

# LOCAL ECONOMIC PLANNING STRATEGY BASED ON SECTORAL ADVANTAGED AND POTENTIAL IN EASTERN JAVA PROVINCE

Oleh  
**Rossanto Dwi Handoyo\***

## *Abstract*

*Legislation act no. 22/1999 about local government management and act no. 25/1999 about the balancing central and local government budgeting makes local authority to improve and widen their local development planning. The consequences of getting wider of local government planning to manage their own local potential capacity makes all initiative planning must come from local government themselves. The central government now has nothing to do with this. Now, the question is, are they well prepared to take this consequences?*

*The purpose of this paper is to develop regional economic planning through sectoral oriented development model in Eastern Java Province. This paper uses dynamic Input-output model presented by Leontieff (1982), has been widely applied in many domestic and abroad researchers. As we know that Input-output model is static model. But, nowadays by simulating final demand components through the change in consumption, investment, government expenditure and net export, in input-output tabel, we can make it dynamic. In this paper, we make a simulating final demand by changing every single sector in Eastern Java Province 2000 input-output tabel using 10 percents. This paper also aims to figure out the economic problem facing East Java Province. The Disparities between Kabupaten/Kota can be seen from magnitude of economic variables, such as economic growth, percapita income, poverty level, and Human Development Index for each Kabupaten/Kota.*

*This paper finds that industrial sector has the highest both forward and backward linkages. It means when the local government gives the policy which can improve the output sectoral will lead another sectors grow much faster than ever, especially fertilizer, pestiside and chemical industries; paper and stuffs from paper industries; unspecified things industries; non metal mineral things and cements industries; machines, electrical tools and shipment industries; iron and steel industries. Secondly, Sectors in Eatern Java that saved foreign exchange, independent and high value added are other aggricatural plant (sugar, coconut, clove, tobacco, coffee, tea, crude palm, rubber, and etc); fishery; poultry and its output; mining; food plants; food, beverages and tobaccos industries; textile and garment industries. Thirdly, five sectors that can speed up economic growth faster are fertilizer and pesticide industries; chemical industries; rubber and plastics industries; paper industries and mineral things non metal industries. Fourthly, the sectors that able to generate highest income multiplier are all sub sectors in aggricatural sector and local government and defense. Finally, the sectors that able to generate highest employment multiplier are individual and household services sectors; local government and defense; trading sector; food and paddy plant sectors.*

*Keywords: Local Sectoral Development Planning, Dynamic Input-Output Model, Final Demand Simulation Changing.*

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\* The Author is the lecturer in Economic Faculty of Airlangga University

## 1. Introduction

National development has great impact to local development, because the local as integral part of a nation. Indonesia is a unity nation, in which the development planning include national and regional planning. Industrial growth development oriented, for instance, can cause industrial sector become more increasing and multiplying throughout the national and local level.

The regional decentralization started in 1999 in Indonesia occurred in the background of political and economical instability. The background of the released of Law no 22 and 25/1999 is important in understanding the context of the decentralization process.

In an effort to meet regional demands for greater local autonomy and a greater share of income generated from local natural resources, in May 1999 the Habibie administration secured the passage of Law No. 22/1999 on Regional Political Autonomy and Law No. 25/1999 on Fiscal Decentralization.

Law 22 set up guidelines for the election of governors, district heads (regents), and mayors, all of whom were in the past appointed by Jakarta. It also ordered that all central government functions except foreign policy, defense and security, justice, monetary and fiscal affairs, and religious affairs be fully devolved to the local level. Thus local government will have control over a broad range of areas, including education, health, public works, investment, domestic trade and industry policy, labor, agriculture, and the environment.

Law No. 25/1999 on regional fiscal balance reverses the extreme centralization of Soeharto's New Order when central government spending accounted for over 80 percent of total government spending. It mandates that a minimum of 25 percent of domestic revenue be transferred to local governments through a budget grant mechanism called the General Allocation Fund (the Dana Alokasi Umum, or DAU). In addition, the producing localities, their host provincial governments and other local governments within that province will receive 15 percent of oil, 30 percent of natural gas, and 80 percent of mining, fishing, and forestry net after-tax revenues. All regions will also receive the bulk of centrally collected property tax revenues.

In theory, it is stated that 'good' decentralization process should be timely and sequenced properly, the policy sequencing is important to make decentralization 'work' or effective. The term 'good' and 'workable' decentralization refers to the ideas and goals of decentralization and the respective laws or policies to implement them (Bayhaqi, 2005).

Many literatures have stated the ideal goals or objectives of decentralization. To quote one of them, the main goal of decentralization is to make government performs better, especially in the level of regional government. The main goal is to make government that is more honest, efficient, and responsive at providing basic public services to their citizens. It assumes that the structure of government would determine the quality of governance (Treisman, 2000).

Bahl (2003) mention several key characteristics can be used to identify countries that are likely to decentralize, which are:

1. Geographically, they tend to be large in population as well as in land area; and they tend to be diverse in terms of culture and religion.
2. Countries that decentralize also tend to be relatively wealthy: the higher the income, the more likely a country is to decentralize.
3. A country that faces a substantial risk of civil unrest (or, alternatively, risk of war with its neighbors) will not decentralize so readily.

It must be remembered though, that as we speak of 'government', it refers to three tiers of government in the Indonesian context, the central, the provincial and the local (kabupaten) government. As such, decentralization actually could bring different impacts to different tiers of government and society.

Decentralization, on the other hand, could also be referred to many concepts. Bird (1993: 208) described decentralization as "whatever the person using the term wants to mean". The Law No 22/1999 and 25/1999 in Indonesia, divide decentralization into two categories, Law 22 concerns administrative decentralization, while Law 25 concerns financial administration.

In terms of financing, the local government with rich natural-resources seem to have little objection for the fiscal decentralization arrangement, since their budget allocation would increase in absolute or relative term. However for local government with limited tax base (usually in the rural areas) and only small amount of natural resource available, seems to face difficulties in coping with decentralization.

As the the changing of new international economic order become more integrated, local demand to move forward the economic potentials to compete with another nations become more increasing. New paradigm in term of international economic which is becoming more multilateralism particularly free trade area for developing countries in 2020, the opportunity of many product development to be marketable in global market become more opened as well as the new challenging faced by local industrialist. For example, to breakthrough the chinese market is not easy for the new competitor. The Indonesian interpreneurs have to compete not only with the chinese products themselves which is very cheap, but also with the other country enter into.

Eastern Java province faces the common problem. It turns out that the fertility of farming land in East java can not produce the competitive agricultural commodities in global market. Otherwise, foreign agricultural commodities flooded the eastern Java market. The same reason happens to other economic sectoral.

This paper aims to develop regional economic development model using dynamic input-output model to decide the interindustrial linkages sector, local output income and employment multiplication sectors. Dynamic input-output regional economic model is performs by simulating due to changing of final demand, in this circumstances, it is assumed to be ten percentages. This paper also attempt to draw the economic problem between Kabupaten/Kota in East Java Province.

## **2. literature Survey**

### **2.1. Local Income and Employment Determinant**

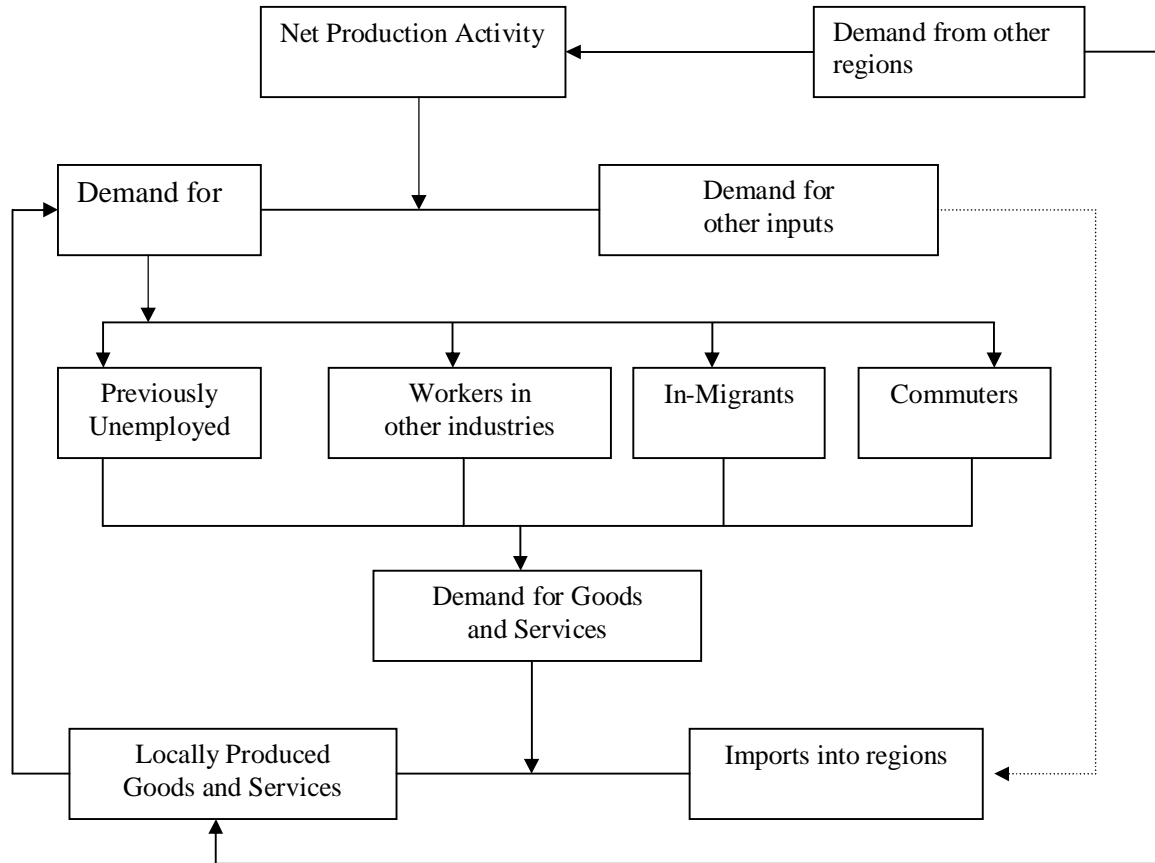
Numerous attempts have been made to model the underlying economic structure of regions in order to gain a better understanding of the factors determining regional economic variables such as income and employment (Armstrong and Taylor, 2000). Regions differ considerably in their geographical and economic size, demographic characteristics, industry mix, labour force skills, age of plant and machinery, trading links with other regions, consumption patterns and many other fundamental economic characteristics. Nevertheless, It is possible to construct models, which can be used to explain the determinants of income and employment in all types region regardless of the vast differences between them. Two main routes have been taken, one based on Keynesian income-expenditure approach to modelling the national economy, and the other based on input-output analysis.

At the very heart of all regional economic models is the notion of internal feedback through input-output linkages between economic agents such as firms and households. Firms are linked to other firms through the goods and services they buy from each other. Households sell their labour services to firms and buy goods from them. These linkages occur both within region and between regions.

The way in which an injection of expenditure works its way through a regional economy can be demonstrated by considering the impact of new productive activity. Suppose a new plant is to be built in a particular locality. A model can be constructed to estimate the effect of the new plant on local income and employment. This includes not only the direct impact of the plant itself on local income and jobs, but the indirect and the induced effect as well. Indirect effects occur in industries supplying component and other inputs, such as transport and commercial services, to the new plant. Induced effects occurs as those employed in the new plant spend some of their income on locally produced goods and services.

A Simplified illustration of the way in which new production activity can be expected to affect local economy is demonstrated in figure 1.1. The new plant requires labour, this may be obtained in various ways: by attracting existing workers from other industries in locality; by employing unemployed workers, by inducing person not currently in the labour force to join it; and by attracting labour from other localities. The impact of the new plant spread to other local industries both through direct purchases from other industries in the locality and through additional purchases of locally produced goods and services, which result from the increase in income and employment. Further impact occur due to feedback effect. Industry producing for local consumption require more labour and more input from the construction industry in order to expand capacity to meet the extra demand for their own output. This multiplier process continues until the initial injection (I.E. the additional output produced by the new plant) has worked its way through the local economy. It is useful to take of this happening as consecutive rounds of expenditure assuring through attempt until the multiplier effect works its way through the the system, but in practice the expenditure effects are likely to be extremely complex with one round overlapping another (Armstrong & Taylor, 2000)

**Figure 1.**  
**The Impact of New Production Activities On**  
**Regional Labor, Output dan Import**



Source: Armstrong, Harvey dan Taylor, Jim, 2004. *Regional Economic and Policy, Second Edition*

### 2.2 Regional Multiplier Analysis : The Keynesian income-expenditure

The Keynesian income-expenditure approach to modelling the regional economy is virtually identical the simplest over economy version of Keynesian income-expenditure model, the only differencec being the old expenditure variable refer to the regional (or local) economy instead of the nation. The models begin with the familiar income-expenditure identity

$$Y = C + I + G + X - M \quad (1.1.)$$

where: Y = regional Income, C : regional consumption, I = regional investment

G = Government expenditure; X = Regional Export M = Regional Import

Investment, Government expenditure and export are all assumed to be exogenously determined (denoted by a zero subscript):

$$I=I_0, \quad G=G_0, \quad X=X_0 \quad (1.2.)$$

Consumption and import expenditure are assumed to be partly exogenous and partly dependent on disposable income.

$$C=C_0 + c DY. \quad (1.3.)$$

$$M=M_0 + m DY. \quad (1.4.)$$

Where DY is disposable income and is given by

$$DY = Y-tY \quad (1.5.)$$

where t is the rate of income tax on substituting equation (1.2)-(1.5) into the regional income – expenditure identity (1.1.), we obtain

$$Y = k(C_0 + I_0 + G_0 + X_0 - M_0) \quad (1.6.)$$

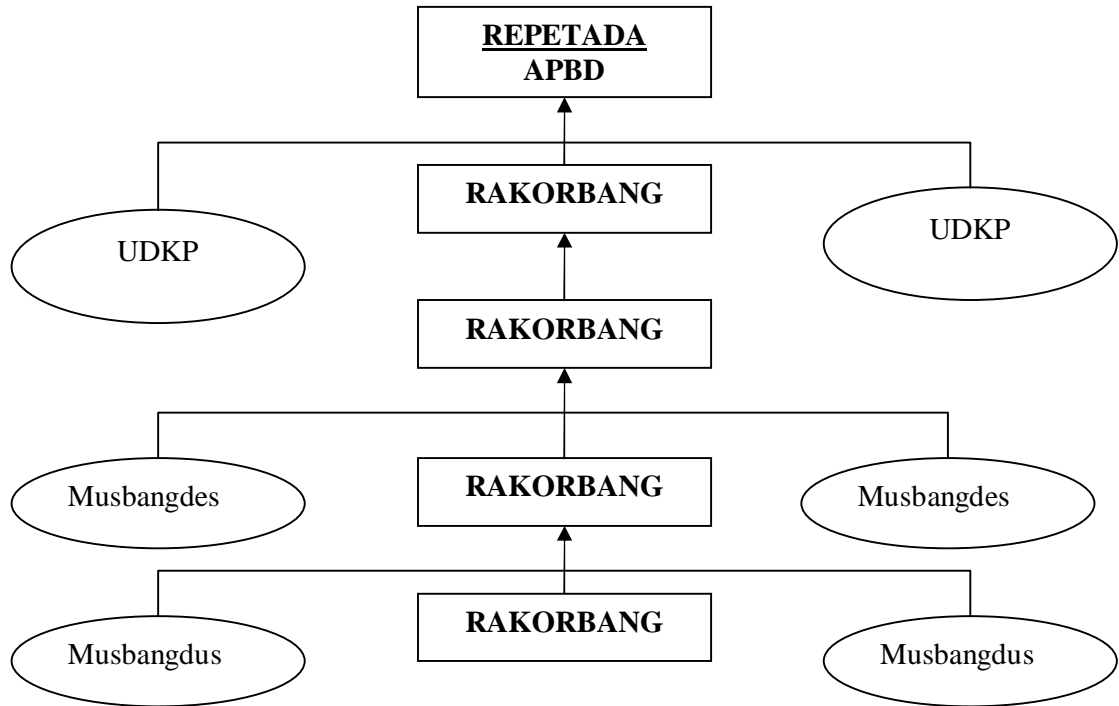
where k is the regional multiplier and is given by

$$k \frac{1}{1-(c-m)(1-t)} \quad (1.7.)$$

#### 4.1. Development Planning in Decentralized Era.

The general goals of Indonesia's fiscal decentralization program are to help: (1) increase national allocative and regional government operational efficiency, (2) meet regional aspiration, improve overall fiscal structure, and mobilize regional and therefore national revenues; (3) enhance accountability, increase transparency, and expand constituent participation in decision making at the regional level; (4) mitigate fiscal disparities among regional government and assure the delivery of basic public services to citizens across the country; (5) ameliorate social welfare of Indonesia; (6) support macro-economic stability (Sidik&Kadjatmiko, 2002).

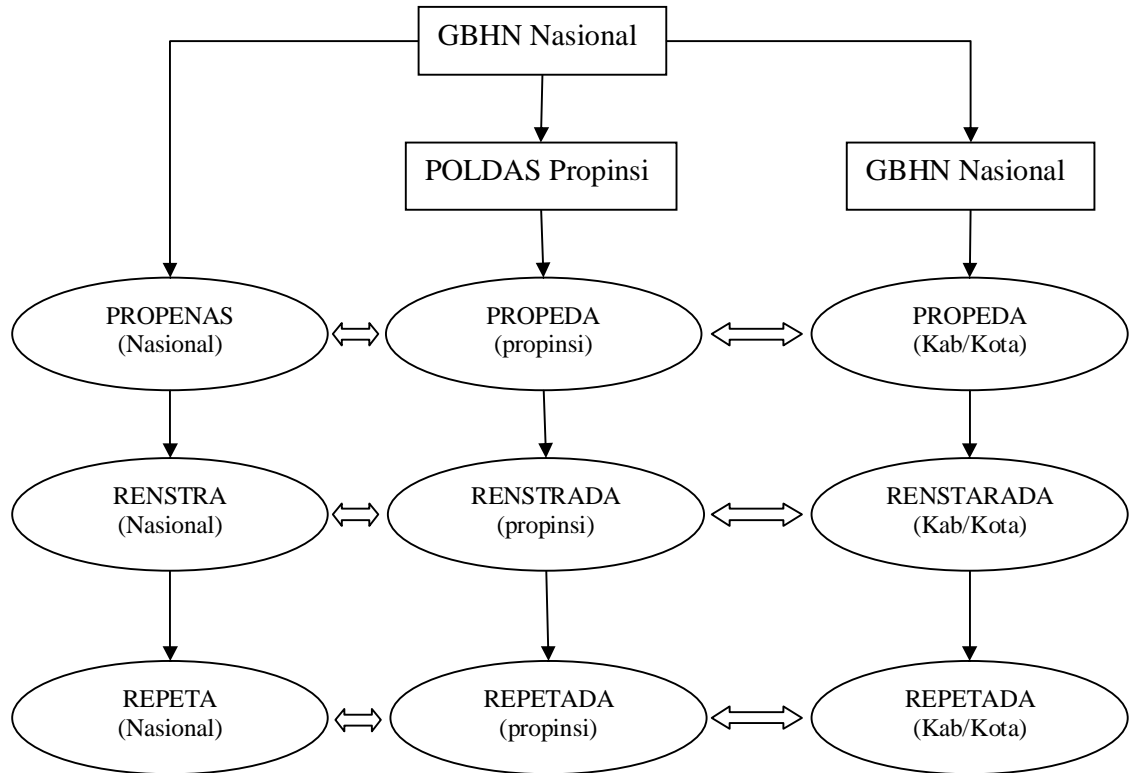
In the decentralized era, the development planning consist of bottom-up process and top down process. Bottom up process is the consutation process in which every single government level attempt to arrange the annual development proposal draft based on the project proposal proposed by the lower level of the government. To begin with, This process start from the village development meeting (Musbangdes) lead by the chairman of the village and presented by Local representative Body (BPD), Non-government organizations, and the regency representative (see figure 2). The main purpose for this meeting is to arrange project proposal proposed to higher level of governance (regency/kecamatan). Further more, project proposal from the village meeting will be analyzed in the regency meeting held by Development working local unit (UDKP= Unit Daerah kerja Pembangunan). In such meeting, all the project proposals will be analyzed, which one is not efective to implement, overlapping and not priority and also add more project came from the meeting. Then, those project proposals will be discussed in the development coordination meeting (RAKORBANG) in the local level until the province level.



**FIGURE 2**  
***BOTTOM UP DEVELOPMENT PLANNING***

Source: Kuncoro (2004)

Meanwhile, top down process start from the GBHN discussion by MPR follow with the arragnemet of National Development Program or PROPENAS (Program Pembangunan Nasional) held by central governement to give the direction of national goals, policies and national development program. Development Strategic Plan (Rencana Stratejik Pembangunan or RENSTRA) is arranged based on PROPENAS and followed by arranging annual national development plan (REPETA) to establish the priority of national development budget. All local government have the obligations to arrange basic development pattern (POLDAS). Based on POLDAS, local governments also have to prepare Local Development Program (PROPEDA) for the next five years through Local Strategic development planning (Rencana Pembangunan Stratejik Daerah or RENSTRADA) and Annual local development Planning (Rencana Pembangunan Tahunan Daerah or REPETADA) that suit to PROPENAS, RENSTRA, and REPETA in national level.



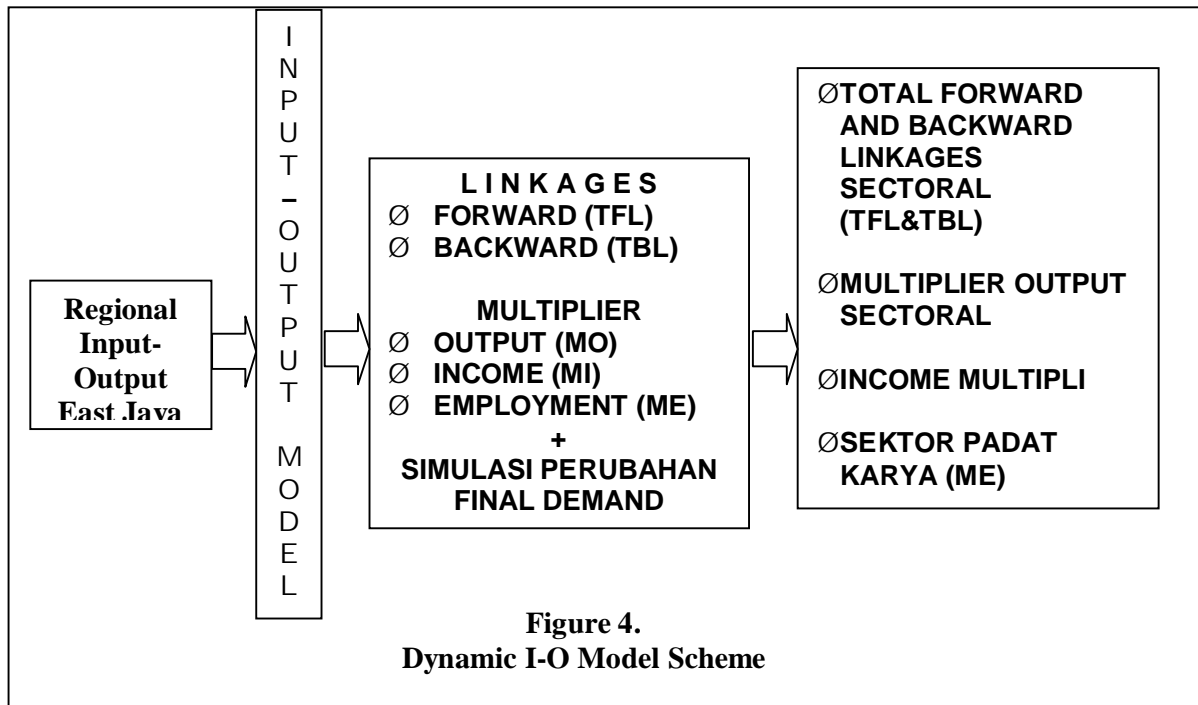
**FIGURE 3**  
**TOP DOWN DEVELOPMENT PLANNING**

↔ = Consultation

Source : Usui and Alisjahbana (2003)

### 3. Economic Structure Based On Input-Output Approach

Input-output model is the method is used sistematically to measure intersectoral linkages in the complex economy. Regional Input-output dynamic model is used for local development planning because the characteristic of regional economy differs from national economy. This model shows the dynamic technical relationship (changing the final demand) that one sector uses another sector as the input, and vise versa, the output of local sector will be used by another sector as input. Despitefully, Input-output model also explain how much output of one sector is used for direct consumption and for primary input, such as wage, and etc. Through input output model can be explored analysis such as: interindustrial linkages, output multiplier, income multiplier and employment multiplier sector analysis. Input-output analysis scheme can be drawn as seen in figure 4.



The analysis of economic structure in east java province with input output approach use 2000 I-O tabel from Statistic Centre Body of East Java Province. The 19x19 matrix I-O tabel need to expand by disaggregating table to 29 x 19 matrix and then simulating the final demand about 10 pcentages. (We used software developed by Inter University Center of Gadjah Mada University). I-O table gives a useful information, both as economic development evaluation and as a refference to make comprehensive macro economic development planning (For detail information about the sectoral name can be seen in 2000 I-O East Java Province table).

**A. Total Backward Linkage (TBL)**

According to total backward linkage, the big ten sectorals are(see table 1): (1) fertility and pesticide Industry, Chemical Industry, and rubber and plastic goods Industry; (2) paper, paper and cartoon stuffs Industry; (3) Unclassified goods industry; (4) mineral non metal industry and cement industry; (5) Machinery, electrical tools and equipment industry and non ship transportation industry; (6) yarn industry, textile and garment industry; (7) oil refinery; (8) construction; (9) bamboo, wood and cane industry; (10) iron and steel industry, non metal industry and metal industry.

**B. Total Forward Linkage (TFL)**

Meanwhile the best ten sectors that have total forward linkages are (see table 1): (1) transportation and communication; (2) fertility and pesticide industry, chemical industry, rubber and plastic stuff industry; (3) trade; (4) iron and metal industry, non metal industry, metal industry; (5) mining and exploration; (6) livestock and its goods; (7) oil refinery; (8) paper industry, paper goods and cartoon industry; (9) Electrical, gas and watter supply; (10) forestry.

The sectors that have total forward and backward linkage as mentioned above, are (1) fertility and pesticide industry, chemical industry, rubber and plastic stuff industry; (2) paper

industry, paper goods and cartoon industry; and (3) oil refinery. It means that those sectors be the potential sectors which lead to pull the other sectors (with the high TBL coefficient) and also to push the other sector (with the high TBL coefficient) to increase the output significantly.

**D. Ekspor (X)**

Sectors that result highest reserves for the east java province are (1) food, beverages and tobacco; (2) trade; (3) yarn industry, textile and garment industry; (4) bamboo, wood and cane industry; (5) iron and metal industry, non metal industry, metal industry; (6) paper industry, paper goods and cartoon industry; (7) fertility and pesticide industry, chemical industry, rubber and plastic stuff industry; (8) mineral non metal industry and cement industry; (9) hotels; (10) Machinery, electrical tools and equipment industry and non ship transportation industry.

**E. Impor (M)**

Sectors that result highest import for the east java province are (1) iron and metal industry, non metal industry, metal industry; (2) Machinery, electrical tools and equipment industry and non ship transportation industry; (3) fertility and pesticide industry, chemical industry, rubber and plastic stuff industry; (4) food, beverages and tobacco; (5) oil refinery; (6) yarn industry, textile and garment industry; (7) other agricultural plant; (8) paper industry, paper goods and cartoon industry; (9) hotel; (10) mining and exploration. Industrial sectors that mentioned above still can not fulfill their own needs and still content import raw materials.

**F. Nilai Tambah (Value Added)**

Sectors that have highest value added are (1) local government and defence sector; (2) paddy; (3) food plant; (4) fishery; (5) forestry; (6) Financial institution, construction, and company services; (7) Othe society services; (8) Other agricultural plant; (9) livestock and its good; (10) transportation and communication.

**TABLE 1**  
**I-O MODEL ANALYSIS RESULT**

<b>No.Urut</b>	<b>TBL</b>	<b>No-IO</b>	<b>TFL</b>	<b>No-IO</b>	<b>SSR</b>	<b>No-IO</b>	<b>X-LN</b>	<b>No-IO</b>	<b>M-LN</b>	<b>No-IO</b>	<b>VA</b>	<b>No-IO</b>
<b>1</b>	2.5152	<b>39,40,42</b>	3.4353	<b>15</b>	1.0000	<b>1</b>	0.1836	<b>8</b>	0.1749	<b>45,46,47</b>	0.9524	<b>17</b>
<b>2</b>	2.3818	<b>38</b>	3.1439	<b>39,40,42</b>	1.0000	<b>2</b>	0.1699	<b>13</b>	0.1720	<b>48,49</b>	0.8743	<b>1</b>
<b>3</b>	2.3625	<b>50</b>	2.8167	<b>13</b>	0.8256	<b>3</b>	0.1619	<b>35,36</b>	0.1660	<b>39,40,42</b>	0.8567	<b>2</b>
<b>4</b>	2.3042	<b>43,44</b>	2.7529	<b>45,46,47</b>	0.9998	<b>4</b>	0.0696	<b>37</b>	0.1544	<b>8</b>	0.8377	<b>6</b>
<b>5</b>	2.2615	<b>48,49</b>	2.2797	<b>7</b>	0.8510	<b>5</b>	0.0622	<b>45,46,47</b>	0.1256	<b>10</b>	0.8191	<b>5</b>
<b>6</b>	2.2504	<b>35,36</b>	2.0868	<b>4</b>	1.0000	<b>6</b>	0.0600	<b>38</b>	0.0552	<b>35,36</b>	0.7455	<b>16</b>
<b>7</b>	2.0626	<b>10</b>	2.0618	<b>10</b>	0.8847	<b>7</b>	0.0566	<b>39,40,42</b>	0.0387	<b>3</b>	0.7309	<b>98</b>
<b>8</b>	1.9602	<b>12</b>	1.9967	<b>38</b>	0.8618	<b>8</b>	0.0563	<b>43,44</b>	0.0264	<b>38</b>	0.6912	<b>3</b>
<b>9</b>	1.8837	<b>37</b>	1.7517	<b>11</b>	0.7708	<b>35,36</b>	0.0410	<b>74</b>	0.0164	<b>74</b>	0.6376	<b>4</b>
<b>10</b>	1.8684	<b>45,46,47</b>	1.6938	<b>5</b>	0.9531	<b>37</b>	0.0366	<b>48,49</b>	0.0155	<b>7</b>	0.6222	<b>15</b>
<b>11</b>	1.8155	<b>74</b>	1.6765	<b>8</b>	0.8629	<b>38</b>	0.0363	<b>98</b>	0.0122	<b>98</b>	0.6109	<b>95,96,97</b>
<b>12</b>	1.7610	<b>11</b>	1.6098	<b>50</b>	0.3863	<b>39,40,42</b>	0.0198	<b>50</b>	0.0108	<b>43,44</b>	0.5531	<b>94</b>
<b>13</b>	1.7582	<b>8</b>	1.5261	<b>16</b>	0.8904	<b>43,44</b>	0.0184	<b>3</b>	0.0095	<b>15</b>	0.5464	<b>7</b>
<b>14</b>	1.7347	<b>73</b>	1.4924	<b>35,36</b>	0.2103	<b>45,46,47</b>	0.0123	<b>7</b>	0.0081	<b>50</b>	0.4858	<b>12</b>
<b>15</b>	1.5943	<b>7</b>	1.4710	<b>48,49</b>	0.4577	<b>48,49</b>	0.0050	<b>5</b>	0.0058	<b>37</b>	0.4853	<b>13</b>
<b>16</b>	1.5064	<b>15</b>	1.3902	<b>43,44</b>	0.5962	<b>50</b>	0.0050	<b>73</b>	0.0052	<b>73</b>	0.4716	<b>45,46,47</b>
<b>17</b>	1.4827	<b>98</b>	1.3885	<b>3</b>	0.0264	<b>10</b>	0.0047	<b>15</b>	0.0026	<b>5</b>	0.3643	<b>11</b>
<b>18</b>	1.4639	<b>13</b>	1.3426	<b>2</b>	1.0000	<b>11</b>	0.0003	<b>4</b>	0.0005	<b>94</b>	0.3527	<b>73</b>
<b>19</b>	1.4082	<b>95,96,97</b>	1.2607	<b>37</b>	1.0000	<b>12</b>	0.0003	<b>94</b>	0.0001	<b>16</b>	0.3452	<b>74</b>
<b>20</b>	1.3727	<b>4</b>	1.2211	<b>74</b>	1.0000	<b>13</b>	0.0001	<b>16</b>	0.0000	<b>4</b>	0.3256	<b>10</b>
<b>21</b>	1.3536	<b>16</b>	1.2158	<b>98</b>	0.8986	<b>73</b>	0.0000	<b>10</b>	0.0000	<b>95,96,97</b>	0.3153	<b>48,49</b>
<b>22</b>	1.2784	<b>3</b>	1.1863	<b>73</b>	0.9505	<b>74</b>	0.0000	<b>95,96,97</b>	0.0000	<b>1</b>	0.2970	<b>8</b>
<b>23</b>	1.2226	<b>1</b>	1.1499	<b>6</b>	0.9730	<b>15</b>	0.0000	<b>1</b>	0.0000	<b>2</b>	0.2958	<b>50</b>
<b>24</b>	1.1880	<b>6</b>	1.1386	<b>1</b>	0.9994	<b>16</b>	0.0000	<b>2</b>	0.0000	<b>6</b>	0.2904	<b>43,44</b>
<b>25</b>	1.1802	<b>2</b>	1.1101	<b>95,96,97</b>	1.0000	<b>17</b>	0.0000	<b>6</b>	0.0000	<b>11</b>	0.2832	<b>37</b>
<b>26</b>	1.1674	<b>94</b>	1.0221	<b>94</b>	0.9998	<b>95,96,97</b>	0.0000	<b>11</b>	0.0000	<b>12</b>	0.2579	<b>35,36</b>
<b>27</b>	1.0826	<b>5</b>	1.0000	<b>12</b>	0.7423	<b>94</b>	0.0000	<b>12</b>	0.0000	<b>13</b>	0.2577	<b>38</b>
<b>28</b>	1.0000	<b>17</b>	1.0000	<b>17</b>	0.9355	<b>98</b>	0.0000	<b>17</b>	0.0000	<b>17</b>	0.1845	<b>39,40,42</b>
<b>29</b>	1.0000	<b>19</b>	1.0000	<b>19</b>	0.0000	<b>19</b>	0.0000	<b>19</b>	0.0000	<b>19</b>	0.0000	<b>19</b>

**TABEL 2**  
**SECTORAL MULTIPLIER**

SECTOR (NO I-O)	MULTIPLIER		
	OUTPUT	INCOME	EMPLOYMENT
1	1.2225	<b>0.6822</b>	<b>0.0679</b>
2	1.1801	<b>0.6012</b>	<b>0.0861</b>
3	1.2784	0.5456	0.0588
4	1.3727	0.3403	0.0408
5	1.0825	<b>0.6013</b>	0.0050
6	1.1880	0.5467	0.0182
7	1.5943	0.4264	0.0042
8	1.7582	0.2696	0.0474
35,36	2.2503	0.2490	0.0195
37	1.8836	0.2080	0.0086
38	<b>2.3817</b>	0.3604	0.0129
39,40,42	<b>2.5152</b>	0.2901	0.0099
43,44	<b>2.3041</b>	0.3676	0.0081
45,46,47	1.8684	0.2947	0.0051
48,49	<b>2.2615</b>	0.3903	0.0097
50	<b>2.3624</b>	0.2677	0.0019
10	2.0626	0.2552	0.0001
11	1.7609	0.3199	0.0016
12	1.9601	0.5189	0.0371
13	1.4639	0.2778	<b>0.0928</b>
74	1.7346	0.2827	0.0056
75	1.8155	0.2290	0.0410
15	1.5063	0.2905	0.0357
16	1.3536	0.2627	0.0031
17	1	<b>0.9523</b>	<b>0.2272</b>
96,97,98	1.4081	<b>0.6728</b>	0.0925
95	1.1674	0.2500	0.0028
99	1.4826	0.2695	<b>0.4168</b>
19	0	0	0

**G. Regional Multiplier Output Sectors**

From output multiplier analysis conclude that all sectors have output multiplier with the magnitude bigger than 1. It shows that for each additional unit of final demand will increase output change more than one unit. This indicates that overall output total sectoral will stimulate to grow the sectoral production when there is increasing in sectoral demand. In table 2, five biggest output multiplier sectors are (1) fertility and pesticide industry, chemical industry, rubber and plastic industry (2.5152); (2) paper industry, paper goods and cartoon industry (2.3817); (3) unclassified goods industry (2.3624); non metal mineral industry, cement industry (2.3041); electrical tools and equipment, non ship transportation tools industry (2.2615), respectively.

From those sectors, it turns out that East Java Province is still dominated by industrial sectors than others. This indicates that industrial sectors ability to strengthen and even to enhance the production capacity when there is increasing in its final demand. The production capacity can be sustained its production improvement. These industrial sector product characteristics differ from other sectors. For example agricultural sectors still have external problem, such as climate or weather condition, pest, the case of tree crops that involve long gestation period, low agricultural term of trade, etc.

## **H. Regional Income Multiplier Sectors**

From income multiplier analysis result that all income multiplier coefficient sectors have magnitude lower than one. It shows that additional unit of sectoral final demand will increase household income less than one unit overall income its own sectoral. In tabel 2, sectors that have biggest five income multiplier are (1) local government and defence sectors (0,9523); (2) paddy sector (0.6822); (3) education services, health services; other social services (0.6728); (4) forestry sector (0.6013); (5) food plant sector(0,6012).

All those sectors conclude that most of sectors are people interested to work for. It happens because transmission mechanism of the final demand changing will increase household income through sectors people lived to work for. Most sectors are still dominated by agricultural sector. Number of people work in this sector about 47,18% of overall workers in east java province (East Java Statistic Central Body, 2002).

Meanwhile, the biggest income multiplier sector is local government and defence. It means that local government need to point out that this sector doesn't play important role in stimulating regional output growth, although many people desire to work for. There is a common thought that being government and defence employees, such as public servant, soldiers, policemen is safe jobs. The number of government employees are now too large and considered to reorganized or even restructured in order to make government budget not over burden.

## **I. Employment multiplier sector analysis**

From employment multiplier analysis conclude that overall sectors have employment multiplier coefficient less than one. It shows that that one unit additional of sectoral final demand will increase sectoral labour, but the sectoral increasing is not as large as the sectoral final demand. In table 2, five biggest employment sectors are individual and household services sector (0.4168); local government and defence sector (0.2272); trade sector (0.0928; food plant sector (0.0861); and paddy sector (0.0679), respectively. These sectors are vary enough. Hence, there is a red line that these five sectors are labour intensive commodities. The same reason with the income multiplier analysis, local government and defence sector has high multiplier. It means that if government desire to increase people's income and employment, this sector could be the most effective sector and right on target. Meanwhile, the effort to increase thepeople's society through this sector can be done through giving more incentive wages for productive employees than adding more employees. The impact of adding more employees to this sector will cause decreasing returns to scale or too many employees will decrease the services that they provide for the society.

## **4. Economic Problem In East Java Province**

### **Disparities between Development Regional Unit**

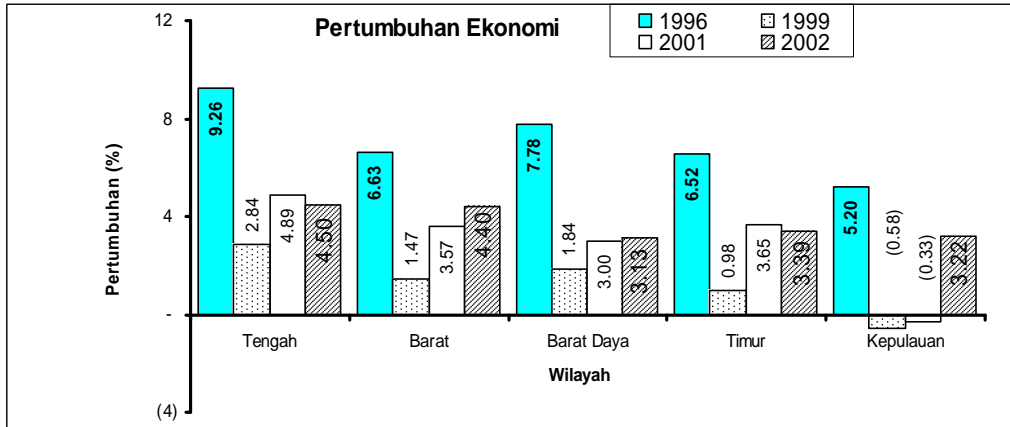
Disparities between Kabupaten/Kota can be seen from magnitude of economic variables, such as economic growth, percapita income, poverty level, and Human Development Index for each Kabupaten/Kota. All of these three variable related each other. Theoretically, higher economic growth indicates larger per capita income and also increasing purchasing power parity of East java Province society. At the end, degree of wealth society will increase through greater number of HDI, and the society's poverty line will decrease.

The disparities for each Kabupaten/Kota in East Java Province can be seen from comparing these variable's magnitude. Based on data analysis, there are differences of these variable in 1996 (before crisis), in 1999 (post crisis) and in 2001. Meanwhile to draw the differences between Kabupaten/Kota, this study devided Kabupaten/Kota into 5 Development Regional Units (Satuan Wilayah Pengembangan/SWP). Middle SWP consists of Surabaya City, Gresik, Mojokerto, Kota Mojokerto, Sidoarjo, Kota Malang, Malang, Tuban, Lamongan, Pasuruan, and Kota Pasuruan. North West SWP consist of Kota Kediri, Kediri, Kota Blitar, Blitar. West SWP consist of Tulungagung, Jombang, nganjuk, and Trenggalek. Eastern SWP consist of Kota Probolinggo, Probolinggo, Banyuwangi, Situbondo, Lumajang, Jember, Bondowoso. Islands SWP consist of Bangkalan, Sampang, Pamekasan, and Sumenep.

Those SWP differs from the existing SWP made by the government. This SWP division is based on regional and economic indicator approach. Economic Indicator approach is done based on per capita PDRB(current price) in 1996 with high, medium and low level economic groups and PDRB growth (1993 constant price) with high, medium and low level economic groups. As noted here, this study prefer to choose 1996 PDRB because of based on more stable condition than the others. Meanwhile, based on economic structure middle SWP tends to economic activity on industrial sectors, trade and services, West SWP on agricultural sector, east SWP on forestry and island SWP on fishery.

#### **1. Economic Growth Disparities**

Middle SWP always have higher economic growth than others, both before and after crisis (see figure 5). Lowest economic growth lies on island SWP, even after crisis had negative sign. In 2001 all SWPs grew significantly in which the average economic growth about 4.89%. In 2002, Economic growth was slow down in Middle and East SWP, but west SWP, northwest SWP and Island SWP increase significantly. Hence, overall Middle SWP had higher economic growth than the others.



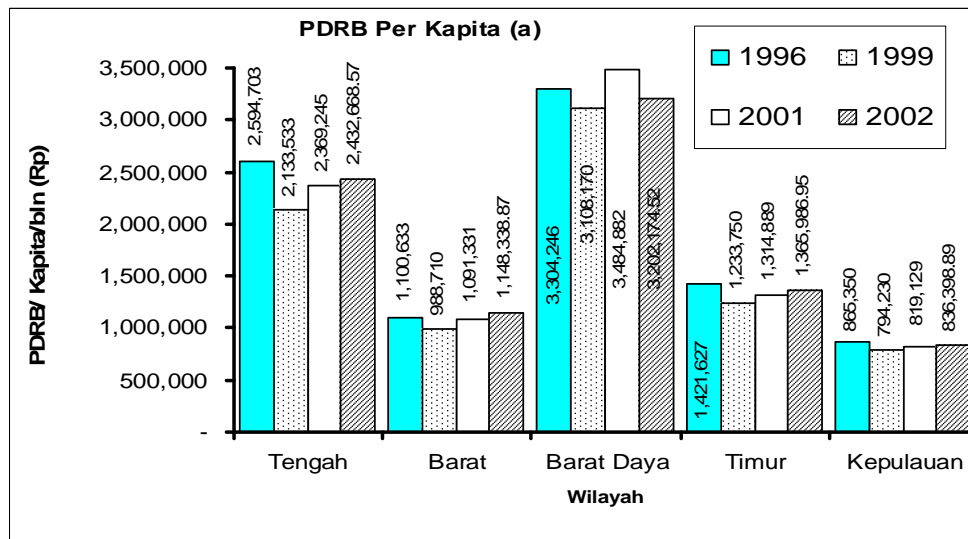
Source: PDRB Kabupaten/ Kota in East Java, BPS, (calculated).

Where Pertumbuhan Ekonomi means Economic Growth. Wilayah means SWP, Tengah means middle, Barat means West, Barat Daya means North west, Timur means East, and Kepulauan means Islands

## 2. Per Capita Income Disparities

Overall middle SWP has higher per capita income than the other except north west SWP because this SWP was pushed by high per capita income in Kota Kediri (see figure 6). Per capita income in Kota Kediri was high because of Gudang Garam cigarette industry. If Per capita income in Kota Kediri was excluded from the analysis, north west still be lower than in the middle. It means Kota Kediri plays important role in north west SWP.

Figure 6



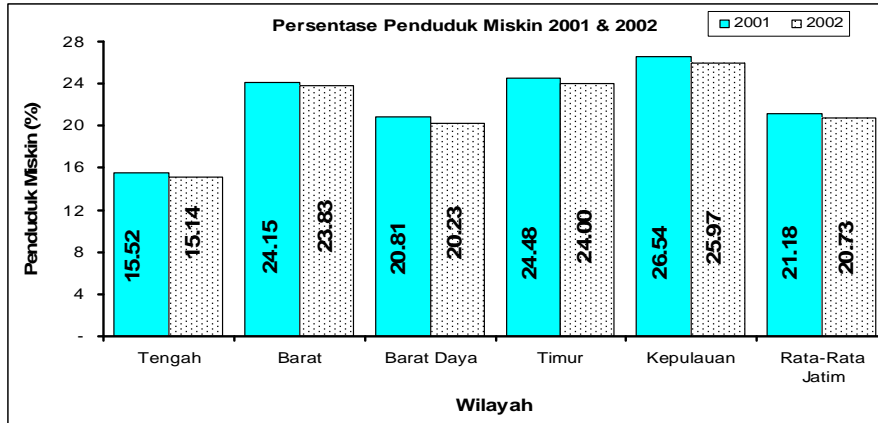
Source : PDRB Kabupaten/ Kota in East java Province, BPS, (calculated).

Where PDRB per kapita means Per capita Income.

### 3. Poverty Disparities

According to East Java poverty data in 2001 and 2002 can be proved the poverty disparities among the SWP (see figure 7). Island SWP with the lowest economic growth and per capita income shows the highest poverty number. Meanwhile, the lowest one is Middle SWP. North west SWP had the higher poverty than in the middle, although per capita income in north west higher than in the middle. This proved that higher income in north west was not distributed flatten.

Figure 7



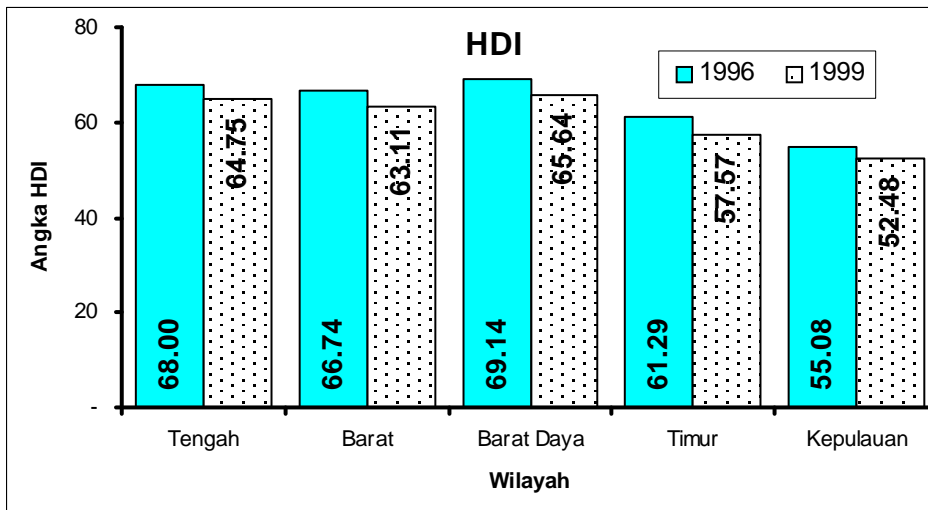
Source: Poverty Data and Information, BPS (calculated)

Persentase penduduk miskin means poverty people as percentages of East Java Province.

### 4. Wealth Disparities

*Human Development Index* (HDI) as measure the degree of society's wealth shows that wealth disparities among SWP still very high. As seen on figure 8 Middle SWP has higher HDI (about 68.00/upper medium) than in the islands SWP (about 55.08/lower medium).

Figure 8



Source: Poverty Data and Information, BPS (calculated)

## **CONCLUSION AND POLICY IMPLICATION**

Dynamic regional economic input-output model can be used to determine leading sector which can stimulate other sectors to grow through stimulating on final demand changing about 10 percents, such as consumption, investment, government expenditure and net export for each sector. Those sectors are output multiplier sectors, income multiplier sectors, employment multiplier sectors, interindustrial linkages sektors , export sectors, import sector and high value added sectors.

This research found that first of all, although industrial sectors have high TBL and TFL coefficient, but these sectors still dependent to import content for the production. The raw material for the production process still have high import content. Secondly, the sectors that need to overcome the specific problem, such as international reserve saving, dependent and high value added in East Java Province are other agricultural plant (sugar cane, coconut, tobacco, clove, coffee, tea, crude palm, rubber, and etc), fishery, livestock and its good, mining and exploration, food plant, food & beverages industry, yarn industry, textil&garment industry, tobacco industry. Thirdly, to foster economic growth in East Java Provinsi, sectors that needed the opportunity broaden are fertility and pesticide industry, chemical idustry, rubber and plastic industry; paper industry, paper goods and cartoon industry; unclassified goods industry; non metal mineral industry, cement industry; electrical tools adn equipment, non ship transportation tools industry. Fourthly, the sectors that stimulate economic income of the society grow faster are agricultural sectors and local government and defence sector. Fifthly, the sectors that reduce unemployment level are individual and household services sector; local government and defence sector; trade sector; food plant sector; and paddy sector, respectively. These sectors are vary enough. Hence, there is a red line that these five sectors are labour intensive commodities

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