Journal of Economics, Business and Accountancy Ventura Volume 13, No. 3, December 2010, pages 195 – 212
Accreditation No. 110/DIKTI/Kep/2009

INVESTMENT ON THE COMMUNITY INCOME AND THE ECONOMIC GROWTH IN CENTRAL JAVA

P. Eko Prasetyo Adnan
Suryo Darmono
Universitas Negeri Semarang
E-mail: prasetyo.dr.eko@gmail.com
Kampus Sekaran, Gunung Pati,Semarang 50229 Jawa Tengah,Indonesia

ABSTRACT

This article attempts to analyze the impact of investment on the community income and the economic growth in Central Java using the social accounting matrix (SAM) framework concerning people's income and economic growth. The data were taken from Central Bureau of Statistics (BPS). Thus, it concerns production factor block, institutional block, and production sector block. It shows that investment influences the people income and economical growth. People's income that is most affected is farming business income while that of being less affected is farming worker. The distribution of people's income is not spread evenly among the group. Furthermore, investment production block has positive impact on the biggest economic growth, especially on manufacturing industry sectors, except food, electricity, gasses, and drinking water. People's income condition and economic growth which are influenced by investment proved to have no difference. As such, several factors that support investment atmosphere policy: bureaucracy and licensing, infrastructure, and investment protection from illegal tolls must be given more serious attention. Beside, investment is expected to grow effectively and efficiently. Next, the implication of investment policy as the main generator of economic growth trough production sector has biggest positive impact, especially on financial institution and trade sector, while investment has less impact on industrial and agricultural sectors especially on food crop and food industry.

***Key words** : Investment impact, people income, and economical growth*

INTRODUCTION

It is the fact that investment is an important component in the national income and economic growth. This can also mean that good economic growth is a reflection of the level of national income. In the process of economic development, investment expended by the company is the starting point of economic development activities. Every state and local government tries to create a conducing climate to encourage investment, by doing for example private, government or between government and private cooperation. When investment is made by the government, it may provide services to the community (non-profit oriented). Of course, this type of investment may not be conducted by private investors.

It can be stated that the realization rate of capital invested is influenced by a number of factors such as interest rate, the level of national income, government policy, expectations regarding economic activity in the future, and technological progress. The level of investment can increase production capacity, i.e. when the production sector increases, the output will increase as well. In other words, the economy will grow; in multiplier effects in a chain such as it will impact on other sectors including the people's income.

Since the practice of regional autonomy, it has not reached consensus yet on the model of regional autonomy for being efficient, well targeted on the basis of Law no. 22, 1999 and Law no. 32 of 2004. Ideally, every process of development, including all in the area based on their own ability (self-

reliant development), should optimize all the potential resources. However, such a desire is very difficult to achieve. The real condition shows that areas with specially difficulties in economic development are usually indicated by limited human resources, technological backwardness and lack of capital. Of these problems, the most common is the problem of lack of capital (Jhingan, 2000).

In this context, the government attempts to look at the need to take policy which provides broader opportunities to the private sectors, both domestic and foreign, to participate in national development. The form of this participation is the investment. The capital investment is the first step of development activities. Thus, it is essentially the beginning of economic development activities. With this investment, it is also expected to provide technology transfer, so that local industries can absorb and apply the technological advances and increase efficiency. It also incurs additional capital to create new jobs, so as to reduce unemployment and poverty.

In the economic theory of development, resources for economic advancement consist of a variety of factors, among others, capital accumulation, population growth, labor force, and technological progress. In general, the main sources for economic growth of a country or region are the existence of investments that can improve the quality of capital or human and physical resources. This, in turn, succeeds in increasing the quantity of resources through new discoveries, innovations and advances in technology, (Mudrajad, 2003).

The issue is related to the problem on how the government policy of a country and region concern encouraging the investment climate for the development of the region. A study found that the implementation of regional autonomy since 2001 has worsened the investment climate in Indonesia (SMERU, 2001) which does not directly undermine the investment climate in Indonesia. Based on the data from Central Bureau Statistics in Central Java (2007), it shows that the realization of investment (domestic and foreign investment) in Central Java from 2004 to 2007 experienced a declining tendency. It can be realized that investment declined and it will further enlarge feared unequal distribution of household incomes and cause increasing the number of people unemployed in Central Java is due to the lack of new jobs created by investors. Central Java was chosen because the local government is currently working hard to make conducive investment policies for the progress of the region. However, based on BPS of Central Java (2007) realization of investment in this area actually has declined.

The research uses SAM (Social Accounting Matrix) framework based on the data analysis approach SAM (Social Accounting) economies of Central Java. It is expected to find out and analyze the impact of public investment on income and economic growth. Besides that, this article attempts to explain the development of economic performance in Central Java on the growth of value added factor of production, household income and income production sector. In particular, it describes how the investment impacts on household incomes and economic growth in Central Java.

THEORETICAL FRAMEWORK

SAM has been adopted in several previous studies and is still found relevant and therefore, it is also used as a basic concept of writing this article. Priyarsono (2007) has reviewed the role of investment in agriculture and agro-industry sectors in employment and income distribution. It shows that investment can increase output of agricultural sector which has a greater impact on production factors of labor and increase household income. This is due to the fact that the role of investment is being capable of distributing sectoral income, labor, and households. Investment policy in the agro-food sector has impact on income distribution and it is greater than the policy on non-food agro-industry sector. It is recommended that the most effective economic policy on

income distribution is to increase investment in agro-industry sector priority.

Sri Hery Susilowati (2007), for example, has also conducted research which aims to analyze the impact of economic policy in the agro sector on poverty and household income distribution. It was found out that the impact of the policy increases exports, investment, and tax incentives in the agro-industry sector and thus increases household income farm laborers and farmers groups most when compared with the increase in other household income groups. Another research is by Wayan (2007), aimed at analyzing the potential role of plantation-based industries to spur economic growth, create job opportunities and increase revenue. It is argued that that the effectiveness, the role of plantation-based industry both as a leading sector as well as adjusting the sector, is still capable of fostering economic growth, employment opportunities and increase incomes in particular groups of households.

An expenditure is referred to investment both by private and public companies in order to improve or maintain the stock of capital goods (capital stocks), in which the capital stocks of these investments aimed at increasing people's income and economic growth, (Jhingan, 2000). The macro-level economic theory realization of capital invested in the economy is influenced by a number of factors such as, interest rate, the level of national income, government policy, expectations regarding economic activity in the future and technological advances, (Sadono, 2004; Dornbusch, 2008). Various previous studies have also explained that the factors which have a considerable effect on the investment expenditure are the interest rate, national or regional levels of income and government policy. One of the other studies found that the implementation of regional autonomy since 2001 has worsened the investment climate in Indonesia (SMERU, 2001) which is not directly undermining the investment climate in Indonesia. The low public services, lack of legal certainty, and various Regional Regulations (Perda) are not considered pro-business. As such they are identified as evidence that is not conducive for business climate. Public services complained mainly are associated with the uncertainty of cost and length of time dealing with licensing and a complicated bureaucratic system (Mudrajad, 2005).

Various policies have been pursued to increase the level of investment, among others, through Presidential Instruction No. 3 year 2006 on Investment Climate Policy Package and *Permendagri* (the Decree by Minister of Domestic Affairs) No. 24 of 2006 on Guidelines for Providing Service One Stop. The Government of Central Java has also contributed to improving the business climate by creating a good business climate through a gate licensing service (one stop service), investment protection (task force), as well as providing incentives for investors. The general policy of the Presidential Directive was intended to strengthen the institutional investment services, synchronization of central regulations and local regulations, and clarity of the provisions on environmental impact assessment obligations. Furthermore, this policy also specifically regulates customs and excise, taxation, employment, and Medium and Small Enterprises (MSEs). Unfortunately, in Central Java it is commented that there are no regulations that specifically regulate the issues.

RESEARCH METHOD

This study uses the SAM model or SAM analysis. It is a matrix that summarizes the social and economic balance sheets as a whole. Clusters of balance sheets (accounts) are grouped into two groups, i.e. groups of balance sheet-balance-sheet group of endogenous and that of exogenous balance sheet. Broadly speaking, the endogenous balance-sheet is divided into three blocks: balance sheet block-production factor balance sheet blocks, balance sheet blocks and institutional balance-sheet activities and balance sheet blocks-(activity) production block. To abbreviate the writing, the three blocks are further referred to as a production

Table 1
Basic Framework of SNSE

				EXPENDITURE				
				Endogenous Balance sheet			Balance sheet Exogenous	Total
				Factor of Production	Institution	Activities of Production		
				1	2	3	4	5
INCOME	**Endogenous Balance sheet**	Factor Production	1	0	0	T_{13} Distribution Value Added	X_1 Income Exogenous Factor of Production	Y_1 Total Income Factor of Production
		Institution	2	T_{21} Income of Institution from Factor of Production	T_{22} Transfer Inter-Institutions	0	X_2 Income of Institution from Exogenous	Y_2 Total Income of Institution
		Activities of Production	3	0	T_{32} Demand End of Domestics	T_{33} Transaction Inter-activities (I-O)	X_3 Exports And Investment	Y_3 Total of Output Activities of Production
	Balance sheet of Exogenous		4	L_1 Expenditure Exogenous Production factor	L_2 Saving	L_3 Import & Tax indirect	R Transaction inter-Exogenous	Total Income Exogenous
	Total		5	Y_1' Total expenditure Production factor	Y_2' Total expenditure Institution	Y_3' Total expenditure Production activities	Total of expenditure Exogenous	

Source: SNSE of East Java 2004

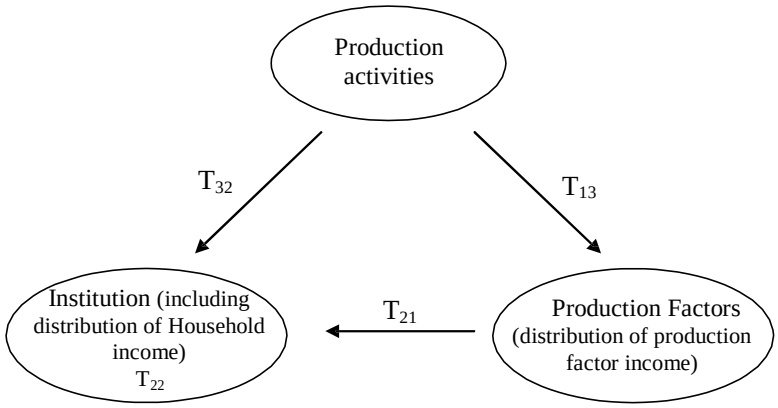
factor block, institutional blocks and production activity block. Based on Table of SAM of Central Java in 2004, the balance-sheet block shows endogenously and exogenously, such as in Table 1.

Any balance sheet in SAM is prepared in rows and columns. For example, vector row shows the breakdown of revenues, while the vector column shows the breakdown of expenditure. Similarly, the number of rows is equal to the number of columns. In other words, the amount of revenue is equal to the expenditures. Thus, SAM is a simple composition as displayed in Table 1. Column 5 is the sum of columns 1, 2, 3 and 4. Likewise, row 5 is the sum of lines 1, 2, 3 and 4. Because the amount of revenue is equal to expenditures, line 5 is the transpose of column 5.

Furthermore, in the table, few matrixes SAM are presented. The matrix T is a matrix of inter-block transactions in the balance sheet of endogenous. The matrix X represents the revenue from the balance sheet of endogenous-exogenous. Matrix L balance sheet shows expenditures for the balance sheet of endogenous exogenous, also called leakages. Matrix Y is income, the total balance sheet of endogenous. Meanwhile, the matrix T is the total expenditure of the balance sheet f endogenous.

From Table 1, the distribution of endogenous income balance sheet and it is clarified as the following.

Figure 1
Transaction of inter block activities in SNSE



Source: Pyatt and Round, 1985; Thorbecke 1989; Sadoulet, 1995; Djoni, 2005

1. Total amount of production Factors income = $Y_1 = T_{13} + X_1$
2. Total amount of institutional income = $Y_2 = T_{21} + T_{22} + X_2$
3. Total amount of production activity income $Y_3 = T_{32} + T_{33} + X_3$

The distribution of endogenous expenditure balance sheet can be described as the following.

1. Total amount of production factor expenditure = $Y_1' = T_{21} + L_1$
2. Total amount of institutional expenditure = $Y_2' = T_{22} + T_{32} + L_2$
3. Total amount of production activity expenditure = $Y_3' = T_{13} + T_{33} + L_3$

Matrix *T* as inter-block transaction matrices in endogenous balance sheet can be expressed as the following.

$$T = \begin{bmatrix} 0 & 0 & T_{13} \\ T_{21} & T_{22} & 0 \\ 0 & T_{32} & T_{33} \end{bmatrix} \quad (1)$$

As one sub-matrix of the SAM, the matrix T also shows the transaction of receipts and expenditures, with a more narrow scope, namely in the endogenous balance sheet. When read per line, the matrix T indicates acceptance of one block from another block. T_{13} indicates acceptance of input from production activities. In row two, T_{21} shows institutional acceptance of production factors and T_{22} shows acceptance of the institution itself. At the three lines, T_{32} indicates acceptance of the production activities of the institution and T_{33} shows revenue producing activities from the production itself.

When per column is seen, the matrix T indicates expenditure of one block to another block. In column one, T_{21}, shows expenditure for institutional factors of production. In column two, T_{22} shows the expenditure for institution to institution itself and T_{32} shows institutional expenditures for production activities. In column three, T_{13} shows expenditures of production activities to factors of production and T_{33} shows expenditures of production activity to production activity itself. Within the same or different blocks of transaction, the transaction T in the matrix above shows transactions that occur between different blocks, such as T_{13}, T_{21}, and T_{32}. Beside, it also occurs within the same blocks as T_{22} and T_{32}. These relationships can be seen in Figure 1, arrows indicate the flow of money.

In addition, the transaction matrix T above shows the flow of revenue and expenditure expressed in monetary units. If every cell in the matrix T is divided by the number of columns, it will get a new matrix that

Table 2
Income per capita of the Population and Economic Growth of Central Java

Year	Income per Capita		Changes		Economic Growth
	Existing price	Constant price 2000	Existing price	Constant price 2000	
2000*	3.178.753,18	3.178.753,18			3,93
2001*	3.617.930,84	3.233.673,95	13,82	1,73	3,59
2002	4.154.163,03	3.365.590,06	13,10	2,52	3,55
2003	4.669.568,92	3.517.661,94	12,41	4,52	4,98
2004	5.217.344,20	3.683.196,94	11,73	4,71	5,13
2005	6.271.193,36	3.853.012,68	20,20	4,61	5,35
2006	7.527.487,12	4.030.376,58	20,03	4,60	5,60
2007	8.281.309,54	4.223.197,03	10,01	4,78	5,61

Source: Central Bureau of Statistics (BPS) and GDP Central Java 2007

Table 3
Economic Indicator of Central Java 2006-2007

Indictor	Year 2006	Year 2007	Changes	
			Nominal	%
GDP on the existing price (Billion Rph)	281.996,71	307.297,09	25.300,38	8.97
On Constant price 2000 (million Rph)	150.682,65	159.110,04	8.427,39	5.59
Economic growth trend (%)	5,33	5,5		0,17
Inflation (%)	6,6	6.24		(0,36)
GDP/per capita on constant price 2000 (,million Rph)	4,60	4,78	0,23	4.91
Unemployment number (million people)	1,35	1,36	0,01	0.74
Poor population number (million people)	6,5	6,56	0,06	0.92
Investment realization				
Domestic Investment (billion Rph)	5.067,31	348,94	(4.718,37)	(93.11)
Foreign Investment (million US$)	381,68	107,88	(273,8)	(71.74)
Export (million US$)	3114,7	2887,13	(557)	(19.21)
Import (million US$)	1,033	1,154	121	11.71

Source: CBS Central Java province, 2007

shows the average expenditure propensity (average expenditure propensity). These are then expressed in proportion (ratio). The new matrix, such as matrix A comes up and then its elements are such in A_{ij} which is the result of the distribution of T values in row i and column j (T_{ij}), which can be formulated as: $A_{ij} = T_{ij}\ Y_i$. In this case, Y_i is the diagonal matrix of the values of the number of columns, which form the matrix T can be converted into matrix A as the following.

$$A = \begin{bmatrix} 0 & 0 & A_{13} \\ A_{21} & A_{22} & 0 \\ 0 & A_{32} & A_{33} \end{bmatrix} \quad (2)$$

Thus, $Y = AY + X$ or $Y = (1\text{-}A)^{-1} X$. If $M_a = (1\text{-}A)^{-1}$, so $Y = M_a X$.

In this case, A contains the coefficients that show the direct influence of the changes that occurred in one sector to another sectors. Meanwhile, M_a as the accounting multiplier is a multiplier that shows the effects of changes in a sector to other sectors after going through the whole system of SAM.

The purpose of SAM analysis model approach in this research is to explain the relevance of economic aspects in an integrated social and (simultaneously) from the impact of public investment on income and economic growth in Central Java. This study

Table 4
Economic Structure of Central Java 2006-2007
Based on Constant Price 2000

Sectors	Growth		Distr. Percentage	
	2006	2007	2006	2007
Agriculture	3,60	2,78	20,57	20.03
Mining and Digging	15,41	6,23	1,11	1,12
Processing Industries	4,52	5,56	31,98	31,97
Electricity, gas and drinking water	6,49	6,72	0,83	0,84
Building	6,10	7,21	5,61	5,69
Trade, hotel and restaurants	5,85	6,54	21,11	21,30
Transportation and Communication	6,63	8,07	4,95	5,06
Finance, rental, and company services	6,55	6,81	3,58	3,62
Services	5,33	6,71	10,25	10,36
	5,33	5,59	100,00	100,00

Source: CBS Central Java 2007

uses the data from both domestic and foreign investments in the province of Central Java during 2000-2007. This investment is assumed to improve production processes and productivity so as to increase people's income and regional economic growth. Through these investments, production capacity or the national income and economic growth will be increased. Furthermore, the multiplier effect can be a source of income for workers who work in these sectors.

Next, the data were processed based on SAM analysis table in 2004 which then was aggregated in accordance with the purpose of research. The main stages in this research are secondary data collection, processing, and data analysis. Secondary data in the form of SAM Central Java, 2004, GRDP, Central Java and Central Java investment growth data from 2004 to 2007, obtained from the BPS, the Investment Coordinating Board (BKPM), Central Java, and various other sources as supporters including input-output tables, industrial statistics and other relevant data. Structural analysis and path analysis multiplier is built with the help of MATS (Accounts Matrix Transformation System) policy simulation and the analysis was performed with excel software.

Based on the balance sheet of SAM multiplier, it indicates changes in income that occur at certain endogenous variables when there is any injection or exogenous economic stimulus on the balance sheet. SAM multiplier of balance sheet can be written in matrix equation as: $T = M_a X$. Furthermore, the multiplier M_a balance can be decomposed into several components with the help of models of Pyatt and Round (as in Daryanto, 2000) who has made *Ma* balance sheet multiplier decomposition into several components. Decomposition is done to see endogenous process of balance sheet changes resulting from exogenous changes in the balance sheet. Based on these studies, there are three components of the balance sheet decomposition of multiplier. Matrix M_a is formulated in the form of additives as the following.

$$M_a = I + (M_{a1} - I) + (M_{a2} - I)\, M_{a1} + (M_{a3} - I)\, M_{a2} M_{a1} \quad (2)$$

Where: I = (initial injection); $M_{a1} - I$ = transfer multiplier; $(M_{a2} - I)\, M_{a1}$ = open loop multiplier; $(M_{a3} - I)\, M_{a2}\, M_{a1}$ = close loop multiplier.

The community income in this research concerns the household income and expenditure used for transaction process, where the

Table 5
Investment Condition of Central Java 2007
(according to Business Types)

No.	Business Sectors	Foreign Investment	Domestic Investment
1	Food Crop	-	-
2	Plantation	-	-
3	Farms	42,590,280,000.00	42,637,000.00
4	Fishery	-	-
5	Forestry	-	-
6	Mining	4,229,100,000.00	-
7	Food Industries	877,259,418,996.00	-
8	Textile Industries	834,981,926,069.44	199,808,653.00
9	Wood Industries	112,714,252,500.00	-
10	Paper Industries	-	-
11	pharmacy	5,950,000,000.00	-
12	Chemistry	3,562,500,000.00	42,150,954.02
13	Non Metal Industries	2,742,000,000.00	-
14	Basic metal Industries	190,164,001,464.00	-
15	Metal Goods Industries	118,029,250,000.00	8,469,627.00
16	Other Industries	18,666,700,000.00	666,909,000.00
17	Electricity, Gas, and drinking water	64,610,000,000.00	50,000,000.00
18	Building	-	-
19	Trades	329,886,140,000.00	18,300,000.00
20	Hotel and Restaurants	16,000,000,000.00	125,000,000.00
21	Transportation	-	-
22	Housing, Industrial Territory	58,874,060,000.00	-
23	Offices	57,016,648,000.00	-
24	Other Services	190,808,496,744.00	38,600,000.00
	Total	2,928,084,773,773.44	1,191,875,234.02

Source: Board of Domestic Investment, Central Java 2007

household (they) work. This entity is categorized as the entire household in Central Java province such as the following.

1. Farm workers household
2. Farming business household
3. Village low level household
4. Village high level household
5. Town low level household
6. Town high level household

Again, as the basis for further analysis, there are 3 endogenous blocks and also 3 exogenous blocks. Endogenous block variables include the production factor block, institutional block and production activities block. Exogenous variables include the accumulation block, other supporting blocks. Thus, the analysis of economic sectors used in this study is the classification of economic sectors based on the table of SAM of Central Java (2004), namely with the following indicators:

1. Agricultural crops, livestock, fishery, food industry.
2. Other crops Agriculture, forestry and blue collar workforce.
3. Mining, processing industries except for food, electricity, gas and drinking water.
4. Trade, restaurants and hotels, transport and communication, personal and household services.
5. Financial institutions, real estate, government, social services and cultural and entertainment services.

DATA ANALYSIS AND DISCUSSION

Economic Performance of Central Java

Income per capita can be used as an indicator to see the performance of economic development in Central Java. The development of income per capita in Central Java on the

Table 6
Investment Growth of Central Java Province 2007
Based on SNSE Aggregate 2004

No	Sectors	Classification of SNSE	Total (in Million)
1	Agriculture, food plantation, farms, fishery, food industries	19	962,487
2	Agriculture of other plantation, forestry, and hunting	20	-
3	Mining, processing industries except food, electricity, gas, and drinking water	21	2,322,988
4	trade, restaurants, and hotels, transportation, and telecommunication, limited companies and households	22	489,189
5	Financial institutions, real estate, public, social services, and culture, entertainment	23	345,299
	TOTAL		4,119,960

Source: Investment Growth of Central Java Board of Domestic Investment 2007, processed

basis of current and constant prices from 2001 to 2007 shows an increasing tendency from year to year. In 2006, income per capita in Central Java was at 7527.49 million dollars or there was an increase of 20.03 percent from 2005. Similarly, income per capita at constant prices, within the last 4 years, also continues to increase although it is not so big as the current price. Due to the income per capita at current prices with the influence of market prices, income per capita at constant prices is calculated using fixed prices without considering market prices.

The increase of income per capita does not mean an increase of revenue in each group, because the form of income per capita is merely not to calculate the increase in revenue of each class of income beneficiaries. The GDP is only obtained through Central Java compared with the population of Central Java, so that the income per capita does not represent the public revenue per class. Therefore, through SAM analysis, the results can account for the way how the distribution of income among each class is. In addition to the community, in terms of revenues, economic performance of Central Java can be seen from the conditions of economic growth.

Central Java economic growth during 2000-2007 still shows positive economic growth and output growth across sectors although there are some sectors which, negatively, increase from year to year. This indicates that the economy of Central Java has good prospect. In the same period, inflation declined by 0.36 per cent so as to encourage regional investment rate and economic growth. Such a condition leads to the welfare of community. The question is concerned with the reason why, in the 2006-2007 period, investment showed an increase.

It is clear that that the reduction in the rate of these investments turned out to have a negative impact on the increasing unemployment and the decline in exports in the region of Central Java province. So, policies are required to encourage investment. In general, the decline in investment in Central Java, however, is considered bad, because a decrease is estimated to 93.11 percent and the decrease in the value of foreign direct investment (FDI) to 71.74 percent. The decline in value of domestic and foreign investment can be said as the indicator that the investment climate in Central Java is less conducive. In other words, it needs a policy to enhance a triggering investment climate.

The impact of the decline in investment can still maintain positive economic growth rate. Yet, it has a negative impact on the

Table 7
Investment Impact 2007

Sectors	Initial Condition	Value	%	Total Increase
Production factor Block				
Agriculture, salary and wage receivers	6.642.865,46	193.659,92	2,92	6.836.525,38
Agriculture not salary and wage receivers	23.390.691,53	679.911,05	2,91	24.070.602,58
production, transportation operator, manual and blue collars receiving salary and wages	27.412.424,21	831.547,30	3.03	28.243.971,51
production, transportation operator, manual and blue collars not receiving salary and wages	13.554.746,22	397.169,64	2.93	13.951.915,86
Administration, sales, services receiving salaries and wages	20.654.879,89	717.752,97	3.47	21.372.632,86
Administration, sales, services not receiving salaries and wages	21.712.218,75	742.099,80	3.42	22.454.318,55
leadership, operational, military, professional and technicians receiving salaries and wages	3.887.222,60	137.934,97	3.55	4.025.157,57
leadership, operational, military, professional and technicians not receiving salaries and wages	233.437,92	7.382,19	3.16	240.820,11
Domestic Private capital	49.790.002,50	1.510.574,89	3.03	51.300.577,39
Foreign and government capita;	13.912.471,51	314.557,46	2.26	14.227.028,97
TOTAL I	181.190.960,59	5.532.590,20	3.05	186.723.550,79
Institutional Blocks				
Farmer workers	16.124.861,03	467.238,60	2.90	16.592.099,63
Agriculture business people	42.712.584,16	1.289.254,94	3.02	44.001.839,10
Free Low level business people, administrations, vendors, free transportation workers, individual services, blue collars, non workforce and low level of unclear job in villages	19.899.127,73	563.302,60	2.83	20.462.430,33
Free-high level workers, business people of non agriculture, managers, military, professional, technicians, teachers, clerical administration, and high level sellers in villages	16.198.907,49	477.041,20	2.94	16.675.948,69
Low level business people, clerical administration, vendors, free transportation workers, individual services, blue collars, non workers, and unclear workers in cities	26.284.921,56	802.531,76	3.05	27.087.453,32
High level workers, business people of non agriculture, managers, military, professional, teachers, technicians, clerical administration, and high level sellers in cities	35.533.688,12	1.120.443,22	3,15	36.654.131,34
TOTAL II	156.754.090,09	4.719.812,32	3,01	161.473.902,41
Production Sector Blocks				
Food plantation agriculture, farms, fishery, food industries	245.265.321,36	7.104.831,90	2.90	252.370.153,26
Other plantation agriculture, forestry, and hunting	18.358.829,22	559.606,23	3.05	18.918.435,45
mining, processing except food, electricity, gas, and drinking water	416.743.242,20	11.386.383,27	2.73	428.129.625,47
trade, restaurants, and hotels, transportation, and communication, individual services and household	226.036.342,64	7.748.610,28	3.43	233.784.952,92
Financial institutions, real estate, public, social services and culture, entertainment services	74.466.728,56	2.795.515,84	3.75	77.262.244,40
TOTAL III	980.870.463,98	29.594.947,52	3,02	1.010.465.411,50
TOTAL I+II+III	1.318.815.514,05	39.847.350,04	3,02	1.358.662.864,70

Source: summary of analysis of SNSE

rising unemployment of 0.92 percent and a decrease in exports estimated to 19.21 percent. In addition, the economic growth rate increased by 0.17 percent and thus it is unable to increase income per capita in 2007 at current price which is greater than the previous year where it is only 10.01 percent. This phenomenon raises a new question, because a fairly good economic performance is not accompanied by declining unemployment and increasing income per capita. Conversely, it even lowers exports and increases imports.

Further analysis shows that economic performance in Central Java in 2007 was still dominated by manufacturing industry sectors, with the contribution to total GDP of 31.97 percent, followed by trade, hotels and restaurants as well as the agricultural sector. The tendency is likely to continue given the

Table 8
Impact of Investment Policy 2007

Sectors	Initial Condition	Value	%	Total Increase
Production Sector Blocks				
Agriculture, salary and wage receivers	6.836.525,38	319.491,18	4.81	6.962.356,64
Agriculture not salary and wage receivers	24.070.602,58	1.081.732,30	4.62	24.472.423,83
production, transportation operator, manual and blue collars receiving salary and wages	28.243.971,51	1.266.081,72	4.62	28.678.505,93
production, transportation operator, manual and blue collars not receiving salary and wages	13.951.915,86	586.980,48	4.33	14.141.726,70
Administration, sales, services receiving salaries and wages	21.372.632,86	1.179.843,74	5.71	21.834.723,63
Administration, sales, services not receiving salaries and wages	22.454.318,55	1.162.894,51	5.36	22.875.113,26
leadership, operational, military, professional and technicians receiving salaries and wages	4.025.157,57	236.527,14	6.08	4.123.749,74
leadership, operational, military, professional and technicians not receiving salaries and wages	240.820,11	12.007,52	5.14	245.445,44
Domestic Private capital	51.300.577,39	2.311.499,99	4.64	52.101.502,49
Foreign and government capita;	14.227.028,97	485.334,31	3.49	14.397.805,83
TOTAL I	186.723.550,79	8.642.392,88	4.77	189.833.353,48
Institutional Blocks				
Farmer workers	16.592.099,63	738,278,69	4.58	16.863.139,72
Agriculture business people	44.001.839,10	2.017.109,10	4.72	44.729.693,26
Free Low level business people, administrations, vendors, free transportation workers, individual services, blue collars, non workforce and low level of unclear job in villages	20.462.430,33	883.542,60	4.44	20.782.670,33
Free-high level workers, business people of non agriculture, managers, military, professional, technicians, teachers, clerical administration, and high level sellers in villages	16.675.948,69	750.354,62	4.63	16.949.262,11
Low level business people, clerical administration, vendors, free transportation workers, individual services, blue collars, non workers, and unclear workers in cities	27.087.453,32	1.263.885,92	4.81	27.548.807,48
High level workers, business people of non agriculture, managers, military, professional, teachers, technicians, clerical administration, and high level sellers in cities	36.654.131,34	1.754.024,78	4.94	37.287.712,90
TOTAL II	161.473.902,41	7.407.195,70	4.73	164.161.285,79
Production Sector Blocks				
Food plantation agriculture, farms, fishery, food industries	252.370.153,26	10.813.913,41	4.41	256.079.234,77
Other plantation agriculture, forestry, and hunting	18.918.435,45	1.410.585,57	7.68	19.769.414,79
mining, processing except food, electricity, gas, and drinking water	428.129.625,47	15.611.012,51	3.75	432.354.254,71
trade, restaurants, and hotels, transportation, and communication, individual services and household	233.784.952,92	12.133.772,96	5.37	238.170.115,60
Financial institutions, real estate, public, social services and culture, entertainment services	77.262.244,40	4.962.293,30	6.66	79.429.021,86
TOTAL III	1.010.465.411,50	44.931.577,76	3.48	1.014.988.128,32
TOTAL I+II+III	1.358.662.864,70	60.981.166,35	3.46	1.364.485.371,11

Source: Summary of Analysis of SNSE

growth of investment in this sector is greater than other sectors including the agricultural sector. This is, any how, consistent with the theory of investment policy by Samuelson (2001). The role of government in increasing GDP / GDP of a region can be in the form of capital, such as in industrial development or direct investment in projects. This includes facilities and infrastructure that directly or indirectly can promote economic development, even if private parties can not or might not be willing to invest in this sector.

Investment Policy Impact Analysis of Economic Performance in Central Java

The role of central and local governments in increasing investment still follows the release of Presidential Instruction No. 3 of

2006 on investment climate improvement policy package. A good investment climate can push the rate of good investment. Ultimately, good investment performance will be able to spur economic growth and incomes. In this study, this investment is derived from various business sectors belonging to the domestic and foreign investments (in Table 5).

In Table 5, it appears that domestic investment (PMDN) in Central Java in 2007 shows the largest value in the food industry sector Rp 877.259.418.996,00 and the smallest in the sector of Non-Metal Mineral Industry of Rp 2.742.000.000,00. However, foreign investment accounts for the largest value in other industry sectors for Rp 666.909.000,00 and the smallest value in the metal goods sector Rp 8.469.627. Thus, it strengthens the argument that such sectors still contribute to a positive growth because investment is still considered a considerable industrial sector.

If classified by the primary, secondary, and tertiary sectors and the investment conditions in Central Java shows that it is dominated in secondary and tertiary sectors. Such a condition is not good because the agricultural sector as the primary sector has not yet been accelerated. When this sector is accelerated, it can increase economic growth so as to reduce unemployment and poverty, even though it might be in a smaller portion of the investment. It is known that the classification of investment in the primary sector that should be questioned includes food crops, plantations, livestock, fisheries, forestry. Classification of secondary sectors are mining, food industry, textile industry, wood industry, paper industry, pharmaceutical industry, chemical industry, metal mineral, basic metal industries, metal goods industry, electricity, gas, and drinking. Classification of tertiary sector is the construction, trade, hotels and restaurants, transport, housing, industrial estates, offices, and other services.

Furthermore, this study conducted the process of classification by grouping based on business sector investment. This is to see the total amount of funds in domestic and foreign investment for production activity of every business sector. The impact of these investments can be seen clearly and in more detailed. The development of investment in Central Java Province in 2007 is based on the aggregation of SAM as shown in Table 6.

Policy Simulation Analysis

Scenario simulation analysis of policy with SAM model aims to find out how the impact of investment policies by the government of Central Java area of inter-class incomes and regional economic growth. The counting process in the SAM model is based on the assumption that returns to scale, making it impossible to increase the input of two-fold which would increase output more or less than two-fold. This simulation is also based on government policies regarding investment through Presidential Instruction Policy no 3 in 2006 as the following.

Simulation 1: The allocation of investment growth on their respective businesses is in Central Java in 2007; this simulation is used to see the pure impact of investment in 2007 on incomes and economic growth in Central Java.

Simulation 2: Development of an investment in the simulation is done through increasing investment in Central Java development in 2007, namely with the addition of 10 percent in production sector block to all sectors of business in the aggregate balance sheet of socio-economic system.

Each simulation scenario can be explained as follows. In this section, the first analyzes the results of simulation 1 or it can be seen on how the development of investments in Central Java in 2007 affects incomes and economic growth in Central Java. The impact of investment in 2007 against the public revenue is seen through the household income changes. Economic growth is seen through changes in the income scale production sector. Furthermore, based on simulation analysis we can see the impact of investment in 2007 on incomes

and economic growth in Central Java, as shown in Table 7.

It is found that the impact of investments in Central Java in 2007 occurred in the largest block of input and it results in total value added of domestic private capital which has increased by Rp 1.510.574,89 or an increase of 3.03 percent. Meanwhile, the impact of the largest investment to increase revenue production factor labor in leadership, management, military, professional and technical wage earners and clerical salaries, sales, services unpaid salaries totaled 3.55 percent and 3.47 percent. The labors of production, leadership, management, military, professional, and technicians did not receive wages and salaries, and administrative, sales, services are unpaid with wages in Central Java. The most benefit is from the investment policy in 2007 than any other production factors.

At institution block, it is known that the impact of the first simulations of investment policy is on the largest employers in the sector of the upper class, rather than agricultural employers, managers, military, professionals, technicians, teachers, clerical workers and sales of the upper class in the city, which is equal to 3.15 percent . That is, if the government imposes additional policy by 10 percent, most large institutional block receives the benefits as a top class business sector, rather than agricultural employers, managers, military, professionals, technicians, teachers, clerical workers and the elite who live in the city. Meanwhile, sectors that receive the smallest benefit to this institution block are farm worker families that are only equal to 2.90 percent. However, if the farm worker families received the greatest benefit equal to Rp 1.289.254,94, they would still have impact on the smallest investment policy that is Rp 467.238,60. Thus, the impact of investment in Central Java has not been able to improve the welfare of farm worker families. Unfortunately, the number of poor people in the region of Central Java is dominated by farm worker families.

Table 7 concerns the distribution of household income. The impact of investment development increases the total household income for Rp 4.719.812,32. The total increase is then distributed to each household group. It is known that the impact of investment policy is not equitable. The impact of the largest investment is received by agricultural entrepreneurs while the lowest is by farm worker families, as well as free business people. It is considered low as accepted by administration, traders, and free workers of transportation sector, individual service, blue collars, rather than the labor force and the group located in the countryside.

In the production sector block, the largest impact of investment revenue is received in the mining, processing industries except for food, electricity, gas and drinking water although the percentage increase is small enough, only 2.73 percent. Yet, the value could increase by Rp 11.386.383,27. Meanwhile, the largest increase in percentage obtained in the sector of financial institutions, real estate, government, and social services and cultural and entertainment services. This sector increased by 3.75 percent with revenues of Rp 2.795.515,84. Growth in the production sector reflecting the economic growth can be seen through the amount of revenue received, increasing by Rp 29.594.947,52, or by 3.02 percent.

Based on the simulations of investment policy in the second scenario, i.e. by adding an injection of 10 percent to the existing investments growth in 2007, it shows the degree how it affects people's income and economic growth in Central Java. The impact of investment policies in 2007 was against the public revenue as defined in this study. It can be seen through the household income changes, and the impact of investment policy on economic growth can be seen through the mass production sector earnings changes. In general, the impact of investment policy in 2007 on incomes and economic growth can be described in Table 8. It appears that the block of production factors and the impact of the largest investments will result in total value added of

Table 9
Comparison of Investment Impact towards the Community Incomes

Industry Blocks	Simulation 1	Simulation 2	Index of Changes
Farmer workers	467.238,60	738.278,69	**0,5801**
Agriculture business people	**1.289.254,94**	**2.017.109,10**	0,5645
Free Low level business people, administrations, vendors, free transportation workers, individual services, blue collars, non workforce and low level of unclear job in villages	563.302,60	883.542,60	0,5685
Free-high level workers, business people of non agriculture, managers, military, professional, technicians, teachers, clerical administration, and high level sellers in villages	477.041,20	750.354,62	0,5729
Low level business people, clerical administration, vendors, free transportation workers, individual services, blue collars, non workers, and unclear workers in cities	802.531,76	1.263.885,92	0,5749
High level workers, business people of non agriculture, managers, military, professional, teachers, technicians, clerical administration, and high level sellers in cities	1.120.443,22	1.754.024,78	0,5655

Source: Summary of Analysis of SNSE

Table 10
Comparison of Investment Impact towards
Economic Growth of Production Sectors

Production Sector Blocks	Simulation 1	Simulation 2	Index of Changes
Food plantation agriculture, farms, fishery, food industries	7.104.831,90	10.813.913,41	0,5221
Other plantation agriculture, forestry, and hunting	559.606,23	1.410.585,57	**1,5207**
mining, processing except food, electricity, gas, and drinking water	**11.386.383,27**	**15.611.012,51**	0,3710
trade, restaurants, and hotels, transportation, and communication, individual services and household	7.748.610,28	12.133.772,96	0,5659
Financial institutions, real estate, public, social services and culture, entertainment services	2.795.515,84	4.962.293,30	0,7751
TOTAL	29.594.947,52	44.931.577,76	0,5182

Source: Summary of Analysis of SNSE

domestic private capital which has increased by Rp 2.311.499,99 or an increase of 4.64 percent. Meanwhile, the impact of the largest investment of the first and the second largest revenue on the increase in the production factor labor occurs in the sectors of leadership, management, military, professional and technical sector wage earners and clerical salaries, sales, services unpaid salary each increased by 6.08 percent and 5.71 percent. That is, the two sectors are the sectors that received the most benefit from the injection of investment policies by 10 percent.

The results of analysis showed that the block of institutions, domestic agricultural entrepreneurs have the highest receipts of Rp 2.017.109 i.e., 10 or increased by 4.72. On the other hand, the effects obtained at the lowest class of farm worker households are of Rp 738.278,69 or by 4.58 percent. It can be seen in Table 8 on top of the distribution of household income. The impact of investment development is to increase total household income for Rp 7.407.195,70. Furthermore, the total increase is distributed to each household group. As a result, it appears that the impact of investments at the uneven distribution of income occurs, where the impact of the largest investment by households is received by agricultural entrepreneurs, while the lowest impact is received by farm worker families.

In this case, this study explains that the investment policy implemented by the government of Central Java, both before and after the injection by 10 percent, still provides the smallest benefit to the farm worker

families. Thus, it can be concluded that the policy of the investment climate in Central Java can increase revenues and economic growth but it is unable to improve the welfare of farm worker families. In other words, the investment policy by the government of Central Java has not been able to reduce poverty significantly because the farm worker families with their poverty are only to receive the smallest benefit from the existence of the investment policy.

In the production sector blocks, known as beneficiaries, received the largest impact of investment are mining sector, manufacturing industry (except food), electricity, gas, and water supply increased by Rp 15.611.012,51 although the percentage only increased by 3.75. Meanwhile, the largest impact of investment is on the agricultural sector, the crops, forestry, and blue collar workforce. This sectors increased by 7.68 percent with revenues of Rp 1.410.585,57. The growth in the production sector reflects that the economic growth increase by Rp 44.931.577,76, or by 3.48 percent.

Investment Impact on Public Revenue and Economic Growth

The impact investments on community income can be seen through the second institution block of the simulation results. Meanwhile, the impact of investment on economic growth itself can be seen through the production sector block indicated by the simulation. Based on the two simulations, the largest impact of investment is received by household entrepreneurs. The revenue from the smallest community is located on the farm workers income, but they received the biggest percentage of effect that is equal to 0.5801 percent. In the simulation 2, it occurs because it is the addition of 10 percent in Central Java investment growth in 2007 in order to implement investment climate policy package.

The biggest impact of investment on economic growth in Central Java is displayed in the production sector block indicated by the simulation 2. The value of benefits in simulation 2 shows the bigger results due to the increase in investment policy (injection) by 10 percent to the growth of investment in Central Java in order to improve the investment climate policy package. The value of this ratio can be seen in Table 10. Index changes affect the largest increase of the injection by 10 percent policy, also other crops such as agriculture, forestry, and labor which is equal to 1.5207 percent. However, other crop agriculture, forestry, and blue collar workforce still receive the value of the smallest investment impact on economic growth. Meanwhile, sectors that receive the largest investment impact on economic growth is the mining, processing industries except for food, electricity, gas and drinking water with an index change of 0.3710 percent.

Table 10 shows the impact of each simulation. Simulation 1 has a smaller impact, since there is no injection of investment climate policy package, resulting in the impacts which are received less than the maximum. In simulation 2, the increase in investment increase by 10 percent is resulted in the total impact of investment which increases by Rp 44.931.577,76. That is, the total impact of the policy by 10 percent additional injection was able to increase the impact of the average total investment totaled to 51.82 percent. This shows that the policy injection by 10 percent affects other blocks of crop agriculture, forestry and blue collar workforce. It was the biggest percentage. However, the impact of these policies is that it creates the greatest value that is on the blocks of the mining, processing industries except for food, electricity, gas and drinking water. This phenomenon strengthens previous argument that investment policies are indeed to have a big percentage of impact on agriculture. However, the value of the benefit remains small so that it has not yet been able to improve the welfare of farm worker families who are still poor.

It can be noted that the people's income and economic growth exposes the impact of investment policy. It shows the condition

Tabel-11
Comparison of Impact of Investment Policy Simulation

Block	Initial Condition	Simulation 1	Simulation 2	Index of Changes
Production Factors	181.190.960,59	186.723.550,79	189.833.353,48	0,0166
Institutions	156.754.090,09	161.473.902,41	164.161.285,79	0,0166
Production	980.870.463,98	1.010.465.411,50	1.014.988.128,32	0,0045
TOTAL	1.318.815.514,05	1.358.662.864,70	1.364.485.371,11	0,0043

Source: Summary of Analysis of SNSE

changes before and after the affected investments. Changes in the investment impact on people's income occurred in the blocks production factors: each institution of 0.0166 percent. The impact of investment on economic growth that occurred within blocks of the production sector amounted to 0.045 percent. That is, the impact of investment policies in these scenarios still has a greater influence on people's income than on economic growth. Meanwhile, a total change of policy appears in the third block of only 0.0043 percent as seen in Table 11.

In reference to the discussion above, several important findings can be asserted as the following. In general, the policy implications of these investments have impact on household incomes and economic growth in Central Java.

First, it was found that foreign private capital in the country provides the greatest impact on production factor block. With the simulation of development of investment, an increase in capital that can be used for expenditure, results in increased demand for goods and services. The increase of goods and services in the multiplier effect will ask for other goods and services. This is caused by the need for raw materials and additional production activities to meet increased demand for goods and services.

Second, the institutional block, the increase in household income farm workers in the percentage also increase. Thus, the future is expected to induce a little inter-institutional transfer of economic actors in community, the multiplier effect can lead to revenue that can increase institutions and other economic actors. Then, the increase in revenue on institutional block will be used for expenditure in the form of demand for goods and services. If we only look at people's income through income per capita, distribution of income received by each community group does not exist.

Third, in production sector block, the increase of capital and incomes is shown in the increasing demand for goods and services. It also increases the output of economic sectors and then proceeds from the production sector to rotate back to be used in production factor block and institutional block. The existence of capital causes higher productivity. This is because of productivity resulting in increased revenues received, increased savings, investment increase, and so on as described in most macroeconomic theory, (Dornbusch, 2008; Samuelson, 2001).

In addition, the condition of people's income and economic growth before and after the impact of investment policy are displayed. The condition before and after investment implementation does not change, in fact, it is only 0.015 percent. But this can be proved that the investment has a positive impact on economic growth and incomes. This is because of the investment representing the purchase of capital goods (capital stock) and production equipment in order to replace and especially the increase of capital goods in the economy used to produce goods and services in the future. In other words, investment is an activity improving the capacity of creating good economy, so the level of investment into one of the economic determinants affects the rate of economic growth and welfare of the community, (Sadono, 2004).

CONCLUSION

It can be concluded that that the investment provides a positive impact on incomes. The revenue affecting communities are the largest employers of farm workers income which is totaled Rp 1.289.254,94. On the other hand, the smallest impact of investment on household income is received by farm workers at Rp 467.238,60. The people's income distribution is not yet equitable to every class of community. In addition, it is found that the investment provides a positive impact on economic growth. Through the production sector block, it shows that the biggest impact of investment on economic growth comes from the mining, processing industries except for food, electricity, gas and drinking water for Rp 15.611.012,51. Meanwhile, the smallest impact is on agriculture, forestry, and blue collar workers. The condition of people's income and economic growth before and after the investment is not affected. However, this proves that investment policy is still able to provide a positive impact on household incomes and economic growth.

The Central Java investment growth can increase the acceptance of input blocks, so the multiplier effect of acceptance from the input block will be used by institutional block as fringe benefits in the form of revenue. Furthermore, the increase in production factor and institutional blocks directly increase the output of production block. On the other hand, the investment climate policy package seems, indeed, to have become one of the non-economic factors that support the investment itself in increased revenue and economic growth.

The investment climate policies are the factors supporting investment climate policies, among others; bureaucracy and licensing, infrastructure, and investment protection from illegal fees that must be considered, so that the implementation of investment today and in the future to run more effectively and efficiently. Therefore, the policy of improving the investment climate must be done thoroughly and integrated simultaneously, in order to support real economic sectors of community for the added value is the maximum contribution, because at the time of the research, some of the real sectors in Central Java have not been touched by the development of investment policy.

REFERENCES

Andi Alfian Parewangi, 2005, "An Analysis of The Direct Subsidy to The Farmers Household in Indonesia: Application of The SAM Model", *Journal of Development Economy*, FE-UI, Jakarta.

Antara Made, 2000, *Dampak Pengeluaran Pemerintah Dan Wisatawan Serta Investasi Swasta Terhdap Kinerja Perekonomian Bali: Suatu Simulasi Model Social Accounting Matrix*. Tidak Dipublikasikan, Program Pascasarjana, Institut Pertanian Bogor.

Aris Yunanto, 2005, "Konsep Analisis Dampak dan Analisis Pengganda: Output, Pendapatan & Tenaga Kerja", *Makalah Pelatihan Input-Output & SNSE*, Lab FE-UI & DIKTI, Depdiknas, Cisarua, 28 November-1 Desember, 2005.

Basri Rizak, 2006, Analisis Peranan Sektor Agroindustri terhadap Pendapatan dan Kesempatan Kerja di Sulawesi Selatan, *Jurnal Analisis*, Maret, 2006, Vol 3, No. 1, Hal. 25-38.

BPS, 2005, *Sistem Neraca Sosial Ekonomi Jawa Tengah 2004*, Semarang

BPS, 2007, *Jawa Tengah Dalam Angka*, Semarang

Blakely, Edward James, 1994, "*Planning Local Economic Development: Theory and Practice*", Second edition, Sage Publication.

Daryanto, A., 2000, Social Accounting Matrix Model for Development Analysis, *Mimbar Sosek*, 14(3): 23-43.

Djoni Hartono, 2005, "Dekomposisi SNSE: Analisis Dampak dan Analisis Keterkaitan Antar Sektor & Sektor Kunci", *Makalah Pelatihan Input-Output & SNSE*, Lab FE-UI & DIKTI, Depdiknas, Cisarua, 28 November-1 De-

sember, 2005.

Dornbusch, Rudiger, Stanley Fischer, and Richard Startz, 2008, "*Macroeconomics*", 10th, New York: McGraw-Hill, Inc.

Dumont, J.C., 2003, *SAM Multiplier Analysis*, http://www.crefa.ecn.ulaval.ca/develop/Fiche Multiplicateur.pdf.

Edi Suharto, 2005, "*Analisis Kebijakan Publik*; *Panduan Praktis Mengkaji Masalah dan Kebijakan Sosial*, Alfabeta, Bandung.

Jhingan, ML., 2000, *Ekonomi Pembangunan dan Perencanaan, Rajawali Press, Jakarta*

Mudrajad Kuncoro, 2003, *Ekonomi Pembangunan: Teori, Masalah dan Kebijakan, Edisi Ketiga*, UPP AMP YKPN, Yogyakarta.

Mudrajad Kuncoro, 2005, *Menanti Reformasi Iklim Investasi/Bisnis Di Indonesia*, Online, www.mudrajad.com/ [accessed 01/04/09]

Nokala, Marko, 1997, *Social Accounting Matrices and Sectoral Analysis: The Case of Agricultural Sector Investment In Zambia*. www.iioa.org/ [accessed 01/04/09]

P. Eko Prasetyo, 2008, Struktur Fundamental dan Kinerja Perekonomian Jawa Tengah: Pendekatan Model Sistem Neraca Sosial Ekonomi (SNSE), *Laporan Penelitian*, Tidak dipublikasikan, FE Unnes, Semarang.

P. Eko Prasetyo, 2009, Kinerja Pembangunan Ekonomi Daerah Kabupaten Semarang, *Jurnal Asset*, Volume 11, No. 1, Maret 2009, STIE Widya Manggala, Semarang

Priyarsono, et al. 2007, Peran Investasi di Sektor Pertanian dan Agroindustri dalam Peyerapan Tenaga Kerja dan Distribusi Pendapatan: Pendekatan Sistem Neraca Sosial Ekonomi, *Jurnal Agro Ekonomi*, Fakultas Ekonomi dan Manajemen, IPB, Bogor

Pyatt, G. and J. Round, 1985, Social Accounting Matrices: A Basis for Planuse the service of Islamic Microfinance ning, *The World Bank*, Washington D.C.

Sadono Sukirno, 2004, *Makroekonomi Modern: Perkembangan Pemikiran Dari Klasik Hingga Keynesian Baru*, Rajawali Press, Jakarta.

Sadoulet, Elisabeth, and Alain de Janvry, 1995, "*Quantitative Development Policy Analysis*", Johns Hopkins University Press.

Samuelson Paul A., and William D Nordhaus, 2001, "*Macroeconomics"*, 17th , New York: McGraw-Hill Companies

Sri Hery Susilowati, et al. 2007, Dampak Kebijakan Ekonomi di Sektor Agroindustri terhadap Kemiskinan dan Distribusi Pendapatan Rumah Tangga di Indonesia: Analisis Simulasi dengan Sistem Neraca Sosial Ekonomi, *Jurnal Agro Ekonomi*, Volume 25 No.1, Mei 2007: 11-36, IPB, Bogor

Suratman, Eddy, 2004, *Dampak Kebijakan Pengembangan Kawasan Perbatasan Terhadap Kinerja Prekonomian Kalimantan Barat: Analisis Simulasi dengan Pendekatan Sistem Neraca Sosial Ekonomi*, Jurnal Ekonomi, UNDIP, Semarang

Thorbecke and Khan H.A., 1989, Macroeconomic Effects of Technology Choice: Multiplier and Structural Path Analysis within a SAM Framework. *Journal of Policy Modeling*, 11(1):131-156.

Wanjala Bernadette and Maureen Were, 2005, *Impact of Investment in Kenya's Priority Sectors on Gendered employments Outcomes: A Social Accounting Multiplier Analysis Approach*, Online https://editorialexpress.com/ [accessed 01/04/09]

Wayan R., Susila dan IDM Darma Setiawan, 2007, Peran Industri Berbasis Perkebunan dalam Pertumbuhan Eonomi dan Pemerataan: Pendekatan Analisis Sistem Sosial Ekonomi, *Jurnal Agro Ekonomi*, Volume 25 No. 2, November 2007:125-147, IPB, Bogor.