-base progressive
Banjarnegara	R, S, T, U	0.72	+4.40	1.03	0.13	Non-base progressive

Structure economy Cilacap 2019 starts show growth in sectors services. The information and communication sector (J, LQ 0.22) includes sector key downstream with effect competitive High positive Shift Share +137.20, illustrating Power competitiveness and interconnectedness between strong sectors. Financial sector (K), electricity and gas (D), and water and energy management (D) waste (E) is classified as non- progressive based, meaning sectors This Keep going grow even though his contribution Still small. The mining sector (B) also shows trend growth positive Shift Share +17.74. In general, general, Cilacap 2019 shows transformation going to sector services and industry information, along decline dependence to primary sector, namely sector agriculture, forestry, and fisheries as well as sector mining and quarrying.

Purbalingga own structure better economy dynamic and balanced. Mining and quarrying sector (B) LQ value 2.31 and transportation and warehousing (H) LQ value of 1.33 is sector featured currently with Shift–Share positive big, showing Power competition strong. The trading sector (G) has an LQ value of 1.19 strategic base sector, plays an important role in support activity economy local. Education sector (P) LQ 1.73 and services others (R, S, T, U) LQ 1.59 is also classified as featured moderate, indicating strengthening in the field social and services society. Meanwhile that sector processing (C) remains play a role as sector key downstream, which supports activity economy area. In terms of overall, Purbalingga 2019 shows diversification strong economy, with growth evenly distributed in the primary, service and social sectors.

Banjarnegara Still put agriculture, forestry and fisheries (A) LQ 1.08 as strategic base sector, with growth positive Shift Share +86.81. Mining sector (B) LQ 1.15 including stagnant base, indicating contribution tall but growth slowing down. Industrial sector processing (C) and trading (G) include sector key downstream with relatedness strong to other sectors. The financial (K), transportation (H), and education (P) sectors are classified as non- progressive bases, which indicates existence opportunity strengthening in the sector services. With thus, Banjarnegara start show direction development going to diversification economy-based services, although sector agriculture Still become bone back main.

General Conclusion 2019 Leading Sectors main area in the former Residency Banyumas 2019 is still dominated by agriculture, mining, and electricity gas. Service and financial sectors start to grow rapidly in all districts, especially in Banyumas and Cilacap. Key sectors downstream like industry processing, information and trade become connector important between sector economy area. The year 2019 marks continued transformation process economy area going to strengthening sector services, information, and trade, although primary sector still plays a role dominant.

3.2 Analysis of location quotient (LQ), shift share (SS), backward and forward linkage in 2020

Structure economy Banyumas 2020 still show domination sector procurement electricity and gas (D) LQ 13.18 and water supply and processing waste (E) LQ 33.88 which is classified as a stagnant basis, indicating role big in economy local However its growth start declining. Industrial sector processing (C) LQ 0.02 and information and communication (J) LQ 0.28 play a role as sector key downstream with effect competitive positive, showing potential driving force other sectors (Rocha Aponte, 2025). The education sector (P) LQ 2.9 shows position featured in progress, while financial (K) LQ 2.92 has growth tall However Not yet become stable base sector. In general, general, Banyumas start switch to sector service like education and finance, with sector energy Still become driver main.

Table 2. Output of LQ, SS, backward-forward linkage analysis 2020

Regency	sector	LQ	SS	Backward Linkage	Forward Linkage	Information
Banyumas	A	0.01	-9.46	1.04	2.19	No base
Banyumas	B	0.42	-36.00	1.03	0.38	No base
Banyumas	C	0.02	+45.94	1.04	5.73	Key sectors downstream
Banyumas	D	13.18	-2.33	1.05	0.98	Stagnant/declining base
Banyumas	E	33.88	-49.24	0.95	0.02	Stagnant/declining base
Banyumas	F	0.14	NA	1.02	0.62	No base
Banyumas	G	0.09	-106.66	1.01	1.91	No base
Banyumas	H	0.02	-626.98	1.03	0.83	No base
Banyumas	I	0.02	+11.37	1.04	0.24	Non-base progressive
Banyumas	J	0.28	+1287.92	0.87	1.46	Key sectors downstream
Banyumas	K	2.92	+4954.24	0.97	0.88	No base
Banyumas	L	1.23	NA	0.94	0.18	No base
Banyumas	O	2.3	-61185.15	NA	NA	Stagnant/declining base
Banyumas	P	2.9	+7238.52	1.02	0.07	Featured currently
Banyumas	Q	4.09	-1765.02	1	0.09	Stagnant/declining base
Banyumas	R, S, T, U	3.85	NA	1.03	0.13	No base
Cilacap	A	0.29	-90.61	1.04	2.19	No base
Cilacap	B	0.66	+63.22	1.03	0.38	Non-base progressive
Cilacap	C	0.96	-6820.79	1.04	5.73	No base
Cilacap	D	0.39	+0.87	1.05	0.98	Non-base progressive
Cilacap	E	0.31	+1.34	0.95	0.02	Non-base progressive
Cilacap	F	0.27	-23.06	1.02	0.62	No base
Cilacap	G	0.21	+115.68	1.01	1.91	Key sectors downstream
Cilacap	H	0.45	+70.53	1.03	0.83	Non-base progressive
Cilacap	I	0.18	+49.73	1.04	0.24	Non-base progressive

Cilacap	J	0.24	-157.38	0.87	1.46	No base
Cilacap	K	0.17	-0.52	0.97	0.88	No base
Cilacap	L	0.27	-8439.76	0.94	0.18	No base
Cilacap	M N	0.23	+0.94	0.97	0.31	Non-base progressive
Cilacap	O	0.22	-9032.01	NA	NA	No base
Cilacap	P	0.21	-1.16	1.02	0.07	No base
Cilacap	Q	0.23	-11.70	1	0.09	No base
Cilacap	R, S, T, U	0.26	+3.00	1.03	0.13	Non-base progressive
Purbalingga	A	0.27	-215.63	1.04	2.19	No base
Purbalingga	B	2.6	+1065.85	1.03	0.38	Featured currently
Purbalingga	C	1.1	+16952.29	1.04	5.73	Basic and strategic sectors
Purbalingga	D	0.79	+15.56	1.05	0.98	Non-base progressive
Purbalingga	E	2.44	-31.68	0.95	0.02	Stagnant/declining base
Purbalingga	F	0.85	+1727.48	1.02	0.62	Non-base progressive
Purbalingga	G	1.31	-672.95	1.01	1.91	Stagnant/declining base
Purbalingga	H	1.53	+1706.69	1.03	0.83	Featured currently
Purbalingga	I	1.17	+2888.72	1.04	0.24	Featured currently
Purbalingga	J	0.71	-2662.47	0.87	1.46	No base
Purbalingga	K	1.1	-202.04	0.97	0.88	Stagnant/declining base
Purbalingga	L	0.91	-195031.62	0.94	0.18	No base
Purbalingga	O	1.43	-399637.70	NA	NA	Stagnant/declining base
Purbalingga	P	0.19	-85557.78	1.02	0.07	No base
Purbalingga	Q	1.73	-403.34	1	0.09	Stagnant/declining base
Purbalingga	R, S, T, U	1.79	+719.26	1.03	0.13	Featured currently
Banjarnegara	A	1.12	+28.03	1.04	2.19	Basic and strategic sectors
Banjarnegara	B	1.19	+9.28	1.03	0.38	Featured currently
Banjarnegara	C	0.2	+39.14	1.04	5.73	Key sectors downstream
Banjarnegara	D	0.16	+0.02	1.05	0.98	Non-base progressive
Banjarnegara	E	0.33	-0.00	0.95	0.02	No base
Banjarnegara	F	0.34	+38.03	1.02	0.62	Non-base progressive
Banjarnegara	G	0.57	-26.36	1.01	1.91	No base
Banjarnegara	H	0.65	+24.16	1.03	0.83	Non-base progressive
Banjarnegara	I	0.33	+6.05	1.04	0.24	Non-base progressive
Banjarnegara	J	0.39	-27.00	0.87	1.46	No base
Banjarnegara	K	0.51	+0.09	0.97	0.88	Non-base progressive
Banjarnegara	L	0.46	-2435.81	0.94	0.18	No base
Banjarnegara	M N	0.51	+0.17	0.97	0.31	Non-base progressive
Banjarnegara	O	0.65	-4474.37	NA	NA	No base
Banjarnegara	P	0.74	-3.31	1.02	0.07	No base
Banjarnegara	Q	0.76	-3.38	1	0.09	No base
Banjarnegara	R, S, T, U	0.75	+0.82	1.03	0.13	Non-base progressive

Cilacap 2020 shows direction growth going to sector services and distribution. Trade sector wholesale and retail (G) to sector key downstream with effect relatedness height and *Shift–Share* positive +115.68. Mining sector (B), electricity and gas (D), transportation (H), as well as accommodation (I) includes non-basic progressive, indicating potential growth sector support economy. Meanwhile the information and communication sector (J) experienced decline, reflecting slowdown in the digital sector in the period said. In a way general, Banyumas start switch to sector service like education and finance, with sector energy Still become driver main. In overall, Cilacap show performance stable with strengthening in the sector trade and services support.

Purbalingga own structure relative economy strong and diverse. The mining sector (B) LQ 2.6 and transportation (H) LQ 1.53 are included featured currently with *Shift–Share* positive big, showing Power competition high. Industrial sector processing (C) LQ 1.1 plays a role as basic and strategic sectors, becoming driving force main activity economy area. Accommodation sector (I) and services others (R, S, T, U) are also included featured moderately, indicating rapid growth in the services sector. However, the sector administration government (O) and trade (G) experienced decline,

indicating slowdown in public and consumption activity. In general, general, Purbalingga show direction transformation going to economy industry and services productive.

Banjarnegara Economy 2020 still supported by agriculture (A) LQ 1.12 and mining (B) LQ 1.19 which are strategic and superior bases medium. Industrial sector processing (C) is classified as sector key downstream, with relatedness strong on the chain economy local. Financial sector (K), transportation (H), and services others (R, S, T, U) show non-basic progressive pattern, meaning start grow even though Not yet become the main base. In general, Banjarnegara start show shift economy going to sector services, with primary sector remains become foundation main area.

General Conclusion 2020 Leading Sectors main area in the former Residency Banyumas Still originate from electricity, gas, agriculture, and mining. Service sector like education, transportation, and finance show increase in almost all over district. Industrial sector processing play an important role as sector key downstream, especially in Purbalingga. The year 2020 was marked with shift economy going to sector service productive, even though pandemic start slow down growth sector and trade.

3.3 Analysis of location quotient (LQ), shift share (SS, backward and forward linkage in 2021

Structure economy Banyumas 2021 still show domination sector procurement electricity and gas (D) LQ 12.51 and water and waste procurement (E) LQ 31.96 as a stagnant/decreasing basis. The agricultural sector (A) plays a role as sector key downstream, has relatedness strong to other sectors. The financial (K) and education (P) sectors experienced improvement significant *Positive Shift Share big*, showing direction growth positive going to sector services. The transportation sector (H) also shows progressive non-basic character, indicating potential improvement activity logistics. In general, Banyumas experience shift to direction sector service productive with sector energy Still as support main.

Table 3. Output of LQ, SS, backward-forward linkage analysis 2021

Regency	Sector	LQ	SS	Backward Linkage	Forward Linkage	Information
Banyumas	A	0.01	+2.46	1.04	2.19	Key sectors downstream
Banyumas	B	0.41	-27.76	1.03	0.38	No base
Banyumas	C	0.02	-1.73	1.04	5.73	No base
Banyumas	D	12.51	-55.84	1.05	0.98	Stagnant/declining base
Banyumas	E	31.96	-103.66	0.95	0.02	Stagnant/declining base
Banyumas	F	0.13	-81.04	1.02	0.62	No base
Banyumas	G	0.08	-30.74	1.01	1.91	No base
Banyumas	H	0.02	+0.85	1.03	0.83	Non-base progressive
Banyumas	I	0.02	-0.08	1.04	0.24	No base
Banyumas	J	0.28	-5.79	0.87	1.46	No base
Banyumas	K	3.03	+285.14	0.97	0.88	No base
Banyumas	L	1.25	+43.10	0.94	0.18	No base
Banyumas	O	2.32	+72.59	NA	NA	No base
Banyumas	P	2.99	+337.21	1.02	0.07	Featured currently
Banyumas	Q	4.26	+148.75	1	0.09	No base
Banyumas	R, S, T, U	4.09	+353.66	1.03	0.13	Featured currently
Cilacap	A	0.29	-155.11	1.04	2.19	No base
Cilacap	B	0.68	+19.31	1.03	0.38	Non-base progressive
Cilacap	C	0.97	-206.33	1.04	5.73	No base
Cilacap	D	0.39	-1.47	1.05	0.98	No base
Cilacap	E	0.31	-0.37	0.95	0.02	No base
Cilacap	F	0.27	-92.01	1.02	0.62	No base
Cilacap	G	0.21	-67.13	1.01	1.91	No base
Cilacap	H	0.45	-17.35	1.03	0.83	No base
Cilacap	I	0.19	+1.91	1.04	0.24	Non-base progressive
Cilacap	J	0.23	-86.53	0.87	1.46	No base

Cilacap	K	0.17	-9.35	0.97	0.88	No base
Cilacap	L	0.27	-13.53	0.94	0.18	No base
Cilacap	M N	0.23	-2.06	0.97	0.31	No base
Cilacap	O	0.22	+2.00	NA	NA	Non-base progressive
Cilacap	P	0.22	+1.48	1.02	0.07	Non-base progressive
Cilacap	Q	0.23	+1.01	1	0.09	Non-base progressive
Cilacap	R, S, T, U	0.26	-0.11	1.03	0.13	No base
Purbalingga	A	1.98	+401427.73	1.04	2.19	Basic and strategic sectors
Purbalingga	B	1.87	+169.95	1.03	0.38	Featured currently
Purbalingga	C	0.8	+6652.93	1.04	5.73	Key sectors downstream
Purbalingga	D	0.57	+0.37	1.05	0.98	Non-base progressive
Purbalingga	E	1.73	-33.80	0.95	0.02	Stagnant/declining base
Purbalingga	F	0.61	-451.47	1.02	0.62	No base
Purbalingga	G	0.94	-296.51	1.01	1.91	No base
Purbalingga	H	1.1	-267.64	1.03	0.83	Stagnant/declining base
Purbalingga	I	0.83	-680.72	1.04	0.24	No base
Purbalingga	J	0.51	-150.52	0.87	1.46	No base
Purbalingga	K	0.8	+237.50	0.97	0.88	Non-base progressive
Purbalingga	L	0.65	+13.17	0.94	0.18	Non-base progressive
Purbalingga	O	1.03	+117.61	NA	NA	No base
Purbalingga	P	1.38	+85761.43	1.02	0.07	Featured currently
Purbalingga	Q	1.25	-13.13	1	0.09	Stagnant/declining base
Purbalingga	R, S, T, U	1.29	+52.08	1.03	0.13	Featured currently
Banjarnegara	A	1.12	+10.35	1.04	2.19	Basic and strategic sectors
Banjarnegara	B	1.19	-3.04	1.03	0.38	Stagnant/declining base
Banjarnegara	C	0.21	+45.97	1.04	5.73	Key sectors downstream
Banjarnegara	D	0.16	-0.02	1.05	0.98	No base
Banjarnegara	E	0.33	-0.02	0.95	0.02	No base
Banjarnegara	F	0.34	+2.31	1.02	0.62	Non-base progressive
Banjarnegara	G	0.57	+7.11	1.01	1.91	Key sectors downstream
Banjarnegara	H	0.65	-1.10	1.03	0.83	No base
Banjarnegara	I	0.33	+0.39	1.04	0.24	Non-base progressive
Banjarnegara	J	0.39	-0.33	0.87	1.46	No base
Banjarnegara	K	0.51	-0.97	0.97	0.88	No base
Banjarnegara	L	0.46	-0.06	0.94	0.18	No base
Banjarnegara	M N	0.51	+0.00	0.97	0.31	Non-base progressive
Banjarnegara	O	0.65	-0.40	NA	NA	No base
Banjarnegara	P	0.74	-0.22	1.02	0.07	No base
Banjarnegara	Q	0.76	-0.13	1	0.09	No base
Banjarnegara	R, S, T, U	0.75	+0.35	1.03	0.13	Non-base progressive

Cilacap in 2021 sector mining (B) shows growth positive SS +19.31, although not yet become basic sector. Accommodation sector (I), administration government (O), and education (P) are non-progressive bases, indicating potential expansion in the services sector. Agricultural sector (A) and industry processing (C) still experience decline performance. In terms of overall, Cilacap starts show strengthening in the services sector and government, with indication shift from primary sector.

Purbalingga shows performance the most dynamic economy among regency others. The agricultural sector (A) LQ 1.98 is strategic base sector with Shift–Share is very high, depicting Power competitiveness and contribution strong. The mining (B), transportation (H), and education (P) sectors are included featured moderate, showing development significant. Industrial sector processing (C) functions as sector key downstream that drives economy area. Although several sectors like service health (Q) shows stagnation, overall economy Purbalingga 2021 is dominated by agriculture, and the manufacturing sector service develop.

Banjarnegara Economy is still supported by agriculture (A) LQ 1.12 as strategic base and mining sector (B) LQ 1.19 as a stagnant base. Industrial processing (C) and trade (G)

play a role as sector key downstream that guard's relatedness between sectors. Some sector like construction (F) and services others (R, S, T, U) are classified as non- progressive bases, indicating potential growth even though contribution Still small. In terms of general, structure economy Banjarnegara still dominated primary sector, with trend gradually going to services and trade.

General Conclusion for 2021 Leading Sectors main Still are in agriculture, mining, and energy, with contribution large in regional GRDP. Services and financial sector show trend growth positive in Banyumas and Purbalingga. Industrial processing start play a role more large in Purbalingga and Banjarnegara. 2021 will be a period of recovery post-pandemic, where activities sector services and education start increase although primary sector remains dominate.

3.4 Analysis of location quotient (LQ), shift share (SS, backward and forward linkage in 2022

Economy Banyumas 2022 still dominated by the procurement electricity and gas (D) LQ 11.85 which has a stagnant/decreasing base status, meaning his contribution big However its growth slowed down. The agricultural (A) and trade (G) sectors, included key downstream, play an important role in connecting activity economy area. The financial (K) and education (P) sectors show growth high, each with Shift–Share positive big, reflecting direction strengthening sector services. Although thus, some big sector other Still classified as non-base, indicating the need diversification economy. In terms of general, Banyumas 2022 experienced shift going to sector service finance and education, with sector energy still become the main pillar.

Table 4. Output of LQ, SS, backward-forward linkage analysis in 2022

Regency	sector	LQ	SS	Backward Linkage	Forward Linkage	Information
Banyumas	A	0.01	+3.79	1.04	2.19	Key sectors downstream
Banyumas	B	0.47	+133.91	1.03	0.38	Non-base progressive
Banyumas	C	0.02	-5.03	1.04	5.73	No base
Banyumas	D	11.85	-38.33	1.05	0.98	Basisstagnant/declining
Banyumas	E	31.35	+6.73	0.95	0.02	No base
Banyumas	F	0.12	-6.63	1.02	0.62	No base
Banyumas	G	0.08	+9.86	1.01	1.91	Key sectors downstream
Banyumas	H	0.01	-26.66	1.03	0.83	No base
Banyumas	I	0.02	-5.54	1.04	0.24	No base
Banyumas	J	0.31	+196.24	0.87	1.46	Key sectors downstream
Banyumas	K	3.07	+244.49	0.97	0.88	No base
Banyumas	L	11.75	+1766.15	0.94	0.18	No base
Banyumas	0	2.28	+22.35	NA	NA	No base
Banyumas	P	3.01	+286.63	1.02	0.07	Featured currently
Banyumas	Q	4.14	-13.23	1	0.09	Basisstagnant/declining
Banyumas	R, S, T, U	3.67	-500.05	1.03	0.13	Basisstagnant/declining
Cilacap	A	0.28	-79.73	1.04	2.19	No base
Cilacap	B	0.69	+96.11	1.03	0.38	Non-base progressive
Cilacap	C	0.95	-185.60	1.04	5.73	No base
Cilacap	D	0.38	-0.56	1.05	0.98	No base
Cilacap	E	0.32	+2.17	0.95	0.02	Non-base progressive
Cilacap	F	0.27	+66.41	1.02	0.62	Non-base progressive
Cilacap	G	0.21	-24.72	1.01	1.91	No base
Cilacap	H	0.49	+327.94	1.03	0.83	Non-base progressive
Cilacap	I	0.18	-64.24	1.04	0.24	No base
Cilacap	J	0.23	-39.88	0.87	1.46	No base
Cilacap	K	0.17	+0.25	0.97	0.88	Non-base progressive
Cilacap	L	2.64	+896.04	0.94	0.18	No base
Cilacap	M N	0.23	+0.28	0.97	0.31	Non-base progressive
Cilacap	O	0.22	-4.20	NA	NA	No base
Cilacap	P	0.21	+6.41	1.02	0.07	Non-base progressive

Cilacap	Q	0.23	+1.19	1	0.09	Non-base progressive
Cilacap	R, S, T, U	0.25	-7.04	1.03	0.13	No base
Purbalingga	A	2.05	+6128.13	1.04	2.19	Basic and strategic sectors
Purbalingga	B	1.98	+2201.71	1.03	0.38	Featured currently
Purbalingga	C	0.82	-572.31	1.04	5.73	No base
Purbalingga	D	0.58	+3.06	1.05	0.98	Non-base progressive
Purbalingga	E	1.77	-2.19	0.95	0.02	Stagnant/declining base
Purbalingga	F	0.62	-481.15	1.02	0.62	No base
Purbalingga	G	0.96	-1005.36	1.01	1.91	No base
Purbalingga	H	1.11	-529.84	1.03	0.83	Basisstagnant/declining
Purbalingga	I	0.82	-2113.76	1.04	0.24	No base
Purbalingga	J	0.05	-51620.26	0.87	1.46	No base
Purbalingga	K	0.82	+81.28	0.97	0.88	Non-base progressive
Purbalingga	L	0.65	-52.75	0.94	0.18	No base
Purbalingga	M	1.05	-76.81	NA	NA	Tagnan/descending basis
Purbalingga	P	1.42	+614.90	1.02	0.07	Featured currently
Purbalingga	Q	1.27	-56.68	1	0.09	Basisstagnant/declining
Purbalingga	R, S, T, U	1.32	-60.44	1.03	0.13	Basisstagnant/ declining
Banjarnegara	A	1.11	+41.83	1.04	2.19	Basic and strategic sectors
Banjarnegara	B	1.17	-0.61	1.03	0.38	Basisstagnant/declining
Banjarnegara	C	0.21	+17.45	1.04	5.73	Key sectors downstream
Banjarnegara	D	0.16	-0.00	1.05	0.98	No base
Banjarnegara	E	0.33	+0.01	0.95	0.02	Non-base progressive
Banjarnegara	F	0.34	-0.30	1.02	0.62	No base
Banjarnegara	G	0.56	-6.35	1.01	1.91	No base
Banjarnegara	H	0.61	-40.52	1.03	0.83	No base
Banjarnegara	I	0.32	-7.75	1.04	0.24	No base
Banjarnegara	J	0.38	-0.93	0.87	1.46	No base
Banjarnegara	K	0.5	-0.30	0.97	0.88	No base
Banjarnegara	L	4.52	+259.22	0.94	0.18	No base
Banjarnegara	M N	0.5	-0.12	0.97	0.31	No base
Banjarnegara	O	0.63	+0.44	NA	NA	Non-base progressive
Banjarnegara	P	0.73	+1.08	1.02	0.07	Non-base progressive
Banjarnegara	Q	0.75	-0.22	1	0.09	No base
Banjarnegara	R, S, T, U	0.73	-2.26	1.03	0.13	No base

Cilacap shows sector mining (B) and construction (F) includes non- progressive bases, indicating potential growth and power competition positive. The transportation sector (H) also showed development with mark Shift–Share high (+327.94). In general, Cilacap starts show revival in the transportation, construction, and services finance, while primary and industrial sectors tradititraditionally.

Purbalingga 2022 shows sector agriculture (A) LQ 2.05 becomes strategic base sector, while mining (B) LQ 1.98 including featured currently with Power competition high. Education sector (P) LQ 1.42 and services others (R, S, T, U) LQ 1.32 also plays a role as sector featured, describing strengthening in the field social and services society. In general, general, economics Purbalingga move to direction to service sector productive, with agriculture Still become driving force main.

Banjarnegara Still supported by the sector agriculture (A) LQ 1.11 which is classified as a strategic base, as well as Mining (B) LQ 1.17 which is the basis for stagnation. Industrial sector processing (C) plays a role as sector key downstream, connecting various activity economy area. Administrative sector government (O) shows progressive non-basic pattern, indicating existence potential growth sector services. With thus, Banjarnegara start show transformation going to economy-based services and trade, although primary sector remains dominant.

General Conclusion for 2022 Leading Sectors main area in the former Residency Banyumas Still dominated by agriculture, mining, and energy, with role important in support economy regional. Service and education sectors grow rapidly in Banyumas and Purbalingga, indicating shift structure economy to direction tertiary. Cilacap and Banjarnegara show strengthening transportation, finance, and trade sectors. In general, 2022 will phase recovery economy and transition going to sector service productive, after period stagnation previously.

3.5 Analysis of location quotient (LQ), shift share (SS, backward and forward linkage in 2023

Structure economy Banyumas 2023 shows strong transition to direction sector services and finance. Procurement sector electricity and gas (D) LQ 10.86 and administration government (O) LQ 2.13 still classified as a stagnant base, indicating role big However growth limited. The agricultural sector (A), trade (G), and information & communication (J) play a role as sector key downstream, supporting relatedness economy area. The accommodation sector (I) shows Shift–Share positive significant (+45.30), indicating resurrection tourism and services consumption. In general, Banyumas show strengthening the services sector, especially finance, information, and tourism, with sector energy still play a role as foundation.

Table 5. Output of LQ, SS, backward-forward linkage analysis in 2023

Regency	sector	LQ	SS	Backward Linkage	Forward Linkage	Information
Banyumas	A	0.01	+8.28	1.04	2.19	Key sectors downstream
Banyumas	B	0.48	+50.64	1.03	0.38	Non-base progressive
Banyumas	C	0.01	+7.98	1.04	5.73	Key sectors downstream
Banyumas	D	10.86	-52.10	1.05	0.98	Stagnant/declining base
Banyumas	E	30.47	+36.74	0.95	0.02	No base
Banyumas	F	0.12	-25.17	1.02	0.62	No base
Banyumas	G	0.08	+22.33	1.01	1.91	Key sectors downstream
Banyumas	H	0.01	-1.57	1.03	0.83	No base
Banyumas	I	0.14	+45.30	1.04	0.24	Non-base progressive
Banyumas	J	0.3	+5.63	0.87	1.46	Key sectors downstream
Banyumas	K	30.36	+6781.08	0.97	0.88	No base
Banyumas	L	1.07	-19065.59	0.94	0.18	Stagnant/declining base
Banyumas	O	2.13	-108.13	NA	NA	Stagnant/declining base
Banyumas	P	2.86	-43.90	1.02	0.07	Stagnant/declining base
Banyumas	Q	4.13	+150.55	1	0.09	No base
Banyumas	RS, T, U	3.37	-222.55	1.03	0.13	Stagnant/declining base
Cilacap	A	0.28	+145.65	1.04	2.19	Key sectors downstream
Cilacap	B	0.66	+17.53	1.03	0.38	Non-base progressive
Cilacap	C	0.92	+738.26	1.04	5.73	Key sectors downstream
Cilacap	D	0.36	+0.29	1.05	0.98	Non-base progressive
Cilacap	E	0.31	+0.92	0.95	0.02	Non-base progressive
Cilacap	F	0.26	+13.29	1.02	0.62	Non-base progressive
Cilacap	G	0.2	+31.30	1.01	1.91	Key sectors downstream
Cilacap	H	0.46	-75.25	1.03	0.83	No base
Cilacap	I	1.68	+1255.67	1.04	0.24	Featured currently
Cilacap	J	0.21	-42.37	0.87	1.46	No base
Cilacap	K	1.59	+792.19	0.97	0.88	No base
Cilacap	L	0.25	-9577.94	0.94	0.18	No base
Cilacap	M N	0.21	-3.78	0.97	0.31	No base
Cilacap	O	0.2	-18.06	NA	NA	No base
Cilacap	P	0.2	-37.00	1.02	0.07	No base
Cilacap	Q	0.21	-17.47	1	0.09	No base
Cilacap	R, S, T, U	0.23	-29.87	1.03	0.13	No base
Purbalingga	A	2.18	+2762.54	1.04	2.19	Basic and strategic sectors

Purbalingga	B	2.08	-239.32	1.03	0.38	Stagnant/declining base
Purbalingga	C	0.87	+3860.73	1.04	5.73	Key sectors downstream
Purbalingga	D	0.61	-18.86	1.05	0.98	No base
Purbalingga	E	1.88	+18.84	0.95	0.02	No base
Purbalingga	F	0.65	-738.99	1.02	0.62	No base
Purbalingga	G	0.1	-241291.68	1.01	1.91	No base
Purbalingga	H	1.16	-972.87	1.03	0.83	Stagnant/declining base
Purbalingga	I	8.8	+55303.23	1.04	0.24	Featured currently
Purbalingga	J	0.54	+56775.88	0.87	1.46	Key sectors downstream
Purbalingga	K	8.67	+36277.18	0.97	0.88	No base
Purbalingga	L	0.69	-41.61	0.94	0.18	No base
Purbalingga	O	1.12	+220.14	NA	NA	No base
Purbalingga	P	1.5	-26.97	1.02	0.07	Stagnant/declining base
Purbalingga	Q	1.34	-53.87	1	0.09	Stagnant/declining base
Purbalingga	R, S, T, U	1.39	-226.25	1.03	0.13	Stagnant/declining base
Banjarnegara	A	1.07	+6.76	1.04	2.19	Basic and strategic sectors
Banjarnegara	B	1.13	+5.87	1.03	0.38	Featured currently
Banjarnegara	C	0.2	+76.28	1.04	5.73	Key sectors downstream
Banjarnegara	D	0.15	+0.02	1.05	0.98	Non-base progressive
Banjarnegara	D	0.31	+0.03	0.95	0.02	Non-base progressive
Banjarnegara	F	0.33	+26.16	1.02	0.62	Non-base progressive
Banjarnegara	G	0.53	+1.86	1.01	1.91	Key sectors downstream
Banjarnegara	H	0.58	-2.48	1.03	0.83	No base
Banjarnegara	I	3.13	+396.03	1.04	0.24	Featured currently
Banjarnegara	J	0.37	+4.45	0.87	1.46	Key sectors downstream
Banjarnegara	K	4.78	+402.79	0.97	0.88	No base
Banjarnegara	L	0.43	-2773.16	0.94	0.18	No base
Banjarnegara	M N	0.48	-0.12	0.97	0.31	No base
Banjarnegara	O	0.61	+1.67	NA	NA	Non-base progressive
Banjarnegara	P	0.7	+5.83	1.02	0.07	Non-base progressive
Banjarnegara	Q	0.72	+0.21	1	0.09	Non-base progressive
Banjarnegara	R, S, T, U	0.7	+0.27	1.03	0.13	Non-base progressive

Cilacap experience strengthening the accommodation and food sector drink I, LQ 1.68 becomes featured currently with *Shift–Share* is very high +1255.67, indicating improvement activity economy-based tourism and consumption. Industrial sector processing (C) and trading (G), including sector key downstream, become important in connector economy area. Most of other sectors are still classified as non-basic but show direction growth positively. In terms of overall, Cilacap leads to diversification of economy-based services and industry support.

Purbalingga maintains his position as regency with structure the strongest and most dynamic economy in the region of former Residency Banyumas. Agricultural sector A) LQ 2.18 still become a strategic base, with contribution stable and powerful competition high. Industrial sector processing (C) and information & communication (J) grow significant with *Shift–Share* is very large, playing a role as sector key downstream. The accommodation sector (I) LQ 8.8) becomes featured moderate. Although a number of sectors like government (O) and education (P) are still stagnant. Purbalingga succeedsmaintainingtain pattern balanced growth between primary sector and sector service productive.

Banjarnegara 2023 shows stability economy based primary and service sectors. Agricultural sector (A) LQ 1.07 remains become a strategic base, with growth positive. Accommodation and food sector drink (I) LQ 3.13 and mining (B) LQ 1.13 plays a role as featured moderate, indicating potential strengthening in the sector tourism and resources Power nature. The industrial (C), trade (G), and information (J) sectors function as key downstream sectors, supporting interaction between sector economy local. Growth positive is also seen in the sector education (P) and administration government (O) which is classified as non-progressive base, reflects improvement service public and energy Work

services. In overall, Banjarnegara show direction stable economy with diversification going to sector services and tourism.

General Conclusions for 2023 Agriculture and Energy Sector Still become the main base in the former Residency area Banyumas. The services and tourism sector (accommodation, information, and finance) is growing. significant in all districts, especially Banyumas, Cilacap, and Purbalingga. Purbalingga shows top performance with growth big in the sector industry and communications. Cilacap start strengthening sector transportation and accommodation sectors, while Banjarnegara guard stability with balanced primary and service sectors. In general, Overall, 2023 will be phase consolidation transformation economy going to sector tertiary and digital, after recovery full of period pandemic.

Analysis results sector economy in the former Residency area Banyumas during 2016-2023 period based on Location Quotient (LQ), Shift-Share (SS) and Backward and Forward Linkage approaches for identify base sector, sector potential, as well as relatedness between sectors. Post- pandemic in 2021 to 2023, namely sector Finance (K), information and communication (J), accommodation and meals drinking (I), education (P) rises to sector driving force new for the former area residency Banyumas.

Several sectors that play a role as sector key downstream is industry processing (C) and trading (G) even though LQ value < 1 in various districts, but Forward Linkage is high important for integration chain value and absorption power work. In 2020 to 2021 the shift-share pattern experienced recovery in a gradual way. The most prominent positive shift-share occurred in 2022 to 2023 in the sector tourist or accommodation (I), information (J), finance (K), and education (P) in various ex- regions residency Banyumas.

Regency Banyumas own direction new in several of the original sector own strength in the Energy (D) and services sectors public (O) however tend stagnan or decreased (SS<0) in 2019 to 2023. Now the district Banyumas own direction is new in the Financial Services (K), education (P), information (J), and accommodation (I) sectors are visible from Shift Share value indicating mark positive the year.

Regency Cilacap own sector industry (C), trade (G) and information and communication (J) as key downstream. Progressive non-basic sector can develop namely sector mining (B), electricity and gas (D), water supply and processing waste (E), construction (F), education (P), and service health and activities social that has positive shift -share value in 2019 to 2023 (Faridzad, 2025).

Regency Purbalingga own strategic base sector namely in agriculture, forestry and fisheries (A) 2021 to 2023, Trade (G) in 2019, and industry manufacturing (C) in 2020 as a strategic basis. Non-progressive basis is in the procurement electricity and gas (D), construction (F), accommodation (I), and finance (K) which continue strengthen from 2019 to 2023. Industrial sector manufacturing as sector key downstream.

Regency Banjarnegara own strategic base sector stable agriculture, forestry, and fisheries (A) from 2019 to 2023 and accommodation (I) which has high LQ and SS values. Industrial sector manufacturing and trade become holder role main as key downstream.

Strategic base sector agriculture, forestry, and fisheries located in the Regency Purbalingga and Banjarnegara, meanwhile key downstream is in the Regency Banyumas and Cilacap. Sectors with high forward linkages that is trade (G) and industry manufacturing (C). The forward linkage map > 1 is in the manufacturing sector. industry manufacturing (C), trade (G), and information (J) sectors the play a role For expedite input – output current. While backward > 1 is evenly distributed across many sectors that provide description that capacity upstream Already seen However need depth chain supply (Gacek, 2025).

4. Conclusions

Period 2019-2023 shows transformation gradually going to agglomeration economy in the former region Banyumas Residency, with Banyumas as knot service public including sector education and finance, sector education that can help provide power Work skilled. Manufacturing industry has become a downstream sector that can provide goods with mark add. Purbalingga is the fastest diversification engine. Cilacap in the sector logistics and

accommodation are increasingly strong, sector manufacturing, trade wholesale and retail, information and communication as sector downstream capable add utility value of a goods. Banjarnegara is stable in the sector with acceleration tourism. The agriculture, forestry, and fisheries sectors in the district Purbalingga and Banjarnegara become strategic-base sector become driving force main economy area and can become sector upstream (input) for provide material standard sector downstream (output) of other regions. Focus forward can increase mark plus so that the current sector this is non- progressive basis can move up a class become a dynamic base.

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The author states no own conflict interests that can influence results analysis results or interpretation of data in report This. The entire research and writing process is done in a way independent and objectively.

Declaration of Generative AI Use
The author state that tool intelligence artificial intelligence (AI) including ChatGPT (OpenAI), is used in a way limited in compilation report This For help in compilation language, grammar editor, and formulation analysis. All ideas, data, and interpretations results analysis still not quite enough answer completely, and has through verification as well as adjustment in accordance context study.

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