

Identification of Prominent Sectors in the Regency of Nganjuk Before and After the Era of Regional Autonomy

Febrianto Dwi Nugroho^a, Tri Haryanto^b, ^{a,b}Departement of Economic Science Faculty of Economic and Business Universitas Airlangga Surabaya Indonesia 60286,

Abstract: The difference in development level can affect the prosperity level between the regions, which ultimately will bring about increasing regional inequality. One of the regions in the province of East Java that is experiencing autonomic effects is the Regency of Nganjuk. **Aim:** This research aims to identify the prominent sectors in Nganjuk Regency (Kabupaten Nganjuk) before and during the Regional Autonomy (Otonomi Daerah). **Method:** This research uses a quantitative approach. Data used in this research are secondary data which are gained from various sources and literatures that support the needs of the research. **Results:** The results from this study are, first, Location Quotient (LQ) Analysis in the Nganjuk Regency in the year before the regional autonomy era (1997-1999) shows that there are only three base sectors, which are the agriculture sector, commerce, hotel, and restaurant sector, and services sector. Second, the result of shift share analysis shows that the competitive sectors before the regional autonomy era (1997-1999) are the electricity, gas, and clean water sector and transportation and communication sector. **Conclusion:** Based on the research results, it can be concluded that between the era before and during the implementation of Regional Autonomy, sectors which were classified as base sectors are not so different. The economic sectors and subsectors that had been base sectors before the implementation of Regional Autonomy in the Nganjuk Regency, still stood as base sectors during the era of Regional Autonomy implementation in the year 2009-2013.

Key words: *Prominent sector, LQ (Location Quotient), Shift Share, Overlay, before and during regional autonomy era.*

Introduction

One cause of the demands to establish a new area is rent seeking, where local elites and local politicians try to regain power through the formation of new regions (Imron, 2011). Measurement of the success of an region's development generally can be observed from many sides, including economy, economic structure, and reduction of economic inequality between the population, regions, and sectors (Butt, Regional Autonomy and Legal Disorder: The Proliferation of Local Laws in Indonesia, 2010). This is taking into account that development in a regency is not always equal (Vasin, 2018). The difference in the development level can affect the prosperity level between the regions, which ultimately will bring about increasing regional inequality. One of them relates with corruption in some areas (Abrianto, 2019).

Regional autonomy and decentralisation have a long history in Indonesia, but the discourse reached a crescendo during the period immediately following the collapse of the New Order regime (Simarmata, 2012). Furthermore, regional autonomy became politically viable because it took advantage of the conflicting short and long-term interests (Smith, The Origins of Regional Autonomy, 2008). The main objectives of regional autonomy are to promote better delivery of government services and to raise the level of local government accountability (Usman, 2002). One of the regions in the province of East Java that is experiencing autonomic effects is the Regency of Nganjuk. The geographical location that is very beneficial made the government of Nganjuk Regency a long time ago until now, always working to develop and manage their own region by improving the regency's high-potential sectors. Many programs have been planned and worked by the Nganjuk Regency's government, and one of the main programs of Nganjuk Regency is determining and improving the development of strategic and high-growth areas, especially areas that have prominent products or sectors. Its related with the primary function of local governments— provincial, district, city and village—was to loyally support and implement nationally (Butt, Regional Autonomy And Legal Disorder: THE, 2010).

By developing prominent sectors, the existence of a region can be sustainably assured (O'Brochta, 2017). To support that, there needs to be research to rediscover what potentials exist in the Regency of Nganjuk, either before and during the era of regional autonomy. Which sectors can be explored in order to improve the economy of Nganjuk Regency. All of this is, of course, to repair and improve the economic development that will affect the prosperity level of the people of Nganjuk Regency. Based on the description, the aim of this research is to identify the prominent sectors in Nganjuk Regency (Kabupaten Nganjuk) before and during the Regional Autonomy (Otonomi Daerah).

Method

This research uses a quantitative approach. This approach is used as the primary base which procedurally results in descriptive analytics data that is explained by many forms of numerical from the tabulation, graphics, or diagram and also statistic tests to know the significance of the effect between each variable (Sugiyono, 2012).

Based on the descriptive quantitative research type, this research tries to picture the phenomena and facts presented in statistic numbers before and during the regional autonomy era. The facts gained will be used to explain the actual condition regarding the development planning of prominent sectors in the Nganjuk Regency.

Data used in this research are secondary data. Secondary data is data gained from various sources and literatures that support the needs of the research. The sources of the data of this research includes the Central Bureau of Statistics (Badan Pusat Statistik) of Nganjuk Regency, Central Bureau of Statistics (Badan Pusat Statistik) of East Java, also other relevant sources for this research. All of the data used for analysis in this research includes PDRB (Produk Domestik Regional Bruto or Gross Regional Domestic Product, Residential, and Region's potential of Nganjuk Regency and also documentations of development of prominent sectors in Nganjuk Regency.

Moreover, gathering of the data in this research is done by doing literature studies, which is the collection of data from literatures and readings regarding the problems discussed in this research. The collected data will then be tabulated, processed, and analysed using the Microsoft Excel program.

The focus of this research is in the region of Nganjuk Regency before and during the Regional Autonomy era with consideration and goal to gain complete pictures regarding the prominent sectors in deciding the priority of development in the region of Nganjuk Regency. To analyse this study, the researcher used the LQ Analysis to identify the potential prominent economic sectors (base sectors) to be developed, to know the prominent featured sectors in the Nganjuk Regency. Then, SS analysis is used to know the commodities that are growing in a district (kecamatan) compared to the economic growth in the bigger region (Regency). The SS technique is divided by change in growth (D_{ij}) and classified into three components, which are effect of economic growth above it (D_{ij}), effect of proportional shift or industrial mix (M_{ij}), and effect of differential shift or competitive advantage (C_{ij}).

Overlay model analysis is used to observe the description of economic activity based on the growth criteria (R_{ps} = Growth Ratio of the studied region) and contribution criteria (Abadi, 1999). In this research, this means Overlay analysis is done manually without the use of SIG

(Geographical Information System) equipment and only used to see the description of the economic activity in the Regency of Nganjuk with theorem based on the result of the score of LQ analysis that represent the growth, meanwhile the score of shift share represents the contribution score as follows, first, growth (+) and contribution (+), means that the sector is a prominent sector because it has high level of growth and contribution. This sector should be given priority in the process of development (M^a De La Palma Gómez-Calero, 2014). Second, growth (+) and contribution (-) means that this is a potential sector because it has high growth but still low contribution. This sector is experiencing growth that needs attention in their contribution towards PDRB. Third, growth (-) and contribution (+) means that this is a prominent sector, but has tendency to decline because even though the contribution level is high, the growth is low. This sector shows decline so there have to be incentives to revive the growth. Fourth, growth (-) and contribution (-) means that this sector is low in both growth and contribution; this sector does not deserve priority in the funding for development.

Results and Discussion

Results of LQ Analysis

Discussion regarding the model of base economy is done to understand how a region, as a part of other region, can be formed, and the various activities that come from the formation of filling of a city. That analysis can also be made as the base for the analysis of sectors' potential growth in a region.

LQ Analysis in the Nganjuk Regency is applied by comparing it to East Java Province. This is because Nganjuk Regency is an integral part of the economic system of East Java. A score of $LQ > 1$ means that the role of a sector in Nganjuk Regency is more dominant compared to that sector's role in the Province of East Java. This is a hint that Nganjuk Regency is having a surplus of products from that sector.

In contrary, if the score is $LQ < 1$ it means that that sector role's in the Nganjuk regency is smaller than its role in the Province of East Java. If $LQ = 1$, then the sector has same domination and specialisation both in Nganjuk and East Java. In the Nganjuk Regency, before and during the regional autonomy, sectors that have $LQ > 1$, or can be stated as base sector are agriculture, commerce, hotel and restaurant, and services. The base sectors in the agriculture sector depend on sub sector, first, plant and food ingredients, second, plantation crops, third, farms and its derivative products. Besides those, there are also four sub sector forestry and five fishery. The base sector for commerce, hotel and restaurant rely on sub sector large and retail commerce, hotel, and restaurant. Base sector of services rely on sub sector of general governance and private. Here is the results of the LQ Model Calculation on table 1 and table 2.

Table 1: Results of LQ Model Calculation Nganjuk Regency Year 1997-1999.

No	Sektor	Nilai LQ		
		1997	1998	1999
1	Pertanian	2,07	1,96	1,99
2	Pertambangan dan Penggalian	0,10	0,12	0,09
3	Industri Pengolahan	0,18	0,13	0,13
4	Listrik, Gas dan Air Bersih	0,50	0,48	0,47
5	Bangunan	1,02	1,02	1,03
6	Perdagangan, Hotel dan Restoran	1,09	1,01	1,04
7	Transportasi dan Komunikasi	0,75	0,75	0,72
8	Keuangan, Persewaan dan Jasa Perusahaan	1,95	0,98	0,31
9	Jasa-jasa	1,93	1,92	1,92

Table 2: Results of LQ Model Calculation Nganjuk Regency Year 2009 – 2013.

No	Sektor	Nilai LQ				
		2009	2010	2011	2012	2013
1	Pertanian	2,33	2,33	2,36	2,36	2,39
2	Pertambangan dan Penggalian	0,58	0,55	0,56	0,60	0,63
3	Industri Pengolahan	0,32	0,32	0,32	0,32	0,33
4	Listrik, Gas dan Air Bersih	0,40	0,40	0,40	0,39	0,40
5	Bangunan	0,18	0,19	0,19	0,19	0,18
6	Perdagangan, Hotel dan Restoran	1,00	1,01	1,02	1,02	1,03
7	Transportasi dan Komunikasi	0,29	0,28	0,27	0,26	0,26
8	Keuangan, Persewaan dan Jasa Perusahaan	0,69	0,69	0,70	0,70	0,71
9	Jasa-jasa	1,85	1,91	1,97	2,00	2,02

In the table above, it can be observed that the base sectors in Nganjuk Regency before and during the era of regional autonomy did not experience change. But, there was a shift in domination. The agriculture sector was shifted by the commerce, hotel and restaurant sector. This means that those sectors are potential sectors to be developed as the driving force of regional economy. The score of LQ can be said as a guidance to be a base to determine which sectors are potential to be developed. Table 1 and 2 as follows are the results of measurement

of the LQ score per sector in the economy of Nganjuk Regency for the year before (1997-1999) and during (2009 - 2013) the regional autonomy era:

The strengthening of the base sector in Nganjuk Regency became one of the indicators of growing economy in this region. The improvement of base activity in a region will increase the flow of revenue towards that region (Rudy Badrudin, 2015). And then, this will lead to an increase in demand for goods and services in that region, which in turn will cause the increase the volume of non-base activities.

Results of Shift Share Analysis

Shift Share Analysis is used to know the process of economic growth in the Regency of Nganjuk connected to the referenced region, which is the Province of East Java. Shift Share analysis in this research uses the variable of revenue, which is PDRB to explain the economic growth in the regency of Nganjuk.

To know the specialisation of each regional sector and their growth, components of PR, PP, and PPW are used. This is the methods and results of analysis and calculation of shift-share analysis of Nganjuk Regency for the year 1997-1999 and 2009-2013 in table 3.

Table 3: Shift Share Analysis Result Nganjuk Regency 1997-1999.

Growth : Y	1.432.797,31
Regional Share : PR	1.529.627,52
Shift : PP+PPW	-96.830,21

No	LAPANGAN USAHA (Sektor)	PR	PP	PPW	Y=PN+PP+PPW
1	Pertanian	557.651,51	-372.495,30	23.774,48	208.930,69
2	Pertambangan dan Galian	19.703,50	-5.324,16	5.994,18	20.373,52
3	Industri Pengolahan	127.953,60	-26.961,68	-737,52	100.254,40
4	Listrik, Gas & Air Bersih	8.269,12	-1.326,04	-321,76	6.621,32
5	Bangunan (Konstruksi)	8.823,59	1.481,30	439,86	10.744,75
6	Perdagangan, Hotel & Restoran	459.358,54	217.506,61	42.166,12	719.031,27
7	Pengangkutan dan Komunikasi	31.429,35	18.223,41	-17.585,69	32.067,07
8	Keuangan, Persewaan dan Jasa Perusahaan	57.574,87	7.721,33	4.275,88	69.572,08
9	Jasa-jasa	258.863,44	-79.295,43	85.634,20	265.202,21
Jumlah		1.529.627,52	-240.469,96	143.639,75	1.432.797,31

From the table, its known before the era of regional autonomy, the score of differential shift or the growth of market share (PPW) is -38,589.6. This shows that the economic sectors of Nganjuk Regency generally experience slowing down compared to the Province of East Java. The sectors that can outperform other regions in their role to the East Java's economy are only electricity, gas and clean water sector, transportation and communication sector, and services sector. The first two sectors which are the electricity, gas and clean water sector and the transportation and communication sector are the base sector of Nganjuk Regency.

Electricity, gas, and clean water sectors rely on the sub sector of electricity and clean water. Meanwhile, the transportation and communication sector rely on the communication, transportation supporting service, and highway transportation subsector. Also, the services sector rely on the general government, individual and household, social and entertainment and recreation sub sector.

The government of Nganjuk Regency prioritise the repair of infrastructure needed by the businessmen that want to invest to the Regency of Nganjuk. To smoothen the flow of business, repairs were done including to the transportation sub sector, where the highway transportation sub sector gave high contributions. The infrastructure that often holds the attention of the government of Nganjuk is the repair and enlargement of highways towards Nganjuk Regency, there is corresponding on table 4.

Table 4: Shift Share Analysis Result Nganjuk Regency 2009-2013

Growth : Y	-133.180,87
Regional Share : PR	133.774,92
Shift : PP+PPW	-266.955,79

No	LAPANGAN USAHA (Sektor)	PR	PP	PPW	Y=PN+PP+PPW
1	Pertanian	-42.986,44	34.624,37	-8.447,19	-16.809,26
2	Pertambangan dan Galian	345,07	-415,69	-340,19	-410,81
3	Industri Pengolahan	14.453,05	-24.908,74	-8.640,55	-19.096,24
4	Listrik, Gas & Air Bersih	2.316,44	-1.067,42	-150,09	1.098,93
5	Bangunan (Konstruksi)	18.237,68	-41.366,38	1.682,95	-21.445,75
6	Perdagangan, Hotel & Restoran	61.503,61	-96.615,23	-2.319,44	-37.431,06
7	Pengangkutan dan Komunikasi	12.978,02	-10.927,46	-16,78	2.033,78
8	Keuangan, Persewaan dan Jasa Perusahaan	16.003,27	-29.299,67	-25.471,30	-38.767,70
9	Jasa-jasa	50.924,22	-58.389,96	5.112,98	-2.352,76
Jumlah		133.774,92	-228.366,18	-38.589,61	-133.180,87

From table 4, it can be seen that the growth (Y) of Nganjuk Regency amounting to 1,432,797.31 since 2009 until 2013. The change generally has a similar percentage (even though it is a little bit less) with the Province of East Java in the same period. Then, if Nganjuk Regency develops at the same rate as East Java, then the regional share (PP) is 1,529,627.52. Meanwhile, the difference between the actual growth and the nation-wide growth (PP+PPW) amount to -96,830.21 which shows that Nganjuk Regency has a slower growth compared to East Java.

The proportional shift or proportional growth (PP) score of -240,469.96 shows that Nganjuk Regency contributes big for the sectors that have slow growth in the East Java. It can be said that the development strategy of Nganjuk with East Java is sectorally different. The results suggest that the sector composition favoured by Nganjuk Regency is different with sector composition favoured by East Java Province (Judit Nagy, 2018).

The differential shift or growth of market share (PPW) score of 143,639.75 shows that the economic sectors in Nganjuk Regency are generally experiencing more rapid growth compared to the Province of East Java. All of those sectors can outperform other regions in their roles towards the economy of East Java Province.

Results of Overlay Analysis

This method is used to determine the prominent sectors by combining the results from the Location Quotient (LQ) with the results of the shift share analysis. The combining of two of those tools of analysis is done to gain identification of sectoral activity that have advantages and competitiveness. The identification of prominent activities is shown by the overlay between LQ and the score of Proportional Growth. Sectors that have competitiveness beside shown by the growth of market share (PPW), also by the results of overlay between the LQ and PPW. The coefficient from both of the components' unit will then be united by giving positive (+) and negative (-) notation.

The sectors that have the most positive score (+), means that the sector is a prominent sector. In the contrary, if a sector does not have a positive, that means the sector is not a prominent sector. Positive notation means that the component coefficient score more than one and negative means less than one. For LQ methods, positive score is only given to economic sector that have coefficient score of LQ more than 1 ($LQ > 1$).

The score on the shift share observed from the coefficient of the results of shift share resulting in negative or positive score. Positive means that the sector have contributions to the economy of East Java in the same sector. Meanwhile, negative score means that the sector does not have contribution to the sector in East Java, so that sector can be considered non-competitive.

Overlay Analysis

Table 5 shows Nganjuk Regency 1997-1999 (before Regional Autonomy).

Table 5: Data BPS of Nganjuk Regency (1997-1999)

Sektor	Lapangan Usaha	Tahun 1997			Tahun 1998			Tahun 1999		
		LQ	SS	Overlay	LQ	SS	Overlay	LQ	SS	Overlay
1	Pertanian	(+)	(+)	(++)	(+)	(+)	(++)	(+)	(+)	(++)
2	Pertambangan & Punggalian	(-)	(+)	(-+)	(-)	(+)	(-+)	(-)	(+)	(-+)
3	Industri Pengolahan	(-)	(+)	(-+)	(-)	(+)	(-+)	(-)	(+)	(-+)
4	Listrik, Gas & Air Bersih	(-)	(+)	(-+)	(-)	(+)	(-+)	(-)	(+)	(-+)
5	Bangunan (konstruksi)	(+)	(+)	(++)	(+)	(+)	(++)	(+)	(+)	(++)
6	Perdagangan, hotel & restoran	(+)	(+)	(++)	(+)	(+)	(++)	(+)	(+)	(++)
7	Pengangkutan dan komunikasi	(-)	(+)	(-+)	(-)	(+)	(-+)	(-)	(+)	(-+)
8	Kewangan, persewaan dan jasa perusahaan	(-)	(+)	(-+)	(-)	(+)	(-+)	(-)	(+)	(-+)
9	Jasa - jasa	(+)	(+)	(++)	(+)	(+)	(++)	(+)	(+)	(++)

Sources: BPS of Nganjuk Regency and East Java, processed

Based on the table, the overlay analysis shows that there are only four sectors that show positive scores (+) which are, agriculture, construction, commerce, hotel and restaurant, and services. These four (4) sectors also have positive scores in the LQ analysis. This means that four sectors are prominent sectors and also competitive for Nganjuk Regency. Then there is table 6 which shows an overlay analysis of Nganjuk Regency 2009-2013 (during Regional Autonomy)

Table 6: Overlay Analysis of Nganjuk Regency 2009-2013 (during Regional Autonomy)

Sektor	Lapangan Usaha	Tahun 2009			Tahun 2010			Tahun 2011			Tahun 2012			Tahun 2013		
		LQ	SS	Overlay												
1	Pertanian	(+)	(+)	(++)	(+)	(+)	(++)	(+)	(+)	(++)	(+)	(+)	(++)	(+)	(+)	(++)
2	Pertambangan & Penggalian	(-)	(+)	(-+)	(-)	(+)	(-+)	(-)	(+)	(-+)	(-)	(+)	(-+)	(-)	(+)	(-+)
3	Industri Pengolahan	(-)	(+)	(-+)	(-)	(+)	(-+)	(-)	(+)	(-+)	(-)	(+)	(-+)	(-)	(+)	(-+)
4	Listrik, Gas & Air Bersih	(-)	(+)	(-+)	(-)	(+)	(-+)	(-)	(+)	(-+)	(-)	(+)	(-+)	(-)	(+)	(-+)
5	Bangunan (konstruksi)	(-)	(+)	(-+)	(-)	(+)	(-+)	(-)	(+)	(-+)	(-)	(+)	(-+)	(-)	(+)	(-+)
6	Perdagangan, hotel & restoran	(+)	(+)	(++)	(+)	(+)	(++)	(+)	(+)	(++)	(+)	(+)	(++)	(+)	(+)	(++)
7	Pengangkutan dan komunikasi	(-)	(+)	(-+)	(-)	(+)	(-+)	(-)	(+)	(-+)	(-)	(+)	(-+)	(-)	(+)	(-+)
8	Keuangan, persewaan dan jasa perusahaan	(-)	(+)	(-+)	(-)	(+)	(-+)	(-)	(+)	(-+)	(-)	(+)	(-+)	(-)	(+)	(-+)
9	Jasa-jasa	(+)	(+)	(++)	(+)	(+)	(++)	(+)	(+)	(++)	(+)	(+)	(++)	(+)	(+)	(++)

From that table, the results of the overlay analysis shows that there are only three sectors that shows positive score (+) which are, agriculture, commerce, hotel and restaurant, and services. These three sectors also have positive score in the LQ analysis. This means that these three sectors are prominent sectors and also competitive for the Nganjuk Regency (Smith, The Origins of Regional Autonomy in Indonesia: Experts and the Marketing of Political Interests, 2008).

Conclusion

Based on the research done regarding the analysis of prominent sectors in the area of Nganjuk Regency with the sectoral approach in the time before and during the regional autonomy era, it can be made some conclusions can be made, first, Location Quotient (LQ) Analysis in the Nganjuk Regency in the year before the regional autonomy era (1997-1999) shows that there are only three base sectors, which are the agriculture sector, commerce, hotel, and restaurant sector, and services sector. Second, the result of shift share analysis shows that the competitive sectors before the regional autonomy era (1997-1999) are the electricity, gas, and clean water sector and transportation and communication sector. As for the primary reliance of the



electricity, gas, and clean water sector are the electricity sub sector and clean water sub sector. Meanwhile transportation and communication sector rely on the highway transportation sub sector and transportation support service sub sector. Meanwhile, the shift share analysis also shows that during the era of regional autonomy, all of the sectors in Nganjuk Regency are competitive sectors. Third, the results from the Overlay analysis of LQ and Shift Share shows that the prominent sector in Nganjuk Regency are the agriculture sector, commerce, hotel, and restaurant sector, and services sector. All of those sectors are also locally competitive. This means that the prominent sectors in the Nganjuk Regency are also the base sectors.

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