

## **Sector and Spatial Analysis of Batu, East Java-Indonesia**

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**Abstract:** *This study aims to look at the leading economic sector in order to stimulate the economy of Batu and territorial aspects or the location of economic activity that will be built in accordance with the endowment resources. This research used Qualitative and collection data technique used documentation from Central Bureau of Statistics BPS (Badan Pusat Statistik). An analytical technique used Location Quotient (LQ), Shift Share (SS), and Schallogram. The results showed the sector base in Batu are: trade, hotel and restaurant, agriculture and service. The same specialty, trade, hotel and restaurant sector is growing rapidly in East Java-Indonesia. Agriculture and services had the same rapid growth in Batu. Spatially, Batu and Junrejo dominated by industry activities, while Batu is the Batu District because it is the central of Batu government in terms of the completeness of the facility is also more fulfilled.*

**Keywords:** *Location Quotient (LQ), Shift Share (SS), Schallogram, Batu*

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### **I. Introduction**

Regional development cannot be separated from the potential resources owned by the region endowment resources. Development of a region can not necessarily be generalized to other regions. Each region has different endowment resources for developed. By utilizing these endowment resources, regional development can be done with the maximum. That is because the potential of the resources owned a region is the basic capital and potential factors that owned a region to achieve development goals.

Development of the region can be categorized "good" by looking forward at the completeness of facilities used for the lives of many people. The facilities in question is educational facilities, transportation and telecommunications, markets, and financial institutions. In economics, the availability of facilities or infrastructure in this case, is affected the well-being of people living in the region. The more complete social facilities owned, the more prosperous the community. That is because many community activities that depend on public facilities. According to Haris (2009), the infrastructure have an important influence for improving the quality of life and human wellbeing, among others, in the increase in the value of consumption, increasing labor productivity and access to employment, as well as increased prosperity real and the realization of macroeconomic stabilization, namely fiscal sustainability, the development of credit markets, and the effect on the labor market.

Development of the region can be done through sectoral and spatial approach. The sectoral approach is to choose the leading economic sectors, which is able to drive the region's economy. While a more spatial approach to the territorial aspect or the location of economic activity that will be built in accordance with endowment resources. Both of these approaches in accordance with the Batu which have characteristics different districts. In addition, the spatial and sectoral approaches appropriate for the regional development concentration in the center of town and has not been evenly distributed to the suburbs.

In recent years, the concentration of the development of City concentrated in the tourism sector which in fact can bring substantial income to the economy. It is seen from the many tourist attractions that are built and used again. The economy of Batu is certainly be supported by sectors of the economy that not only contain the tourism sector alone, there are other sectors that could be developed to achieve the desired economic growth. It can develop optimally when knowed exactly which sectors are superior and support the economic development and consider which is the most advanced area in Batu. It can be known by using analysis sectoral and spatially.

Based on the description of the background described above, it can be formulated research problem as follows: How does the economic conditions contained in Batu both sectoral and spatial, which economic sectors that can be support the economic development in Batu, Which Regional (spatial) the most advanced in Batu, and suggestions or recommendations for policy on sectoral and spatial optimization in Batu.

### **II. Theoretical Review**

According Arsyad (1999), the regional development strategy can be classified into four groups, 1) Physical or Localities Development Strategy 2) Business Promotion Strategy 3) Human Resources Development Strategy 4) Community Economic Development Strategy. Regional economic development is the process by which local governments and communities to manage resources that exist and form a pattern of a partnership

between local government and the private sector to create a new jobs and stimulate the development of economic activity in the region.

Fast track growth theory Turnpike introduced by Samuelson (1955), Each country/region needs to look at the sector/commodity what it has great potential and can be developed quickly, good because of the potential natural and because the sector has a competitive advantage to be developed. It means that with the same capital requirements the sector can provide greater added value, can produce in a relatively short time and volume contribution to the economy is large enough. To be assured market, the product must be able to penetrate and compete in a wider market. The development of these structures will encourage other sectors to also develop so that the overall economy will grow.

Economic base theory developed by Tiebout. This theory is basing its view that the pace of economic growth of a region is determined by the magnitude of the increase in exports from the region (Tarigan, 2014). This theory divides the activities of production/type of work contained in one area of activity and the activities of non-base basis. Base activities are activities that are exogenous means not bound to the internal condition of the economy of the region and also serves to encourage the growth of other types of employment. While the non-base activities are activities to meet the needs of people in the region itself. Because it is meeting local needs, the demand for this sector is strongly influenced by the level of income of local communities. Therefore, the increase is in line with revenue growth of local communities. Thus, this sector is tied to local economic conditions and cannot grow beyond the region's economic growth. Based on the above assumption, the only sector that could boost the area's economy beyond natural growth is a sector basis.

Economic development that leads to the leading sectors besides impact on economic growth will also affect the fundamental changes in the economic structure. Leading sectors can be defined as a sector of the economy or productive business activities developed as well as the potential development could be the basis of the economy of a region compared to other sectors.

Neoclassical regional growth is also called the Solow-swan growth. This theory was developed by Robert Solow and Trevor Swan in the 1950s. Neo-classical growth theory put forward four variables: the output obtained from a combination of capital/investment (K), Labor (L), and knowledge/technology or the effectiveness of labor (A). (Arsyad, 2010) states that economic growth depends on the increase of the supply of factors of production (labor, capital) and the rate of technological progress.

The central place of growth theory connects the central point with the area behind it. A central place can be defined as a settlement that provide services for the residents of the area behind it (hinterland). The central point of growth theory can provide a partial explanation of the regional structure. This theory is related to the intensity and location of industry is only one of the main elements.

Tarigan (2014) states that "urban hierarchy is strongly associated with the hierarchy of public interest facilities that exist in each city. Urban hierarchy can help to determine what facilities should exist or need to be built in each city. "The determination of the order of the city is based on a combination of several variables: the number of urban residents, many facilities owned (broad market, broad shopping complex, the number of educational facilities, health facilities, and services), and the level of accessibility of the town to the nearest town (requirements: higher order, the same region).

The new economic geography theory perspective arise due to some limitations theories locations. Krugman provides a framework that illustrates the process of the interaction between the results/benefits increasing at the rate the company/industry, transport costs and factor mobility can cause spatial economic structures evolve and change, Fujita and Krugman (2004).

### **III. Research Methods**

Sources of data obtained through secondary data documentation. The data used in this study is Gross Regional Domestic Bruto (PDRB) Batu, Gross Regional Domestic Bruto (PDRB) East Java Province's, and facilities support economic activity Batu (educational facilities, transportation and telecommunications, markets, and financial institutions). Data were obtained from published reports the Central Bureau of Statistics (BPS) Batu. All data taken in the period 2010-2013. The method used to address issues that have been set, then used several methods of data analysis, namely:

#### **Location Quotient (LQ)**

Location Quotient (LQ) is a comparison of the magnitude of the role of a sector/industry in an area of the size of the role the sector/industry nationally (Tarigan, 2014). LQ method is one approach that commonly used in the economic model base as a first step to understanding the sector of activity of PDRB of a region (district/city) to the GDP in the provincial or national scale, namely East Java. So the value of LQ that is often used to determine the base sector can be regarded as a sector that will encourage the growth or development of other sectors.

$$LQ = \frac{\frac{x_i}{PDRB}}{\frac{X_i}{PNB}}$$

LQ = Magnitude location quotient sector i  
 xi = Value-added sector i in region  
 PDRB = gross regional domestic product  
 Xi = Value-added sector i nationwide  
 PNB = gross national product or GNP

### Shift Share (SS)

Shift Share Analysis (SS) is to compare the rate of growth in various sectors (industries) in the area of our national territory (Tarigan, 2014). Components share often called national component share. National component is the large share of regional employment increase if the proportion of the change is equal to the national rate of increase during the study period. It can be used as a further criterion for the areas concerned to measure whether that area is growing faster or slower than the national growth average.

Components shift was an aberration (deviation) of the national share in regional employment growth. The positive deviation in areas that grow faster and negative in areas that grew slower / degenerate compared with employment growth nationally. For each area, a net shift can be divided into two components, namely the shift proportional component (P) and a different shift component (D).

Proportional shift component (P) is sometimes known as structural components or industrial mix, measure the net regional shift caused by the composition of the industrial sector in the regions concerned. This component is positive in areas that specialize in sectors nationwide grew quickly and negative in areas that specialize in sectors nationwide grew slowly or even being declined.

Different shift component (D) is sometimes called locational or regional component is the remainder of the excess. This component measures the amount of net regional shift caused by certain industrial sectors are growing faster or slower concerned than the national level caused by internal locational factors. Thus, an area which has locational advantages such as abundant resources/efficient, will have different positive shift component, while the locational areas that are not profitable will have a negative component.

$$\begin{aligned} \square E_r &= (N_s + P_r + D_r) \\ N_{s, i, t} &= E_{r, i, t-n} (E_{N, t} / E_{N, t-n}) - E_{r, i, t-n} \\ P_{r, i, t} &= \{(E_{N, i, t} / E_{N, i, t-n}) - (E_{N, t} / E_{N, t-n})\} \times E_{r, i, t-n} \\ D_{r, i, t} &= \{E_{r, i, t} - (E_{N, i, t} / E_{N, i, t-n}) \times E_{r, i, t-n}\} \end{aligned}$$

N = National or the national territory  
 r = Region or area analysis  
 E = Employment or the number of jobs  
 i = industrial sector  
 t = Year  
 t-n = Year early  
 Ns = National Share  
 P = Proportional Shift  
 D = Differential Shift

### Analysis Schallogram

In this research used the schallogram analysis by weighting the number of facilities. The data in this study in the form of a number of distribution facilities are located in three districts in the Batu. The size of the service capacity of each facility is assumed to be equivalent that can be directly summed for each region without the need of correction equalization.

Assuming that the region is an integral autonomous region, then the total number of existing facilities can be considered as the minimum number of facilities required by all residents. Thus, the coefficient of the location of each facility can be calculated as the inverse of the total number of such facilities in the region. The more the number of existing facilities the lower the Location Coefficient. Furthermore, to obtain the amount of decimal places that are not too small, then the location coefficient multiplied by the number 100.

The functional index of each of the facilities in each district. The trick is to multiply the number of facilities in each district with Location Coefficient. Then do the operation of the column, by means of respective districts are summed, to obtain a functional index score of each district. These functional indexes as well regarded as the amount that shows the hierarchical order of each district. Hierarchy center of activity will be determined by sorting the functional index from the highest to the lowest. Functional index is used to view the progress of construction on every districts with the assumption that if the higher the index means the township functional condition of the supporting factors were committing more complete and vice versa.

#### IV. Result and Discussion

##### Analysis of Leading Economic Sector Batu City

Nine sectors that sustain PDRB Batu has contributed with varying proportions depending Natural Resources and Human Resources that managing these sectors. Location Analysis Question (LQ) and Shift Share (SS) is used to view the selected sectors of the municipally owned Batu.

##### Agriculture sector

The agricultural sector has a huge role to the GDP formation Batu, this can be shown by the contributions that reached an average of 19.46% by year and the second in terms of its contribution to the GDP Batu.

**Table a. Agricultural Sector Analysis**

Aspect	Parameter	Meaning
LQ	>1	Basis Sector
Ps	Negative	Growth Slow In Province
Ds	Positive	Growth faster than province

Source: Data processed from BPS

Based on a table observations obtained that during the year 2010-2013 with LQ analysis, the agricultural sector showed an average value of 1.38 > 1, it means that agriculture is a sector basis which means the agricultural sector is not only able to meet regional needs, but also able to meet local needs another, potentially for export.

While based on the calculation of the agricultural sector SS has an average value of P component -13697.89564, shows that the Batu agricultural sector specialize in the same sector and slow growth in East Java because of a negative value. D component values of 7392.756424 means agricultural sector growing rapidly and increasing competitiveness in Batu because it has a positive value.

Batu is a city of tourism with agricultural base. The majority of the population the main livelihood as farmers. Therefore the Batu Government to prioritize the agricultural sector and economic development and tourism in the region. Vast rice fields in Batu in 2013 amounted to 2,480 ha. Consists of 2,086 ha irrigated land, 295 ha of half technical irrigated land, and 99 ha of simple irrigated land. In general, the wetland is used for the supply of food, employment, and income sources of local communities. The land area for paddy rice harvest is 846 ha, while the harvested area of 17 hectares of paddy fields. Rice production output amounted to 5523.2 tons, or an average of about 6.4 tons by ha Rice/fields. For this type there are 4 types of crop grown in Batu 2013, namely maize, cassava, yams, and peanuts. The largest harvested area is corn amounted to 497 hectares with a total production amounted to 1938.30 tons. The average production per hectare is the cassava and yams are each 32 tons and 22.3 tons per hectare, while the the low is Peanuts and Corn respectively 2.1 tons and 3.9 tons by ha.

Based on data from the Department of Agriculture and Forestry Batu, there are 22 kinds of vegetables produced grown in the Batu in 2013. The production of vegetables with one of them, carrots, potatoes, mushrooms, and mustard greens. In addition to vegetable crops, Batu is also potential in terms of production of fruits that there are 12 kinds of fruits produced plants during 2013. Plant fruits Apples and Oranges Siam is a type of fruit trees were planted and produced the largest on any quarter during 2013.

Furthermore, Batu also produces two types of ornamental plants with the largest production of 8 kinds of ornamental plants produced by Batu in 2013. Two types of ornamental plants are chrysanthemums and roses. To chrysanthemum average production generated by square meter harvested area ranged from 47.70 to 63.45 stalk by quarterly, while the average production rose plants by square meter around 18 stalks on a quarterly basis.

Most small livestock population in Batu since 2011 is a rabbit. In addition, the number of broiler chickens is constantly increasing. While the smallest poultry population is Muscovy and ducks. For the production of meat and milk, producing about 261 tons of meat and about 1.827 million liters of milk production.

##### Mining and Quarrying

Mining and quarrying sector contributed to the GDP Batu an average of 0.22% on year and are in the final sequence of the other sectors.

**Table b. Mining and Quarrying Sector Analysis**

Aspect	Parameter	Meaning
LQ	<1	Non Base sector
Ps	Negative	Grow slowly in the province
Ds	Positive	Growing faster than the provincial

Source: Data processed from BPS

According to the table b, LQ analysis showed an average value of  $0.10 < 1$ , meaning belonging to the non base which the sector has not been able to meet the needs of their own regions, so as to meet the needs of other regions also can not afford and do not have the potential to be exported.

Based on the calculation of the SS, the component P has a negative value of  $-107.4634486$  that have meaning this sector specialize in the same sector and grew more slowly in East Java, but it is growing rapidly in Batu because its component D has a positive value of  $46.63255637$  so high competitiveness.

Overall, this sector is the smallest contributor to the GDP but it also includes the non bases in Batu. This is because the natural resources that could be taken only sand and stones, which are located along the Brantas River, which crosses the Batu. The number is also small so that its contribution to the economy is also very small.

### Manufacturing Sector

The manufacturing sector contributes in the GDP amounted to 7.10% Batu and have economic contribution in fourth.

**Table c. Manufacturing Sector Analysis**

Aspect	Parameter	Meaning
LQ	$<1$	Non Base Sector
Ps	Negative	Grow slowly in the province
Ds	Positive	Growing faster than the provincial

Source: Data processed from BPS

According to the table c, calculation LQ has a value  $<1$ , ie 0.28 which included non-sector basis. This means that the industrial sector is only able to meet the needs of their own regions. During the years 2010-2013 observations obtained LQ value relative but no increase / obedience.

Based on the calculation of the SS, the component P has a negative value of  $-1,114.951842$  which means that this sector specialize in the same sector and slow growth in East Java province, while component D has a positive value of  $874.3338146$  thus grown fastly in Batu.

As one tourist destination in East Java, where the industry will affect environmental sustainability Batu. But that does not mean a huge industry / medium, small and household crafts are not empowered, for his contributions were significant in shaping the GDP Batu. In the Year 2013 in Batu industry profile tends to be dominated by the formal industry. Dominance can be seen from the percentage of formal industry that reaches more than 70 percent. Formal industry in Batu in 2013 was able to absorb 255 workers. The type of industry that is established will affect close to the value of the investment made. The total investment in the industrial sector formal planting in Batu in 2013 reached 2.6 billion with a production value of 7.7 billion. The majority of the industry is located in Batu ie food, beverages, tobacco, textiles, apparel, and leather.

### Electricity, Gas and Water Sector

Electricity, gas and water supply plays a role in the formation of GDP Batu, although the contribution is very small in the amount of 1.56% ranks eighth from other sectors.

**Table d. Electricity, Gas and Water Sector Analysis**

Aspect	Parameter	Meaning
LQ	$>1$	Base Sector
Ps	Negative	Grow slowly in the province
Ds	Positive	Growing faster than the provincial

Source: Data processed from BPS

According to the table d, analysis of  $LQ < 1$  is the average of 1.17 entering the base sector. This sector is able to meet the needs of their own regions and other areas. This sector along the observation is always changing, from the year 2010-2013 continues to increase although in small quantities. Based on calculations SS, shows the component P has an average of  $-315.6518569$  which means that this sector specialize in the same sector and slow growth in East Java Province because of the negative. While positive D component so that the sector is growing faster in Batu and competitiveness increase, with the average value of  $772.9239507$ . From the analysis of these instruments, it can be concluded that the sector of electricity, gas and water are leading sectors, because it includes a sector basis in Batu. The company's contribution processing industry in the purchase of electricity from PT PLN is big enough to say, as about 5.591 million kwh come from the industrial tariffs. This means the amount of electricity purchased class industry group reached 4.40 percent of all electricity sold or fourth place after a group of households, businesses and governments. In 2013, the amount of electricity consumption by household type groups totaled 75.621 million kwh, or about 59.54 percent. The rest is bought by a group of business groups, government and social groups each consuming about 25.35 percent, 5.16 percent and 3.73 percent. One way to determine the level of welfare of the society is to see how far the percentage of

people consume water. The size of the welfare of the people can be reflected from the average water consumption by the public. In Batu volume of water in 2013 reached 2,948,893 M<sup>3</sup>. Of this amount, approximately 78.85 percent is consumed non-commercial groups, about 10.77 percent of consumed industrial group, and 3.78 percent is consumed commerce group. Meanwhile, another group the proportion is still very small.

### Construction sector

The construction sector plays a role in the formation of GDP Batu with a contribution of 1.76% and was ranked seventh.

**Table e. Construction analysis**

Aspect	Parameter	Meaning
LQ	<1	Non Base Sector
Ps	Positive	Grow fastly in the province
Ds	Positive	Growing faster than the provincial

Source: Data processed from BPS

From the table, e, observations during the four years from 2010-2013 found that the average value of LQ <1 that is equal to 0,54 entered in the non bases, although each year is always increasing. The construction sector is only able to meet the needs in their own regions.

SS of the calculation, component P at 381.9900313 that specializes in the same sector and growing rapidly in East Java as positive, whereas the D component has a value of 1424.505008 which means that this sector is growing rapidly and increasing competitiveness in Batu as a positive value also.

Batu economic growth in 2013, which reached 8.20 percent. The economic growth of Batu driven by the highest growth of all sectors of the construction sector reached 13.79 slightly increased compared to 2012. The importance of this sector in supporting the economy of Batu as it relates to the provision of buildings for example means of education, healthcare, government, and facilities other common.

### Trade, Hotel and Restaurant Sector

Based on the analysis of the trade, hotels and restaurants play an important role in the formation of GDP because of its contribution in the first place, that is equal to 47.46%.

**Table f. Trade, Hotel and Restaurant Analysis**

Aspect	Parameter	Meaning
LQ	>1	Base Sector
Ps	Positive	Grow fastly in the province
Ds	Negative	Grown more slowly than the province

Source: Data processed from BPS

From table f, the average value of LQ 1,47 > 1, which is included in the basic sector, a sector that is not only able to meet the needs of Batu area, but also other areas. This sector has always experienced a decline since 2010-2013, although in small amounts, but has a considerable contribution.

SS of the calculation, obtained at the P component of 18060.32508 so that this sector specialize in the same sector and growing rapidly in East Java as positive, while the value of -649.8251192 D component so that it grows more slowly and declining competitiveness in Batu because its value is negative.

The main supporters of the GDP ADHB Batu in 2013 were trade, hotels and restaurants reached 2419.6 billion. While the GDP at constant prices Batu trade, hotels, restaurants, reaching 873.9 billion.

Trade sector is the sector that has always existed and is grown enough potential to become the leading sectors of a region. This sector will always be activities every day by residents during the life because the trade sector is the sector that shows the interaction between people who need each other and support. In 2013, the number of businesses trading in Batu who have SIUP amounted to 157 enterprises. Of these about 116 businesses are small businesses, medium-sized businesses and the remaining 15 micro-enterprises. Although the number of micro-trading business in Batu less than 10 percent, but the views from the ability to absorb labor role can not be ignored. In the same period, the number of individuals of a legal entity is the amount of trade that has the highest License license. In 2013 the number of a legal entity registered as many as 131 individual businesses. Next CV as many as 43 businesses, PT as many as 12 businesses and the remaining legal entities cooperatives and firms.

Batu has an appeal to the investors to put their capital in the field of tourism facilities, especially restaurant and accommodation services / accommodation, such as hotels, this is evidenced by the growing number of hotels operating in this tourist town. The number of hotels in 2012 there were 473 enterprises, in 2013 into 476 enterprises. This was followed also by the increasing number of guests come to the hotel. In 2013, the number of guests as much as 1,165,104 people.

### Transportation and Communications Sector

Transport and communication contribute to the GDP amounted to 3.66% and has a sixth of the nine sectors.

**Table g. Transportation and Communications Analysis**

Aspect	Parameter	Meaning
LQ	<1	Non Base Sector
Ps	Positive	Grow fastly in the province
Ds	Negative	Grown more slowly than the province

Source: Data processed from BPS

Based on the tables, showing that the value of LQ <1 is equal to 0.47 and included in the non bases, the only sector capable of meeting the needs of Batu. From observations in 2010-2013 this sector continues to experience loss despite a slow decline.

SS calculations, shows that the component P has a fast growth specialize in the same sector in East Java for a positive value of 1972.362028, whereas it amounted -715.6746231 D component so that it grows slowly in Batu led to decreased competitiveness due to a negative value.

Transportation sector in Batu today many use public transport infrastructure by relying on a paved road to reach the 70% condition is in good condition and the rest in a state of disrepair. In the future, the Batu has a great desire to make a hanging rail as a means of public transport. Ropeway been given the geographical conditions of the city is situated on the slopes of Mt.Arjuno and Panderman. With the development of the area without disturbing agricultural land owned by public hanging rail is expected to break the bottleneck that occurs when the weekend. Meanwhile, the means of communication in Batu lots by mail, telephone, and internet

### Finance, Leasing and Business Services Sector

The financial sector, leasing and business services accounted for its contribution to the GDP amounted to 4.60% and beradapada fourth among the nine sectors that exist.

**Table h. Financial, leasing and business services analysis**

Aspect	Parameter	Meaning
LQ	<1	Non Base Sector
Ps	Positive	Grow fastly in the province
Ds	Positive	Growing faster than the provincial

Source: Data processed from BPS

According to the table h, show that L1 which has an average of 0.83. This sector includes non-sector basis, so the sector is only able to meet the needs in Batu alone, not in other areas. As far as the sector is unchanged. Based on the analysis of SS calculations show, component P specializes in the same sector and growing rapidly in East Java because of the positive value of 653.733193, and for the D component of this sector is growing faster and increasing its competitiveness in Batu because positive values 391.7324382, One important factor in supporting economic growth in the region is the availability of sufficient funds in financial institutions.

The position of the funds in the bank in Batu in December 2013 stood at 313.825 billion with a composition of 49.96 percent for the types of current accounts, 33.48 percent for this type of savings and the balance of 16.56 for this type of deposit. In developing cooperative efforts still face major constraints which are internal, namely the reliance on capital. As known, the capital anatomically as blood drive business.

The development of primary cooperatives showed an increase during this period. In 2013 was formed by 178 units of primary cooperatives with a membership of 27758. Capital cooperatives in Batu reached 41.438 billion and Business Profits reached 1.977 billion. Financial institutions other than the Bank in Batu other than pawnshops and insurance cooperatives. Customer pawn shops in Batu reached 16405 people, while insurance customers reached 10545 people.

### Sector Services

The services sector also plays an important role in the formation of GDP Batu, for his contributions in the third after the trade and agriculture sectors. Its contribution amounted to 14.18%.

**Table i. Services Analysis**

Aspect	Parameter	Meaning
LQ	>1	Base Sector
Ps	Negative	Grow slowly in the province
Ds	Positive	Growing faster than the provincial

Source: Data processed from BPS

According to the table i, the calculation  $LQ > 1$  with a value of 1.63 is included in the basic sector. This means that the sector is able to meet the needs of Batu and able to meet the needs of other areas, so the potential for export. During the observation of this sector continue to rise albeit slowly.

SS calculation, component P of-4034.903446 means that this sector specialize in the same sector and slow growth in East Java because of the negative, while the components D bernilai6876,878162 means the sector is growing faster and has increased competitiveness in Batu as positive. This sector consists of services, namely, governance, social, entertainment, culture, individuals, households in which each year continues to increase its contribution to the economy Batu.

### **Spatial Analysis Batu**

Utilization of natural resources and human resources that are owned area is not enough to develop a regional economic development. There must be other factors that support such as capital investment, infrastructure development, transport and communications, industry composition, technology, economy and trade situation between regions, funding and financing capabilities of regional development, entrepreneurship, regional institutions and development environment. The progress of the construction of an area can be seen through the number of facilities and infrastructure to support socio-economic activities. The more the number of facilities and infrastructure owned, in terms of infrastructure, the attractiveness of the area into another area to develop.

During this development in Batu impressed not only concentrated in the districts Batu that incidentally is downtown, and less spread to other districts. Tarigan (2009) states that the geographical center of growth is one location that has many amenities and services that offer attraction (pole of attraction) that cause a wide variety of businesses keen to be located there, and people love to come take advantage of existing facilities in the city the. It is evident that the Batu as downtown districts have a number of facilities to more than Junrejo districts and Bumiaji. Due to the existence of adequate facilities dialkukan then all the work that the public will more easily, efficiently, and will end on the welfare of the community. If it happens continuously enerus the mobility of existing resources in Batu would switch to other areas around the town of Batu like Blitar, Malang and Mojokerto.

Batu sub-district is a district of the most advanced in comparison with other sub-districts in the Batu Almost all economic activities supporting facilities can be found in this district. The highest functional indices showed Batu sub-district into a district which has the highest order among sub-districts in Batu.

Of the six facilities to be an indicator of the progress of the development of the means of education, health, market, terminal, industry and trade, means that most of the educational facilities in the form of schools from kindergarten to high school/vocational school. Albeit by different amounts, educational facilities can be found in every district. While the means by which at least is in the form of a maternity home health facilities, terminals, and trading business firm shape. All three of these facilities can not be found in every district. The more the number of facilities, the level of interest from a smaller facility, it can be seen from the coefficient location, and vice versa: fewer number of facilities, the level of the greater interest of the facility represented by the high value of the coefficient location.

It is undeniable that the geographical condition of each district will ultimately affect the progress of regional development. Batu sub-district is the District with the geographical conditions of land is more flat than Junrejo and Bumiaji districts. This is what causes Batu sub-district has a number of facilities more than other districts in the Batu. Different conditions indicated by Bumiaji districts, where the township has the most extensive area among other districts, but because of geographical conditions more dominant hills, slopes and plateaus, this is causing the lack of interest of society to live in the region. Under these conditions it is appropriate if the area is designated as a Bumiaji Regional Agro Industry and Forest Park. For the region Junrejo own condition almost identical to Batu districts are dominated by residential areas.

Actually Bumiaji has the potential of Natural Resources were great. That potential will be more optimal if the supporting facilities in the region are adequate. The lack of people who live there and geographical circumstances more uneven menyebabkan the region less touched by development. Such conditions explain why development is concentrated in Batu Batu subdistrict.

With the potential of existing natural attractions, the Batu seeks to harmonize development in Bumiaji by developing natural attractions located in Coban Talun Tulungrejo Bumiaji. Batu Government in cooperation with Perhutani will build eleven new facility is expected to create Bumiaji no less lagging progress with others in the District of Batu. Eleven facilities that include bridges, public facilities, pavilion, road widening, construction of guard posts, toilets, mosques, inns, where children play and adults, area camping, shop and cafeteria, multipurpose buildings, and street lighting general.

Another attempt by the government in the distribution of development is to build an alternative transportation ropeway. The cable car will connect three important areas in Batu like a town square, Markets



and also some of the sights in Batu. Cable car is expected to boost the economy in the area of Batu from various sectors. Mainly in the education sector, agriculture, and tourism.

## **V. Conclusion**

Sequentially sector basis in Batu, among others, trade, hotel and restaurants, agriculture, and services. The same specialty, trade, hotels and restaurants sector growing fast in East Java Province. While agriculture and services is growing slowly in East Java province. Agriculture and services sector had the same rapid growth in Batu. Spatial Economic conditions in Batu dominated by urban economic activity. Batu sub-district and District Junrejo geographic conditions are almost the same so that both regions have almost the same economic characteristics as well. Batu subdistrict and Junrejo formal dominated by industrial activities, as well as the trading business form of CV (*Commanditaire Vennootschap*) and PT (company).

While Bumiaji have different economic conditions. Due to the geographical conditions of the dominant hills, slopes and plateaus, sub Bumiaji earmarked for agro economic activity. The sectors for supporting the economy in Batu city, among others, agriculture; trade, hotels and restaurants; and services. All three sectors of the economy are the main support Batu city. The areas most advanced in Batu District of Batu. This district is a district with the geographical conditions that is flatter than the District Junrejo and Bumiaji. This district is also the administrative center of Batu City so in terms of the completeness of the facility is also more fulfilled than in the district Junrejo and Bumiaji.

Based on the results of research and discussion some suggestions that may be filed Expected Batu city government to develop policy models sectoral linkage especially leading sectors, namely trade, hotels and restaurants, agriculture and services. So that its backward and forward linkages to other sectors can be implemented optimally. It is proposed to develop the infrastructure that connects the three districts of Batu in order to better connectivity so that the economy faster growing evenly.

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