

Impact of SEI Mangkei Special Economic Zones in Perspective Rural–Urban Linkages: Case Simalungun Regency, Indonesia

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Abstract: This study aims to analyze the priority sectors that need to be encouraged in the development of the Sei Mangkei special economic zone in order to have a positive impact on the surrounding areas in the future. This study uses descriptive quantitative research with Input-Output (I-O) analysis method. The results of this study find regional economic sectors with high sensitivity index are secondary and tertiary sectors. The sector with a low boost factor index is the primary sector. This study suggests that investment injections be prioritized in the secondary sector and tertiary sector.

Keywords: Special Economic Zones, Impact, Sei Mangkei, Rural Urban Linkages. Simalungun Regency.

INTRODUCTION

Hirschman's AO [1] was the first economist to operationalize the concept of linkage that defines the relationship between the linkage with economic development. In [1] frame of mind, investment plays a dominant role in economic development as a capacity creator, income stimulator, and foundation layers to increase investment. Therefore [1] proposed development strategy primarily emphasizes linkage as a mechanism to encourage further investment and makes it easier for policy-makers to make investment decisions.

City (urban) macro problems related to the function of the city for the surrounding area. Urban has no passive understanding because the urban has an active role for the surrounding area. The function of the urban in this study is limited to the urban as a center for the development of processing industry and marketing function for the surrounding area. City growth is also not stand alone, but related to the surrounding area related to the hinterland and even abroad [2]. If the economic linkage between sectors is high enough, this means that the development linkage will also be quite good. Therefore, to realize integrated development, priority is given to sectors with high inter-sectoral and vice versa [3]. Sectors that play an important role in national economic development in most developed countries are the secondary sector [4].

In relation to the opinion of the experts above, the question that arises and needs to be answered through this research is how the impact of SEZ Sei Mangkei's linkage to the surrounding regional economy so that investment injection and development program is carried out in the right direction and more optimal to encourage regional development in order to create integration and balance of growth area it with the surrounding area in the future.

The study of urban (macro) urban issues related to the functioning of the city to the surrounding area in the area of special economic zones has been of concern to researchers in the field of urban issues such as the latest research review of [5-8]. Within the scope of Indonesia, the study of the development of special economic zones has become a general study, but no one is concerned about the future and environmental impacts of operating the palm oil industry in the area of special economic zones within the local government system in Indonesia.

The realization of the development policy of oil palm agro industry in North Sumatra Province is SEZ Sei Mangkei Development under the name Sei Mangkei-Integrated Sustainable Palm Oil Industrial Clusters (SM-ISPOIC) as expansion of palm oil industry in improving the added value of high quality products exported by PT . Perkebunan Nusantara III (Persero). In the early stages of 2011, the project required space for an industrial site covering an area of 104 hectares and expanded again to 2002.77 hectares. To support the project, the Indonesia government spends 2.7 trillion IDR for the development of toll road infrastructure, the Sei Mangkei-Kuala Tanjung railway, and the dry port of Kuala Tanjung international hub. SEZ Sei Mangkei is designed to accommodate more than 200 world-class industrial units that are significant for the realization of Indonesia's competitiveness into the future.

Statistical Bureau noted, Production and Area of Oil Palm Plantation from Large Plantation and Smallholder Plantation in North Sumatra Province in 2011 - 2016, FFB of Large Plantation and FFB from People's Plantation continue to increase from 2.63 million tons in 2011 rose to 5.03 million tons in 2016. FFB production of smallholder plantations, amounting to 5.43 million tons in 2011 rose to 5.78 million tons in 2017. CPO production from 618 thousand tons in 2011 rose to 1.13 million tons in 2016. The production of palm kernel by 111.87 thousand tons in 2011 rose to 210.81 thousand tons in 2017. The data of land area for oil palm plantations, for large plantations of 182, 72 thousand hectares in 2011 rose to 289.945 thousand hectares in 2017 while smallholders plantations, of 405.80 thousand hectares in 2011 rose to 417.81 thousand hectares in 2017.

The investment that goes to SEZ of Sei Mangkei is in the form of investment of Indonesian government, State-Owned Enterprise and private company Domestic Investment / Foreign Affairs. Total Realization of investments coming into Sei Mangkei SEZ 2013 - 2017 amounting to 5.10 trillion IDR. Besides UOI Co.Ltd., many foreign investors have expressed interest to invest in building a factory in SEZ Sei Mangkei (Annual Report Sei Mangkei SEZ, 2016). SEZ has been designated as a pilot model for SEZ development throughout Indonesia (SEZ of Sei Mangkei, 2017) and even 2018, this industrial area has been proposed to be one of New Town from 4 new city proposed by the Ministry of Public Works and People's Housing of Indonesia.

From publication data of 2017, it is known that Indonesia's Gross Domestic Product (GDP) is 12.406,81 trillion IDR with an average growth of 5.02% nationally and North Sumatra GDP of 628.39 trillion IDR with an average growth of 5.16% in 2016. In addition, the Open Unemployment Rate (OUR) is increasing, ie, the Indonesian OUR of 14.10 million people and the North Sumatra Province OUR of 258, 71 thousand people.

From the data of Statistical Bureau publication of North Sumatra Province and Regency / City in it, the following conditions are known, OUR of North Sumatra Province has increased from 6.37% in 2011 to 6.71% in 2015. Overall especially in regencies / cities surrounding SEZ Sei Mangkei which decreased OUR from 6.14% in 2011 decreased to 5.82% in 2015. Overall in North Sumatra Province, economic growth rate decreased from 6.63% in 2011 to 5.18% in 2016.

Based on the circumstances described above, it is necessary to analyze the relevance of Sei Mangkei SEZ palm oil industry development to the regional economic sector in the surrounding area in order to determine the projection of investment injection and programs that will be developed in accelerating the development of the region. Research questions how much number is the index of Sei Mangkei SEZ Development relationship to the economic sector with the surrounding area?

RESEARCH METHODS

The location of the research is SEZ Sei Mangkei, located in Bosar Maligas Sub-district, Simalungun Regency, North Sumatra Province-Indonesia. This research as a quantitative research. This quantitative approach departs from the data to then be processed into useful information [9]. According to the method, this research includes descriptive research. The unit of analysis of this research is all business operations that live in SEZ Sei Mangkei and surrounding areas. According to the data sources, this study uses the existing secondary data (as given) and the primary data of the survey results. Data collection was conducted in two ways, namely secondary and primary survey.

Input-Output Analysis

To analyze the linkages of SEZ Sei Mangkei agroindustry development to the area around used I-O Analysis to obtain the value of coefficient I-O. Furthermore, the I-O coefficients are applied to calculate the pull faktor index and degree of sensitivity index. The calculation is done by using Microsoft Excel. In the absence of I-O coefficient value which illustrates sectoral economic flows in SEZ, the first model of the Sei Mangkei I-O Table is used as a modification of the Leontief I-O table model. Then the Model I-O with 3 x 3 matrix (3 rows and 3 columns) is used because the economic sectors of the region are first aggregated in 3 main sectors, namely primary, secondary and tertiary sectors, as shown below:

Table-2.1. I-O Transaction Table With 3 Sectors

Input Source :	Output Allocation					Total		
	Intermediate Demand					Final Demand	Available Goods	
							Import	Total Output
	Production Sectors							
a. Intermediate Input:	Quadrant - I					Quadrant -II		
Primary Sector	x ₁₁	..	x _{1j}	..	x _{1m}	F ₁	M ₁	X ₁
Secondary Sector	x ₂₁	..	x _{2j}	..	x _{2m}	F ₂	M ₂	X ₂
Tertiary Sector	x ₃₁	..	x _{3j}	..	x _{3m}	F ₃	M ₃	X ₃
	Quadrant -III							
b. Primary Input	V ₁	..	V _j	..	V _m	Quadrant -IV		
Total Input	X ₁	..	X _j	..	X _m			

Source: [10] modified.

Backward Linkage Analysis (Spreading Power) and Future Linkage (Derivative of Sensitivity)

This linkage analysis explains how the relationship between final demand for output and impacts on input demand in the upstream sector in one sector and produces a double effect on the overall input and output of other sectors in an economy.

The relationship between Output with coefficient multipliers and the final demand can be formulated in a matrix equation as shown below:

Table-2.2: The Relationship Between Output, Coefficient of Multiplier and Final Demand

X ₁		b ₁₁	..	b _{1j}	..	b _{1n}		F ₁	
..		
X _i	=	b _{i1}	..	b _{ij}	..	b _{in}		F _i	
..		
X _n		b _{n1}	..	b _{nj}	..	b _{nm}		F _n	

Where :	b _{ij} =	Fill cell line to i column to j of inverse matrix (I - A) ⁻¹
	X _i =	Output sector i
	F _i =	Sector final demand i
	i =	1, 2, ... n
	j =	1, 2, ... m

Can also be written in the following matrix equation:

$$X = (I - A)^{-1} F \dots\dots\dots (1)$$

From the above equations we can see that any change of final demand from sector i (F_i) of 1 unit will result in a change in X₁ of b₁₁, to X₂ of b₂₁, to X₃ of b₃₁ and so on. In general the number of impacts posed by sector i on sector j is:

$$r_j = b_{1j} + b_{2j} + b_{3j} + \dots\dots\dots + b_{nj} = \sum_j b_{ij} \dots\dots\dots (2)$$

Where: r_j = The total impact of changes in sector i demand on the entire economy (sector j). b_{ij} = impact on sector j due to changes in sector i.

From the above formula 2 can be calculated the average impact that occurs on the output of each sector as a result of changing the final demand for a particular sector:

$$Y_j = \left(\frac{r_j}{n} \right) = \frac{1}{n} \sum_j b_{ij} \dots\dots\dots(3)$$

Where: Y_j = average impact on output of each sector due to changes in sector final demand i.

In order to be comparable, the attractiveness of each sector should be normalized, i.e the impact of the sector divided by the overall impact of the sector. Once normalized, it can be determined which sectors are above average impact and which sectors are below average. The output of each sector that changes, due to changing the final demand of a particular sector, can be normalized by finding the average, that is by using the formula:

$$\alpha_j = \frac{\sum_i b_{ij}}{(1/n) \sum_i \sum_j b_{ij}} \dots\dots\dots (4)$$

Where: α_j is the pull factor index of sector [10].

CONCLUSION

If the value $\alpha_j = 1$ then the pull factor is equal to the mean of the region (the average of the whole sector); If the value of $\alpha_j > 1$ then pull factor exceeds the region's average, and if the value of $\alpha_j < 1$ then pull factor is lower than the regional average.

This means that, the sector with a pull factor index greater than 1 means the ability of this sector to make greater changes in the downstream sector that attract the upstream sector to contribute to developing (backward linkages) there is a translating pull factor because it is attractive to the sectors that were previously developed.

From the equation 5 can also be seen the overall impact that occurs on the output of sector 1 (X_1) if the final demand of some sectors changed. If F_1 changes to 1 point, then output X_1 changes by b_{11} , if F_2 changes 1 point, output X_1 changes by b_{12} , if F_3 changes 1 point, output X_1 changes by b_{13} and so on. It can be described in terms of equations as follows:

$$s_i = \sum_j b_{ij} \dots\dots\dots(5)$$

Where: S_i = Number of impacts on sector i as a result of changes in various upstream sectors in the region's economy.

In order to compare the degree of sensitivity between one sector and another, it is necessary to compare the degree of sensitivity of the sector to the overall sector average (or need to be normalized). The formula to calculate the degree of normalized sensitivity is as follows:

$$\beta_i = \frac{\sum_j b_{ij}}{(1/n) \sum_i \sum_j b_{ij}} \dots\dots\dots (6)$$

Where: β_i = Sector Degrees-Sensitivity Sector i or abbreviated Degree of Sensitivity [11].

CONCLUSION

If the value $\beta_i > 1$ means the sector has a degree of sensitivity that exceeds the regional average; If the value $\beta_i = 1$ then the degree of sensitivity is equal to the mean of the region (the average of the whole sector); If the value $\beta_i < 1$ then the degree-sensitivity is lower than the average region.

RESULTS AND DISCUSSION

SEZ of Sei Mangkei project is effective to start operation with production capacity of 75 tons CPO of FFB of palm per hour. PKO plant 400 tons of palm kernel oil/day has been in operation since 2011 which produces CPKO products used as raw materials for the oleochemical industry. The UOI Co.Ltd. has been operating in 2015 which produces a 15,000 ton / year surfactant; glyserin 16,500 tons / year; soap noodle 40.000 ton / year; fatty acid 135,000 tons / year. On an area of 27 Ha, UOI Co.Ltd. employs 550-600 workers and creates a multiplier effect such as generating small and medium-sized micro business, operating since 2015.Total Realization of investments entered into SEZ of Sei Mangkei 2013 - 2017 amounting to 5.10 trillion IDR. The development of investment during the last 5 years in SEZ detailed according to the source can be seen in table 1 below:

Table-3.1. Total Realization of Investment in SEZ, 2013 – 2017

Year	Source (billion IDR)			
	Government of Indonesia	Private Domestic	Private Foreign	State Enterprises
2013	-	1.000,00,-	3.350,00,-	6,62,-
2014	-	-	-	8,14,-
2015	297,95,-	-	-	57,05,-
2016	392,60,-	-	-	23,35,-
2017	-	-	-	8,43,-
	650,55,-	1.000,00,-	3.350,-	103,59,-

Source: SEZ Sei Mangkei, 2017.

In 2017, several developments within the zone are carried out: public road lighting, main gardu connecting as the control center of the zone, gates and landscape of the area, road (Row 43A & Row 34E) and environmental channel, area (at three locations), Pagar area, water treatment plant capacity 500 - 900 m³ / days, land mapping for API Co.Ltd. plan, and clean water distribution network to tenant. The number of workers working in Sei Mangkei SEZ and industries located in the region there are about 783 people. Moreover, the number of employed in Sei Mangkei SEZ and industries located in the area during the survey can be seen in table 3.2.

Table-3.2: Number of Workers of SEZ

No.	Company	Labour (people)
1	SEZ of Sei Mangkei's Home Office	104
2	Tank Farm	160
3	Palm Kernel Oil Factory	80
4	Unilever Oliochemical Indonesia, Co. Ltd	429
5	KINRA Co. Ltd.	10
Amount		783

Source: Survey Results, 2017.

Sei Mangkei SEZ Input-Output Table

Results of field enumeration SEZ Sei Mangkei Input-Output Special Survey found cost structure of 3 economic sectors (primary, secondary and tertiary) consisting of intermediate and primary cost, as seen in tables of economic sector cost structure.

Table-3.1.1: Classification of 3 Economic Sectors of SEZ

I-O Code	Sector	Classification 14 Subsectors
1	Primary	1. Agriculture, and 2. Excavation
2	Secondary	1. Processing Industry, 2. Electricity, 3. Gas, 4. Clean Water and 5. Construction
3	Tertiary	1. Trade, 2. Hotels and Restaurants, 3. Transportation and Communication, 4. Finance, 5. Rental, 6. Company Service, and 7. Other Services.

Source: Processing Results, 2017

The table I-O presentation uses the sectoral cost structure approach taken from Table I-O of Indonesia Statistical Bureau, Domestic transaction on the basis of price by 17 Products, 2010. From 17 sectors then aggregated into 3 sectors with the detail of sectoral cost structure as follows: Primary Sector: 16,24 %; Secondary Sector: 49,09%; and Tertiary Sector: 34,72%. The assumption of CPO from FFB at producer level is 1,350 IDR/kg. CPO at a price of 7,300 IDR/kg; PKO with the price of 6.475 IDR/kg and Palm Shell at the price of 800.000 IDR/ton. The value of this cost structure is also used as the base data to form the Sei Mangkei I-O table. The Sei Mangkei SEZ economic cost structure tables are presented as follows:

Table-3.1.2: Cost Economics Structure of SEZ

No.	Description	Primary Sector	Secondary Sector	Tertiary Sector
		(%)	(%)	(%)
I	Intermediate cost	22.34	36.16	39,72
	A. General Cost:	7.44	1.66	39,72
	B. Special Cost:	14.85	34,50	0.10
II	Primary cost	77.66	63.84	60,28
III	Income (output)	100	100.00	100.00

Source: Processing Results, 2017

Table-3.1.3: Input Output Table of SEZ (billion IDR)

Sector	1	2	3	180	301	302	303	304	305	309	310
1	102.04	1,198.16	0.00	1,300.20	412.95	0.00	1,016.49	119.82	0.00	1,549.25	2,849.46
2	150.51	573.66	390.15	1,114.32	275.30	136.70	2,051.66	71.29	855.49	3,390.44	4,504.76
3	126.53	85.25	913.74	1,125.53	229.41	17.91	1,635.76	109.65	0.00	1,992.74	3,118.26
190	379.09	1,857.07	1,303.89	3,540.05	917.66	154.62	4,703.92	300.76	855.49	6,932.43	10,472.48
200	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
201	12.25	342.55	562.86	917.66	0.00	0.00	0.00	0.00	0.00	0.00	0.00
202	1,270.62	2,930.95	1,616.95	5,818.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00
203	37.76	5.14	12.00	54.89	0.00	0.00	0.00	0.00	0.00	0.00	0.00
204	1.02	0.00	140.35	141.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00
209	1,321.64	3,278.63	2,332.16	6,932.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
210	1,700.73	5,135.71	3,636.05	10,472.48	917.66	154.62	4,703.92	300.76	855.49	6,932.43	10,472.48

Source: Processing Results, 2017

Description: Sector Code 1 = Primary Sector; 2 = Secondary Sector; 3 = Tertiary Sector; 180 = Number of Intermediate Demand; 190 = Number of Intermediate Input; 200 = Import; 201 = Wages and Salaries; 202 = Business Surplus; 203 = Depreciation; 204 Indirect Taxes; 209 = Gross Added Value; 210 = Number of Inputs; 301 = Household Consumption Expenditure; 302 = Government Consumption Expenditure; 303 = Fixed Capital Formation; 304 = Stock Changes; 305 = Export of Goods and Services; 309 = Number of Final Demand; 310 = Number of Demand; 409 = Total Import of Goods and Services; 509 = Revenue Margin and Freight Cost.

Multiplying Matrices

The multiplier impact is an impact that occurs directly or indirectly to various economic activities due to changes in the exogenous variables of the economy. To calculate the multiplier matrix is done through 4 stages, as follows: Calculating the input coefficient matrix (matrix A) to obtain the value of the input sector coefficient by dividing the input value of an economic sector to the total value of inputs of the economy sector; Create an Identity matrix (I) where the main diagonal value is 1 and the other elements are 0; Calculating (I-A) by subtracting the value of the identity matrix by the input coefficient matrix value; Calculating the multiplier matrix $(I-A)^{-1}$ and Total Multiplier, calculated by converting the matrix (I-A). Then sum up the matrix values either vertically or horizontally to obtain the total multiplier value. Total multipliers both vertically and horizontally in the later stages are used to measure the degree of sensitivity and pull factor. Table multiplier matrix can be seen in table as follows:

Table-3.2.1. Multiplying Matrices (I-A)⁻¹ and Total Multipliers

Sector	Primary	Secondary	Tertiary	Total
Primary	1,0942	0,2882	0,0413	1,4237
Secondary	0,1225	1,1610	0,1664	1,4499
Tertiary	0,1115	0,0544	1,3434	1,5093
Total	1,3282	1,5036	1,5511	4,3828

Source: Processing Results, 2017

Pull Factor and Push Factor

I-O model can be used to find out how the level of relationship or linkage between the production sectors by calculating the level of forward linkages or also called the degree of sensitivity and the level of backward linkages or so-called spreading power.

Sectors that have high sensitivity give an indication that the sector has a forward linkage as strong as thrust compared to other sectors. Conversely, a sector with high dispersion means that the sector has as high as dependence on other sectors. The sector with the highest linkage means that the sector has the potential to produce high output as well. With certain conversion factors from output to household income and employment figures, sectors with high linkage rates will generate additional household income and additional high employment. From the calculation result by sector in

SEZ I-O Tabel 2016, then table of Pull and Push Factor value of Economic Sector of SEZ dissemination in 3 sector of economics, presented as follows:

Table-3.3.1: Pull and Push Factor value of Economic Sector of SEZ

Sector	Push Factor	Pull Factor
Primary	1,4237	1.3282
Secondary	1,4499	1.5036
Tertiery	1,5093	1.5511

Source: Processing Results, 2017

The sector of the regional economy that has the highest value in Push Factor is the Tertiary Sector with the degree of sensitivity of 1.5093. This indicates that an increase of 1 unit of output of Tertiary Sector will lead to an increase in output of other sectors (including its own sector) as a whole economic by 1.5093 units. In other words, the Tertiary Sector has a stronger thrust compared to other sectors. Next, Secondary Sector which has sensitivity level of 1.4499 and Primary Sector with sensitivity level of 1.4237. The three sectors of the economy appear to have a high degree of sensitivity, because all have a degree of sensitivity > 1.

Table 9 show that the highest Pull Factor is in the Tertiary Sector with a value of 1.5511, followed by the Secondary Sector at 1.5036 and the Primary Sector at 1.3282. The pull factor value in these 3 sectors is also high, since the power distribution value is >1.

However, since the nature of the final demand for each sector is mutually different, neither the quantity nor the average impact is inappropriate to serve as a comparative measure of the impact on each sector. Therefore, these measures need to be normalized by dividing the average value of a sector's impact with the average value of the impact of all sectors. This normalized size is called the spreading power index (α_j) or the backward linkages effect ratio. In addition, to make it easier to see which sectors have high pull factor and push factor index (after normalized) are generated in Table 3.3.2.

Table-3.3.2: Push and Pull Factor Index of Economic Sector in SEZ

Sector	Push Factor (Forward Linkages)	Pull Factor (Backward Linkages)
	Index	Index
Primary	0,9091	0,9745
Secondary	1,0292	0,9924
Tertiery	1,0617	1,0331

Source: Processing Results, 2017.

Sectors that have high forward and backward linkages index are called the excellent sectors. Sectors with high forward linkages index are called potential sectors because they have at least one high sectoral linkage index. The sector with a forward linkages and a low backward linkages index is named after a under developing (lagging) sector.

This means investment in the Secondary Sector and Tertiary Sector will have a broad impact on the economy, not only on the development of its input sectors, but also driving the growth of other output sectors.

The result of the research stated that economic sector with high backward linkages index is Sector Secondary, with index value 1.0292 and Tertiary sector with index value 1.0617. Forward linkages index of high sensitivity is Tertiary Sector with index value 1.0331. Sector with low backward linkages index is Primary Sector with value 0,9091. Sector with low fordward linkages index is Primary Sector with index value 0,9745 and Secondary sector with index value 0,9924.

Matrix Relationship Forward and Backward Linkages

Based on the calculation of push factor and pull factor index, the three sectors of the economy can be classified whether including excellent, potential or under develop sectors, through the matrix relationship forward and backward linkages as follows:

Table-3.4.1: Relationship Matrix Forward and Backward Linkages of SEZ

Description		Backward Linkages	
		High	Low
Forward Linkages	High	Tertiary	--
	Low	Secondary	Primary

Source: Processing Results, 2017.

From the Matrix of Relationship Forward and Backward linkages, shows that the Tertiary sector has a high forward and backward linkage (excellent sector). The high backward linkages indicate the high spread of the changing impact of the sector and other sub-sectors, which are in the upstream industry (input subsector). The outputs of these sectors or subsectors will be inputs for more downstream sectors or sub-sectors [12]. The secondary sector has a low forward linkage but high backward linkages, thus the sector is sensitive to other sectoral changes as a result of changes in the final demand for each sector. In the meantime, changes in the final demand for the sector have much impact on the tertiary sector due to its high backward linkages. This high backward linkages is the main reason why the agricultural industry (oil palm agro industry) needs to be a priority in agricultural development and rural economic growth. Investment in this sector will grow upstream sector, especially agriculture sector. The low forward linkage for the Primary sector is not surprising, given the sector is an upstream sector in the input-output process. Agroindustry with low forward and backward linkages is the Primary Sector, this sector is not only insensitive to other sectoral changes but also unreliable to grow other sectors if we increase investment in this sector [12].

CONCLUSIONS

From result of data analysis and discussion, formulated conclusion of research as follows:

- Regional economic sectors SEZ Sei Mangkei with high backward linkages index is the Secondary Sector and Tertiary sector. The sector with low backward linkages index is the Primary Sector. The sectors of the regional economy with a high sensitivity index are the Tertiary Sector. Sectors with low sensitivity are Primary and Secondary Sectors.
- The tertiary sector is classified as the excellent (leading) sector, the secondary sector is classified as the potential sector, while the primary sector is the underdeveloped sector. Then investment injections should be prioritized in the tertiary sector and second in the secondary sector as it will encourage and attract regional economic development in the zone (rural) and surrounding areas (urban).
- Sei Mangkei SEZ is developed as a public policy product in shaping the poles of spatial economic growth in Indonesia based on location advantage, agglomeration and external economic scale by providing fiscal and non-fiscal facilities in an effort to attract investment, which will impact on improving the forward and backward linkage of regional, interregional economies system.

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