



Selection of Leading Service Subsectors in Order to Support Leading Sector Leaders

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Abstract: This paper aims to recommend superior services subsector should be developed to become the sector leader in the city. Election studies conducted by analyzing secondary data from the city of Surakarta GRDP data from 2013-2018 and to the Input-Output tables Surakarta 28 x 28 sector classification. Selection of services subsector featured based on the amount of the contribution and the rate of growth of services subsector in the GDP Surakarta, LQ value services subsector, value proportional shift and differential shift, the magnitude of the index linkage forward, the index backward linkages, the impact of the output (multiplier output), and services subsector income multiplier effect of Surakarta as a measure of the leading sectors. Determination of the featured services sector conducted with the preparation of a composite index of the 10 variables into account the results of the analysis are: (1) the percentage contribution of sub-sectors of services to the GDP, (2) the rate of growth, (3) the value of LQ, (4) the value of proportional shift, (5) the value of the differential shift, (6) the index of deployment, (7) index of the degree of sensitivity, (8) multiplier outputs, (9) the income multiplier effect of type I, (10) the effect of type II income multiplier. The study shows that there are 6 subsector featured services the city that has a composite index value more than the average which includes the hospitality sector, communications, land transportation, restaurants, air transportation, and wholesale and retail trade. Thus the city government should have to prioritize existing superior services subsector, develop supporting subsector as giving input on the services sector featured.

Keyword: Chitin, chitosan, deproteinas, demineralization & deacetylation.

I. INTRODUCTION

Based on the determination of the spatial structure of the province of Yogyakarta, Surakarta designated as National Activity Centers (PKN) Surakarta because of the tendency of urban development that happens quite intensive.

Spatial Plan (RTRW) Surakarta, Surakarta city functions include: central government activities, Jabar regional trade hub, the center of higher education activities, the center of cultural activities and

tourism, as well as the center of industrial activity. The first four functions on the dominant center of the activities, the basic development strategy and policy Surakarta directed at his position as city services (RTRW of Surakarta 2001-2010, p IV-1).

In an effort to carry out the functions of the city of Surakarta as services and PKN metropolitan city of Surakarta, the city of Surakarta should pay attention and consider the conditions which include human resources potential, natural resource constraints, as well as the chances and opportunities owned by the city of Surakarta. Among its problems is that the city of Surakarta has a limited land and water availability for agriculture or industry so that the services sector is the right choice.

On the other side of the city government's vision as revealed Rosada [1] as a service city, quite vague because the service sector that is highly variable. Because it needs to be determined beforehand featured services subsector that can promote the growth perekonomian Surakarta city and the ability to compete within the scope of the wider economy in Yogyakarta.

The core problem is that their services subsector election winner can be pushed into the city of Surakarta services simultaneously metropolitan centers of national activity. Also featured services subsector dilihat choose from impacts and linkages with other sectors.

II. LITERATURE REVIEW

Tumenggung [2] impose limits that featured sector is the sector that have a comparative advantage (comparative advantages) and competitive advantage (competitive advantages) with similar products from other areas of the sector and be able to give great benefits. While Mawardi [3] imply that the seed sector is the sector that has added value and a great production, has a large multiplier effect on other economies, and has a high demand, both the local market and the export market. The service sector by BPS classified as tertiary sector groups are sectors that are not produced in a physical form.

Location Quotient theory as stated Bendavid [4] are used to analyze and determine the diversity of the economic base (the base sector services). From this analysis can be identified subsectors what services it can be developed for this purpose and the purpose of the supply needs of the sector locally, so subsector said could potentially be a major priority sector in economic development planning. The formula used in the study are:

$$LQ_i = \frac{s_i S_i}{n_i N_i} \dots\dots\dots (1)$$

Where:

LQ LQI = coefficient of sector i

si = The output value of the sector i Surakarta

Si = i sector output value of Yogyakarta province

ni = total output of sector i Surakarta

Ni = total output of sector i of Yogyakarta province

In the calculation model predetermined criteria and range of services as follows: $LQ > 1$, meaning that the sector has the ability to meet the needs of its own territory, provided an opportunity to export to other regions. $LQ = 1$, the sector is only able to meet the needs of the area itself. $LQ < 1$, the sector has not been able to meet the needs of the area itself.

Between sectors can be seen from the multiplier effect (multiplier effect) which can lead to activity in other sectors, and can be formulated as follows:

$$r_i = \frac{E_{ai}}{E_{bi}} \dots\dots\dots (2)$$

where r = the multiplier effect, E_{ai} = non base sector activity, and E_{bi} = sector activity base.

Shift and share analysis is used to see a shift in the structure of activity in a particular location compared to a reference (with extended coverage) at two points in time. This analysis is able to provide a picture of the reasons for the growth of an activity in a region.

The result of the shift and share analysis gives an overview of performance activity in a region to the proportional component of the shift and shift differential components. Shift proportional component indicates whether the growth of economic activity in the sector is faster or slower than the growth of

the region's economic activity as a whole. The component is positive implies that the development of its activities more quickly than the average. Proportional shift formulated as follows:

$$PS = \left[\frac{\Delta S_{i,t-1,t}}{S_{i,t-1}} - \frac{\Delta S_{t-1,t}}{S_{t-1}} \right] R_{i,t-1} \dots\dots\dots (3)$$

While the shift differentials explain the level of competition for an activity / specific sector compared to the total growth of the sector in the region. A positive value indicates that the region's economic activity in the sector competitive. Differential shift formulated as follows:

$$DS = \left[\frac{\Delta R_{i,t-1,t}}{R_{i,t-1}} - \frac{\Delta S_{i,t-1,t}}{S_{i,t-1}} \right] R_{i,t-1} \dots\dots\dots (4)$$

In regional economics, input-output analysis is used to analyze an area or relationship between two or more regions. This method is the most widely accepted, even Richardson [5] suggests not only to describe the industrial structure of the economy, but also to predict these changes.

Input-Output is basically a statistical description in the form of a matrix that presents information about the transactions of goods and services and the linkages between sectors. Input-output tables used are input-output tables total transactions on the basis of producer prices of Surakarta in 2000 and the input-output tables of domestic transactions on the basis of producer prices of Surakarta in 2000.

The composite index can be constructed by using factor analysis. The purpose of building the composite index is to measure the extent of deviation from the mean value. Models built composite index are:

$$I = c_1 \left(\frac{X_1 - \bar{X}_1}{s_1} \right) c_2 \left(\frac{X_2 - \bar{X}_2}{s_2} \right) \dots \dots \dots (5)$$

To compile the index featured services subsector Surakarta, used 10 of the relevant variables, namely:

1. The average rate of growth of services subsector, measured in per cent (X1).
2. Great contribution in the GDP services subsector Surakarta, measured in per cent (X2).
3. The ability of the sector to meet the needs of the market (sector diversity base for the service sector) showed with LQ (X3).
4. Ability services subsector activity growth relative to the growth of economic activity of the region as a whole as indicated by the shift proportional value, measured in units of million rupiah (X4).
5. The performance capabilities of competitive services subsector in the city compared to the Yogyakarta region, as indicated by the shift differential value, measured in units of million rupiah.
6. The relative effect of the increase in output of services subsector to increase output of other sectors, as indicated by the spread of the power index value (X6).
7. The relative effect of an increase in output of all sectors to the concerned services subsector indicated by an index value of the degree of sensitivity (X7).
8. Effect of final demand of the sector in total economic output (output multiplier) (X8).
9. Effect of income multiplier type I (X9).
10. Effect of type II income multiplier (X10).

Because units of measurement X1, X2, ..., X10 is not the same, then the correlation matrix used to perform factor analysis.

III. METHODOLOGY

The order of the stages of study methodology is as follows:

1. Seeing the economic performance of the existing condition of Surakarta to understand the structure of the economy, function and potential as well as the policy direction of Surakarta.
2. Conduct a review of the circumstances and the performance of the services sector of Surakarta and reviewing the theory of the leading sectors.
3. Conduct studies featured services subsector election Surakarta methods:
 - a. Analysis of the GDP growth rate and contribution of sectors. The goal is to know how big the contribution made to GDP services subsector Surakarta.

- b. Location Quotient (LQ), used to determine the diversity of the economic base and see the services sector's ability to meet market needs.
 - c. Shift and share analysis, used to see Which services subsector that can be seeded seen from the ability to compete for services subsector activities in the city of Surakarta dynamically (differential shift) and changes in the growth of its activities in a wider area coverage in Yogyakarta (proportional shift).
 - d. Input Output Analysis of Surakarta in 2000, to see the linkages between sectors, looking forward linkage index (Forward Linkage) or the sensitivity and the index backward linkages (Backward Linkage) or the deployment of services subsector Surakarta. Also to calculate the multiplier output and income multiplier effect.
 - e. Determining the featured services subsector Surakarta based preparation of the composite index taking into account 10 variables.
4. Provide conclusions on the results of the study and provide recommendations to support the development of the services sector in the city of Surakarta as city services.

IV. ANALYSIS, RESULTS AND DISCUSSION

The study results analysis of the data can be written as follows:

1. From the analysis of the GDP by sector, subsector of services that can be seeded based on the analysis of the communications sector growth rate is the average rate of growth (11.86%), land transport services (5.93%), and building rental services (4.73%) , If seen from a great contribution to the GDP that can be seeded services subsector is wholesale and retail trade sector with an average of 27.95%.
2. Of Location Quotient indicate that there are 11 sub-sectors of services that serve as the basic sector in the economy of the city of Surakarta, which has a value of $LQ > 1$ ie wholesale and retail trade sector (1.97), hotel services / accommodation (7.08), transportation services land (1.5), air transport services (9.46), supporting services transport (2.33), communication services (4.85), a financial institution services (2.99), service companies (1.47), public administration (1.91), social services (1.65), and amusement and recreational services (1.62).
3. Of shift-share analysis, there are two services subsector that has a value proportional shift and shift differential positive that the communication sector and building rental sector. It therefore means that these sectors have an important role in the economy of the district (contribution tends to rise), and rose against the economic system of Yogyakarta.
4. Based on the analysis of power distribution, which can be seeded services subsector is the sector with the index $\square_j > 1$ which services the hospitality / lodging (1.3), communication (1.27), the restaurant / diner (1.2), land transportation (1.19) air transport (1.21), and the supporting services transport (1.06). It therefore means that such services subsector increased output will cause a larger increase in other sectors.
5. Based on the analysis of the degree of sensitivity index, which can be seeded services subsector is the sector with the index $\square_i > 1$ which is the communications sector (2.02), wholesale and retail trade (1.65), the hospitality / lodging (1.39), the restaurant / diner (1.13), and land transportation services (1.39). It therefore means that these five sectors will be bigger increase its output (very sensitive) due to increased output of other sectors.
6. Based on the analysis of the output multiplier, which can be seeded services subsector is the subsector with the value of the multiplier outputs a high output based on the transaction total. These include the hospitality sector (2.8), communication (2.74), air transport (2.61), restaurants (2,59), land transport (2.57), and the supporting services transport (2,3).
7. From the analysis of the income multiplier effect of type I shows that the services subsector that can be seeded is a hotel services / accommodation (4.64), communications (4.2), and overland transportation (3.82). The figure shows the effect of the revenue created by the services sector in the short term. While the analysis of the effect of type II income multiplier shows that the service sector of hospitality / lodging occupies the highest score (7.7). This means that the effect of the revenue created by the services sector for the long term would benefit the city of Surakarta because it can increase local revenue.

8. From the results of the preparation of the composite index shows that there are 6 subsector of services in the city that can be seeded as shown in Table 1. ie hospitality (171), communication (166.2), land transportation (142.57), restaurant / diner (129 , 67), air transport (127.53), sizzle and retail trade (111.03)

Table 1. Score Composite Index Services Subsector Surakarta

Services subsector of Surakarta	Value Composite Index	Classification	Rank
Wholesale and retail trade	111.03	High	6
Hotel	171	High	1
Restaurant	129.76	High	4
Land Transportation	142.57	High	3
Air Freight	127.53	High	5
Transport Support Services	99.6	Low	7
Communication	166.2	High	2
Financial institutions	55.68	Low	12
rental Building	59.15	Low	13
Company services	83.35	Low	8
General government	55.49	Low	14
Social services	73.66	Low	9
Amusement and Recreation Services	63.9	Low	10
Other (Individuals and Households)	61.13	Low	11
Average	100		

V. CONCLUSION

From the analysis and discussion can be concluded that the services subsector seed should be prioritized in order to promote the city of Surakarta as the services that the hospitality sector, the communications sector, the sector of land transport, sectors diner / restaurant sector, air transport, and the sector of wholesale and retail trade. It thus based on the preparation of a composite index that there are 6 subsector of services in the city that can be seeded namely hospitality (171), communication (166.2), land transportation (142.57), restaurant / diner (129.67), air freight (127.53), sizzle and retail trade (111.03).

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