

THE DEVELOPMENT OF SMALL AND MEDIUM SCALE ENTERPRISES (SME'S) IN EAST JAVA: A SHIFT-SHARE ANALYSIS

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Abstract

Disparities in economic growth across the region in East Java, especially regions in the North of East Java and the South of East Java is still quite striking. The fact shows that the Region in the North of East Java is still dominating in term of sectoral contribution compare to South Regions. This condition occurs due to a policy that only oriented on the development of industrial zones in the North regions, but not for the South. Meanwhile, the Small and Medium Scale Enterprises (SME's) in the South East Java shows growth rapidly. This study aims to identify the potential of Small and Medium Scale Enterprises (SME's) in the South Regions of East Java. Using sample of Regency/City level, the research methods are (i) mapping the potential sector using Location Quotient (LQ) and (ii) conduct a Shift Share analysis. The results showed that there are 9 of 17 sectors in Regency/City in East Java as the basis sector or has the potential to be developed. Meanwhile, the Shift Share analysis for both region shows that there is any shift in economic structure. Then, we can conclude that the emphasizing policy to encourage the development of SME's will be able to drive the regional growth.

Keywords: *Small Medium Enterprises, Shift-Share analysis*

1. INTRODUCTION

Economic growth in the 38 Regencies in East Java showed an average economic growth tends to increase and dynamic. However, if economic growth were compared between the North and South areas, the economic growth of the north region (which includes Tuban, Lamongan, Gresik, Surabaya, Bojonegoro, Sidoarjo, Pasuruan, Probolinggo and Situbondo), a greater contribution to economic growth in East Java than the south (which includes Pacitan, Trenggalek, Tulungagung, Blitar, Malang, Lumajang, Jember and Banyuwangi). Based on the BPS data in 2010 shows that the contribution of North Region to the total GDP of the East Java Province, about 47 percent, while the South Region only 19 percent.

The differences in economic growth contribution is quite striking between the northern and southern regions has generated economic growth disparities. Policies that only focused on the development of the northern region is considered to be one cause. Further, those condition resulted the economic development in the northern region is relatively better than the southern region. Another factor

that contribute is still relatively high investments in the northern region than southern such as good infrastructure (roads, electricity, ports, etc).

If we look at the data on economic growth, particularly in the southern region of East Java, shows that the industrial sector occupies the second role in GDP formation, whereas the small and medium enterprises (SME's) has contributed significantly. Thus, to spur economic growth in the southern region at least can be done by a special industrial area development of SME's. Experience in some areas proved that the existence of industrial area is effective in promoting economic growth and reducing regional disparities because it is the locality, to encourage the creation of innovation and synergy among relevant actors. In addition, the construction industry will provide a wide range of positive effects: (i) economic growth in the region, (ii) ease in the provision of infrastructure facilities required by the industry in carrying out its production activities, (iii) opening new jobs, (iv) the rising price of land around zone / industrial area, and (v) increase in local revenue (PAD) through local taxes. Furthermore, the research aims to identify the potential of small industry and analyzes the shift of economic structure towards the development of cluster-based industrial area in East Java.

2. LITERATURE REVIEW

2.1. Industrial Localization: a Clusters Theory

In the literature, there are three concepts related to industrial localization, namely industrial clusters, industrial districts and agglomeration economies. The first two concepts are often used interchangeably. The concepts are linked to industry groupings sectorally and geographically. The concept of economic agglomeration is associated with industries that benefit from urbanization economies and localization economies. It's just that, in general, the first two concepts are often used in the literature in turn. The industry cluster itself is often limited in two different ways.

The first is functionally constrained. As Porter (1990) puts it, industrial clusters are viewed more as a group of companies dealing with similar activities within a national economy than simply within a particular location. Therefore, the most important factor in industrial clusters is the linkages between firms within a particular sector or with other sectors but mutually supportive. The territorial aspect is not rigidly limited. Second, industrial clusters are emphasized on a group of industries that exist within a particular region. This is, for example, seen from the boundaries of Schmitz and Nadvi who see industrial clusters as "sectoral and spatial concentration of firms" (Schmitz and Nadvi, 1999).

In its development, the understanding of the cluster includes two things, namely, functionally and geographically. The study of clusters in many countries, both in developed and developing countries, shows that clusters are basically not just a collection of companies located in a particular place (spatial). Moreover, clusters mean the existence of linkages between the companies, both vertical and horizontal. Through linkages, the existing companies are not just competing (competition) between the one with the other, but also do cooperation. Such cluster character is seen as having potential in the business of economic development. Therefore, the cluster pattern then becomes one of the approaches that scientists recommend and used by policy makers in developing industries in an area or country.

2.2. Economic Bases and The Role of SME's

The theory of economic basis stated that the economic growth rate of a region is determined by the economic activities of the region. Further, the economic activities are grouped on basis activities and non-basis activities. The basis activity is represented by all activities that can fulfill the region but also other region. Employment and income in the base sector is an exogenous demand function (but not dependent on internal strength / local demand). While the non-base activity is to meet local consumption needs, therefore the demand of this sector is strongly influenced by the level of local income increase. Thus the sector is tied to local economic conditions and can not expand beyond regional economic growth. While, on the basis of the above assumption, the only sector that can boost the region's economy beyond natural growth is called as the base sector. Therefore, base analysis is very useful for studying and projecting regional economic growth (Tarigan, 2004).

One of the indispensable economic indicators for measuring the performance of an area's economic growth is the Gross Regional Domestic Product (GRDP). Viewed from the aspect of GDP expenditure is the total expenditure for household consumption and private institutions that do not seek profit, government consumption, gross domestic fixed capital formation, changes in stock and net exports in a region. While, from the production side of GRDP is the total value of goods and services produced by various production units (in a region) at a given time period (a year). GRDP calculation through this approach is called the calculation value added approach and has been done by starting from the final use of goods and services produced in the domestic area (BPS, 2008). GRDP is an important indicator in a region that can indicate the totality of net goods and services which can then be used as a basis for planning and evaluation of regional development.

The concern for developing SME's is based on three things. First SME's absorbs a lot of manpower and also intensive use of local resources. Both SME's play an important role in non-oil and gas exports. The third is the urgency in which the economic structure is dominated by the scale of small and medium enterprises operating in a highly competitive business climate, low entry barriers, low profit margins,

and high droup-out rates (Kuncoro, 2010). The tendency of SME's that absorb a lot of labor makes this sector also intensive in using local resources. The large number of people working for SME's shows how important the role of SME's in helping solve the problem of unemployment and income distribution. Its many rural locations make the growth of the SME's will positively impact on the increase in employment, poverty reduction, equity in income distribution, and rural economic development (Kuncoro 1996).

In other words, SME's development is part of a pro-poor and pro-job economic development strategy. Another important role of SMEs is to provide additional income that is a seed-bed for industrial development and as a complement to agricultural production for the poor. So that SME's can serve as a strategy to survive in the midst of crisis. Therefore, it can be said that SME's is the spearhead of the economy especially in terms of poverty alleviation.

3. METHODS

The scope of this study is to analyze the economic potential, as well as the study of theory about the development of cluster-based economic region in East Java. The samples used in the study were Blitar and Tulungagung. The reason choosen these two regencies is based on the characteristics of the perpetrators of relatively large SME's in these two districts. Also, these regencies can represent the condition of the area in the southern region of East Java. The study use secondary data collected from the Central Statistic Agency, Department of Cooperatives, Industry and Trade, CPM district, owners, managers, and employees of SME's in their respective districts in the study area.

In order to identify the potential of each sector, we use Location quotients (LQ). LQ is used to measure the concentration of an activity in a region by comparing its role in the regional economy with similar activities in the regional or national economy (Ghalib, 2005):

$$LQ = \frac{\text{sector}_{ij}/GRDB_j}{\text{sector}_{ik}/GRDP_k}$$

whereas,

Sector_{ij} = sector *i* in area *j*

GRDP_j = GRDP in area *j*

Sector_{ik} = sektor *i* in area *k* that wider than *j*

GRDP_k = GRDP in area *k* that wider than *j*

with the following criteria:

- LQ<1, the sector is concerned less specialized than the same sector at the provincial level, so it is not a dominant sector,
- LQ=1, the relevant sectors have the same level of specialization in these industries in the province, so it is only enough to serve the needs of their own regions,
- LQ>1, the relevant sector is more specialized than the same sector at the provincial level, so it is a leading sector.

Then, to describe the performance of sectors in one district area compared to economic performance in East Java, the Shift-Share analysis was used. The shift-share method for sector *i* in region *j* is (Soepono, 2001):

$$Dij = Nij + Mij + Cij \dots\dots\dots(1)$$

In this study, the analysis applied to regional income (GRDP), then:

$$Dij = E^*ij - Eij \dots\dots\dots(2)$$

$$Nij = Eij \cdot r_n \dots\dots\dots(3)$$

$$Mij = Eij \cdot (r_{in} - r_n) \dots\dots\dots(4)$$

$$Cij = Eij \cdot (r_{ij} - r_{in}) \dots\dots\dots(5)$$

Where in *r_{ij}*, *r_{in}* and *r_n* represent district growth rates and provincial growth rates, for each can be defined as:

$$rij = (E^*ij - Eij)/Eij \dots\dots\dots(6)$$

$$rin = (E^*in - Ein)/Ein \dots\dots\dots(7)$$

$$rn = (E^*n - En)/En \dots\dots\dots(8)$$

The beneficial of shift-share technique is able to provide positive and negative indicators for each sector growth influence which consists of (i) the influence of the growth of the province (N) called the influence of the share, (ii) the influence of the industrial mix (Mij) is called proportional shift, and (iii) the influence of competitive advantage is also called diffrensial shift or regional share (Soepono, 2001). So for a region, the growth of the province (3), the industry mix (4), and the competitive advantage (5) can be determined for sector *i* in region *j* with the notation:

$$Dij = Eij \cdot r_n + Eij(r_{in} - r_{in}) + Eij(r_{ij} - r_{in}) \dots\dots\dots(9)$$

4. RESULTS

4.1. The Result of Location Quotients

Location Quotient (LQ) analysis tools are used to identify the comparative advantages of economic activity in Tulungagung and Blitar by comparing them at the level of East Java Province. The advantage of LQ analysis based

on theory as proposed by Bendavid is used to analyze the diversity of the economic base, further can identify which sectors can be developed. Thus, the sectors that are said to be potential can be the main priority sectors in economic development planning. The result of LQ analysis based on constant price GRDP approach in Tulungagung and Blitar is shown in Table 1.

Table 1: Location Quotient (LQ) of Tulungagung with GRDP based on sectoral (constant price 2000)

No	Sectoral	2010	2011	2012	2013	2014	The Average of LQ
1	Agriculture, Forestry and Fisheries	1.62	2.30	1.63	1.63	1.63	1.76
2	Mining	0.81	1.11	0.80	0.80	0.80	0.86
3	Manufacturing	0.71	1.01	0.71	0.70	0.69	0.76
4	Gas and Electrical	0.10	0.00	0.13	0.13	0.13	0.10
5	Water supply, waste management, and recycling	0.88	1.23	0.88	0.90	0.91	0.96
6	Construction	0.99	1.40	0.98	0.98	0.99	1.07
7	Large and Retail Trade; Repair of Cars and Motorcycles	1.15	1.61	1.14	1.16	1.18	1.25
8	Transportation and warehousing	0.70	0.97	0.69	0.70	0.72	0.76
9	Accommodation supply and Beverages	0.35	0.49	0.36	0.37	0.37	0.39
10	Information and Communication	1.15	1.63	1.15	1.14	1.16	1.25
11	Financial services and Insurance	0.85	1.23	0.89	0.88	0.88	0.95
12	Real Estate	1.23	1.72	1.21	1.22	1.23	1.32
13	Company services	0.46	0.66	0.47	0.47	0.47	0.51
14	Mandatory Government, Defense and Social Security Administration	1.45	2.02	1.43	1.43	1.43	1.55
15	Educational services	1.57	2.22	1.56	1.55	1.58	1.70
16	Health services and Social activities	1.66	2.32	1.66	1.66	1.69	1.80
17	Other services	0.93	1.30	0.91	0.92	0.92	1.00

Sumber: data calculated, 2016.

The result of LQ analysis for Tulungagung for period 2010-2014 shows that there are 9 (nine) business sectors belonging to base sector in Tulungagung. The conclusions are derived based on the average value of the LQ coefficients for each of the nine sectors that have LQ values of more than 1. Those 9 sectors

included in the base sector in Tulungagung are: (i) Agriculture, Forestry and Fisheries; (ii) Construction; (iii) Large and Retail Trade; Repair of Cars and Motorcycles; (iv) Information and Communication; (v) Real Estate; (vi) Mandatory Government, Defense and Social Security Administration; (vii) Educational Services; (viii) Health Services and Social Activities; And (ix) other Services.

Table 2: Location Quotient (LQ) of Blitar with GRDP based on sectoral (constant price 2000)

No	Sectoral	2010	2011	2012	2013	2014	The Average of LQ
1	Agriculture, Forestry and Fisheries	0.003	3.70	2.65	2.66	2.66	2.33
2	Mining	0.84	1.20	0.87	0.90	0.90	0.94
3	Manufacturing	0.46	0.65	0.44	0.44	0.44	0.49
4	Gas and Electrical	0.17	0.00	0.22	0.22	0.22	0.17
5	Water supply, waste management, and recycling	0.39	0.51	0.37	0.37	0.38	0.40
6	Construction	0.96	1.36	0.96	0.97	0.99	1.05
7	Large and Retail Trade; Repair of Cars and Motorcycles	0.92	1.30	0.93	0.95	0.98	1.02
8	Transportation and warehousing	0.44	0.61	0.42	0.42	0.42	0.46
9	Accommodation supply and Beverages	0.17	0.24	0.19	0.18	0.18	0.19
10	Information and Communication	1.13	1.60	1.10	1.10	1.11	1.21
11	Financial services and Insurance	0.74	1.24	0.91	0.87	0.88	0.93
12	Real Estate	1.15	1.62	1.12	1.11	1.12	1.22
13	Company services	0.47	0.67	0.48	0.47	0.46	0.51
14	Mandatory Government, Defense and Social Security Administration	1.46	2.09	1.51	1.53	1.54	1.63
15	Educational services	1.59	2.24	1.55	1.52	1.56	1.69
16	Health services and Social activities	1.25	1.72	1.21	1.21	1.22	1.32
17	Other services	0.96	1.42	1.03	1.03	1.03	1.09

Sumber: data calculated, 2016.

Similar to LQ values in Tulungagung District, the LQ result for Blitar also shows that there are 9 (nine) business sector sectors included in the base sector. The nine business sectors are: (i) Agriculture, Forestry and Fisheries; (ii) Construction; (iii) Large and Retail Trade; Repair of Cars and Motorcycles;

(Iv) Information and Communication; (V) Real Estate; (Vi) Mandatory Government, Defense and Social Security Administration; (Vii) Educational Services; (Viii) Health Services and Social Activities; And (ix) other Services. This condition is similar to the findings that exist in Tulungagung.

The results of LQ calculations in the two regions shows that most sectors in the two regions have $LQ > 1$ indicate that these two areas have been able to meet their own needs in that sector and it is possible to export out the product area in this sector. In addition, the results of the calculations also indicate that the characteristics of the two regions on a sectoral basis are relatively similar. Therefore, policy design on sector development in each region can support each other.

4.2. Results of Shift-Share Analysis

The LQ analysis does not provide an explanation of the factors causing the change of GRDP variables, whereas the Shift-Share analysis (SSA) details the causes of change of a variable by isolating the various factors causing the change of sectoral GRDP in an area from one time to the next. SSA basically discusses the relationship between regional growth and regional economic structure. In this analysis approach can be determined performance or productivity of the economy. In addition, SSA can be used to identify the superior sector of the region by comparing it with larger regions such as Regional or National (Prasetyo, 1993).

Table 3 shows the calculation of sectoral Shift-Share in Tulungagung. Based on the table, it is known that during 2005-2010, the value of sectoral GRDP Tulungagung has undergone a change or development. The value of GRDP grew by 347,427 billion Rupiah. According to calculation of the components of national growth, national economic growth has affected the economic growth of Tulungagung amounted to 410.998 billion rupiah. However, the actual development of GRDP Tulungagung is only 347.427 billion rupiah. This is because there are still two other components that give effect that is industry mix and competitive advantage. The industry mix component states a large change in the region's economy due to the industry mix. The result of the analysis shows that the industry mix gives negative effect to economic development of Tulungagung, that is equal to -92.137 billion rupiah. Negative values indicate

that the sector composition of the Tulungagung tends to lead to an economy that will grow relatively slowly.

Table 3: Shift-Share for Tulungagung, 2005-2010 (Billion Rupiah)

No	Sector	Componen			Shift of economics structure
		National Growth	Industry Mix	Kompetitive advantage	Growth
		(Nij)	(Mij)	(Cij)	(Dij)
1	Agriculture, Forestry and Fisheries	89749	-44760	16129	61118
2	Mining	18048	-14165	4446	8329
3	Manufacturing	85835	-10061	8015	83789
4	Gas and Electrical	190	-958	989	221
5	Water supply, waste management, and recycling	394	-157	40	277
6	Construction	36787	-3111	10044	43720
7	Large and Retail Trade; Repair of Cars and Motorcycles	83077	-14584	46481	114975
8	Transportation and warehousing	7860	-184	4583	12259
9	Accommodation supply and Beverages	6821	-817	5079	11083
10	Information and Communication	22661	8670	11686	43018
11	Financial services and Insurance	7757	3381	5243	16382
12	Real Estate	8312	-162	3365	11515
13	Company services	1495	-254	476	1717
14	Mandatory Government, Defense and Social Security Administration;	16008	-13880	1563	3691
15	Educational services	16268	766	5165	22201
16	Health services and Social activities	3726	726	3685	8137
17	Other services	6004	-2583	714	4134
	Total	410998	-92137	28565	347427

Sumber: data calculated, 2016.

The same relative condition is also shown by the calculation of shift share of Blitar Regency. Based on Table 4, it is known that during 2005-2010, the sectoral GRDP of Blitar Regency has changed or growth with GDP growth rate of 303,635 billion rupiah. Economic growth in Blitar Regency is influenced by the growth at the national level, amounted to 39.722 billion rupiah. Meanwhile, industrial blend in Blitar Regency gave a negative influence to the economic development of Blitar Regency, which

amounted to -111.030 billion rupiah. The negative values indicate that the sector composition of the Blitar GRDP tends to lead to an economy that will grow relatively slowly.

Table 4: Shift-Share for Blitar, 2005-2010 (Billion Rupiah)

No.	Sector	Components			Shift of economics structure
		National Growth	Industry Mix	Competitive advantage	Growth
		(N _{ij})	(M _{ij})	(C _{ij})	(D _{ij})
1	Agriculture, Forestry and Fisheries	140160	-69902	12864	83122
2	Mining	18242	-14317	8862	12787
3	Manufacturing	54058	-6336	-8789	38932
4	Gas and Electrical	308	-1556	1544	296
5	Water supply, waste management, and recycling	168	-67	-53	47
6	Construction	34524	-2920	9025	40629
7	Large and Retail Trade; Repair of Cars and Motorcycles	64397	-11304	37208	90300
8	Transportation and warehouseing	4801	-112	91	4779
9	Accommodation supply and Beverages	3282	-393	1627	4516
10	Information and Communication	21511	8230	3959	33702
11	Financial services and Insurance	6561	2859	8908	18329
12	Real Estate	7539	-147	557	7949
13	Company services	1459	-248	-110	1100
14	Mandatory Government, Defense and Social Security Administration;	15571	-13502	3953	6022
15	Educational services	15893	749	637	17280
16	Health services and Social activities	2717	529	1521	4768
17	Other services	6021	-2591	2137	5567
	Total	39722	-111030	17445	303635

Sumber: data calculated, 2016.

5. CONCLUSION

The base sectors in the two sample districts provide findings that there are 9 sectors as the leading sectors in each district. The nine sectors include Agriculture, Forestry and Fisheries; (Ii) Construction; (Iii) Large and Retail Trade; Repair of Cars and Motorcycles; (Iv)

Information and Communication; (V) Real Estate; (Vi) Mandatory Government, Defense and Social Security Administration; (Vii) Educational Services; (Viii) Health Services and Social Activities; And (ix) other Services.

Meanwhile, to know the cause of shifting economic structure, it is used shift share method. Based on the calculations, both regions show a shift or economic development. The tertiary sector is getting bigger, so the secondary sector is also getting bigger. While the primary sector is shrinking. This shows that the process of transformation of economic structures in both districts has led to trade and services and processing industries where the role of the primary sector has been replaced by the role of the tertiary and secondary sectors which have increased contribution, although still relatively small in almost every year.

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