

The Strategy of Growing the Rubber Processing Industry Subsector as a Competitive Agro-Industry Commodity for the Regional Economy of Jambi Province

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ABSTRACT

The growth of the processing industrial sector in Jambi province is declining, and the sector's contribution is quite worrying, given that it is expected to play a role in encouraging economic growth, alleviating poverty, and creating jobs to reduce the high level of unemployment. Regional industrial development efforts mean that each region has superior commodities that illustrate the region's potential or ability to produce products, create added value, utilize resources, provide employment opportunities, generate income for the community and local government, and have prospects for increasing productivity and investment. The decline in contribution and the relatively small growth of the industry must receive special attention from the government to encourage the industry again and prevent deindustrialization. Jambi Province is the fourth largest rubber-producing region in the country, after South Sumatra, North Sumatra, and Riau. In 2021, land use in Jambi Province will still be dominated by plantation commodities, accounting for 21.3 percent. Rubber production in Jambi will be 310 thousand tons in 2021. In 2021, the number of rubber farmers in Jambi Province will be 154,834 people, (National Leading Plantation Statistics, 2019-2021) this research aims to analyze the determinants of growth and development of the rubber processing industry subsector as a competitive agro-industry commodity for the regional economy of Jambi Province and to analyze the competitiveness of the rubber processing industry sub-sector as an agro-industry commodity for the regional economy of Jambi Province and its growth strategy. The analytical tools used to analyze the determinants of growth and development of the rubber processing industry subsector in the Jambi area are the Simultaneous Equation Model, Simple Regression, Revealed Comparative Advantage (RCA), and the Analytical Network Process (ANP) Method

Keywords: *Strategy, Rubber Processing Industry, Regional Economy of Jambi Province*

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1.0 INTRODUCTION

The main problem in regional economic development lies in emphasizing development policies based on the peculiarities of the region concerned (endogenous development) by using the potential of human resources, institutions, and physical resources locally (Badrudin, 2012). In this regard, for each region to survive and develop amid regional and global competition, the region must be able to develop every local potential it has. Local economic development in principle seeks to develop a sectoral economy that has the potential to create broad employment opportunities and has good prospects in improving the welfare of people in a region.

To increase the competitiveness of the national economy, the regional economy must increasingly play a role as a point of growth for the national economy. For this reason, it is necessary to empower human resources and utilize local economic resources. These two factors should be utilized simultaneously and integrated. The objectives of the Regional Autonomy policy (OTDA) based on Law No. 32 of 2004 were the Empowerment of Local Economic Resources (PSSEL) or "Local Economic Resources Development (LERD)" (Firwan, 2013).

One sector that has an important role in the Indonesian economy is the industrial sector. In general, this sector contributes greatly to the formation of national Gross Domestic Product (GDP) and foreign exchange receipts. The industrial sector is believed to be a sector that can lead other sectors in an economy towards progress. Industrial products always have high terms of trade and create greater added value than other products. This is because the industrial sector has a very diverse variety of products and can provide high benefits to its users (Dumairi, 2000).

Agroindustry is an industry that provides a lot of added value to agricultural products including marine products, forest products, animal husbandry, and fisheries. Wilkinson and Rocha (2008) define agro-industry, namely: Agro-industry: Post-harvest activities involving the processing, preservation, and preparation of agricultural products for final consumption. Furthermore, related to the concept of competitiveness, competitiveness is defined as the ability of a sector, industry, or company to compete successfully in the global environment to achieve sustainable growth with compensation costs lower than the resource income provided (Daryanto, 2009).

The agricultural sector is a major sector in the Indonesian economy because it can absorb more labor. One of the agricultural subsectors that plays an important role in the economy is the plantation subsector. The plantation subsector is a source of foreign exchange income, especially for the Indonesian economy. Rubber is an important commodity because it is the second largest commodity in the agricultural sector after palm oil. Rubber commodities are the backbone of Sumatra's economy, especially in the Jambi Region (BPS Jambi, 2023).

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Economic growth is a benchmark for the regional economy. By the role of each sector in the Gross Regional Domestic Product, the ability of local governments to choose sectors that have advantages/weaknesses in their regions becomes very important.

Table 1.

Leading Local Commodities in Jambi Province and Their Processing Industry in 2021

No	Regency	Regional Leading Commodity Processing Industry
1.	Detailedness	Cassiavera
2.	Merangin	Crumb Rubber dan CPO
3.	Sarolangun	Crumb Rubber dan CPO
4.	Batanghari	Crumb Rubber, CPO and Catfish
5.	Muaro Jambi	CPO, and Catfish
6.	East Tanjung Jabung	Industri CCO
7.	West Tanjung Jabung	CPO dan CCO
8.	Muaro Tebo	CPO dan Crumb Rubber
9.	Muaro Bungo	CPO dan Crumb Rubber

Source: Jambi Provincial Plantation Office 2021

Jambi Province is the fourth largest rubber-producing region in the country, after South Sumatra, North Sumatra, and Riau. In 2021, Jambi Province's land use was still dominated by plantation commodities, with a contribution of 21.3 percent. Rubber production in Jambi amounted to 310 thousand tons in 2021. In 2021, the number of rubber farmers in Jambi Province was 154,834 people (National Leading Plantation Statistics, 2019-2021)

The increasing subsector of the rubber processing industry has a broad impact on regional economic development. Recent economic development has been strongly directed towards competitive, sustainable, and high-quality outcomes. Especially in Jambi Province itself, economic growth is supported by the use of natural resources, one of which is the rubber agro-industry commodity. The rubber agro-industry is a very positive influence on the economy of Jambi Province in achieving regional development. Therefore, local governments need to focus on leading industries, especially the rubber processing industry, to achieve regional economic development. If the dominant sector in an area is extractive or mining, it is necessary to find renewable alternatives. The agricultural sector, especially the plantation subsector, in this case, rubber, is a renewable sector.

2.0 RESULT AND DISCUSSION

2.1 Simultaneous Equation of Rubber Industry Development, Rubber and Plastic Goods

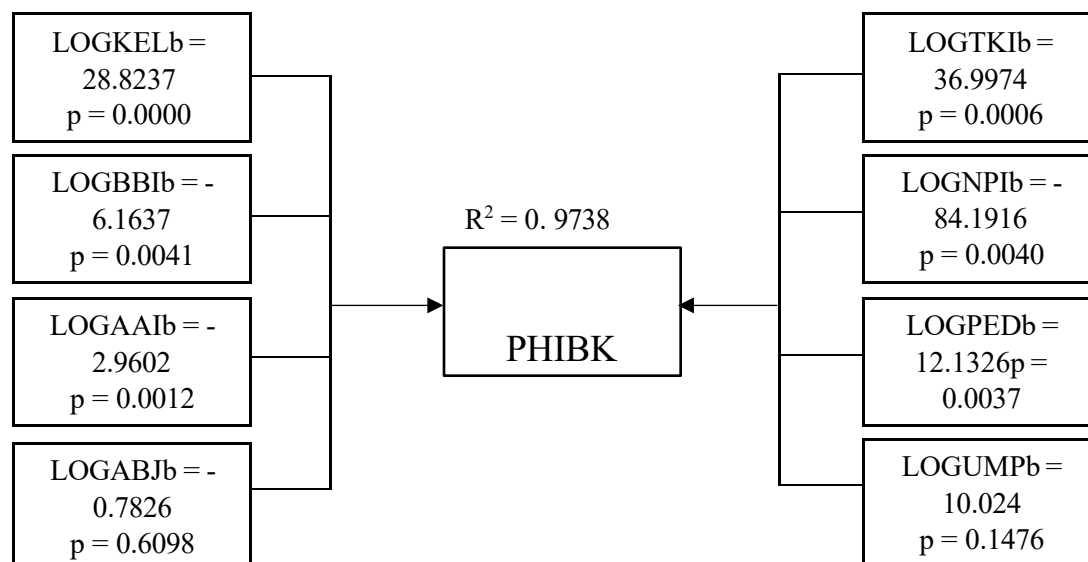
As for what is meant by the Rubber Industry, Rubber and Plastic Goods, namely industrial activities consisting of the Brown Rubber Industry, Crumb Rubber Industry, and Rubber Goods Industry for domestic use. The Rubber Industry and Rubber Goods in Jambi province are dominated by 11 crumb rubber companies that produce Sir-20, 1 company that produces Black Brown, and 1 industrial company that produces household equipment and appliances.

To analyze the factors that affect the Growth of the Rubber Industry and Rubber and Plastic Goods (PHIBK), after data processing, the estimation results and test results for the equation for the Development of the Rubber Goods Industry in Jambi province are influenced by the Availability of Electrical Energy (KEL), Industrial Raw Materials (BBI), Budget Allocation for Industry (AAI), Road Expenditure Allocation (ABJ), Industrial Labor (TKI), and Industrial Production Value (NPI), Regional Economic Growth (PED), and Provincial Minimum Wage (UMP):

$$\begin{aligned} \text{LOGPHIBK} = & 901.468882492 + 28.8237717767 * \text{LOGKEL} - 6.16372086382 * \text{LOGBBI} - \\ & 2.96024524351 * \text{LOGAAI} - 0.782651545752 * \text{LOGABJ} + 36.9973783695 * \text{LOGTKI} - 84.1916354717 * \text{LOGNPI} \\ & + 12.1325825923 * \text{LOGPED} + \\ & 10.0243885673 * \text{LOGUMP} \end{aligned}$$

Figure 1.

Scheme of Factors Affecting the Growth of the Rubber Industry, Rubber and Plastic Goods



The schematics and simultaneous equations in Figure 1 obtained a summary of the estimation table and the results of simultaneous equation tests on the development of the rubber industry, rubber, and plastic goods (PHIBK). The table exposure of estimated results is presented as follows:

Table 2.
Result of the Simultaneous Equation of Rubber Industry Development, Rubber, and Plastic Goods

MODEL	VARIABLE	COEFISIEN	t-stat	PROB
4c	C	901.4689	2.67739	0.0201
(Rubber Goods Industry)	LOGKEL	28.82377	6.57581	0.0000
	LOGBBI	-6.163721	-3.5365	0.0041
	LOGAAI	-2.960245	-4.1991	0.0012
	LOGABJ	-0.782652	-0.524	0.6098
	LOGTKI	36.99738	4.56715	0.0006
	LOGNPI	-84.19164	-3.5467	0.0040
	LOGPED	12.13258	3.58567	0.0037
	LOGUMP	10.02439	1.54809	0.1476
	Prob(F-statistic)	0.000000		
	R-squared	0.973814		

Source: Simultaneous Calculation Results, data processed

In the Development of the Rubber Goods Industry (PHIBK), of the 8 independent variables, 6 (six) of them have significance to the dependent variables, namely Availability of Electrical Energy (KEL), Industrial Raw Materials (BBI), Industrial Budget Allocation (AAI), Industrial Labor (TKI), Industrial Production Value (NPI), and Regional Economic

Growth (PED). The variables of Electrical Energy Availability (KEL), Industrial Labor (TKI), and Regional Economic Growth (PED) have a positive influence which shows that if the Availability of Electrical Energy (KEL), Industrial Labor (TKI), and Growth The Regional Economy (PED) is high, so the Growth of the Rubber Industry Industry and Rubber Goods (PHIBK) will also be high. The variables Industrial Raw Materials (BBI), Budget Allocation for Industry (AAI), Allocation of Expenditure for Roads (ABJ), and Variable Industrial Production Value (BOP) have a negative influence, which shows that BBI, AAI, ABJ and NPI are increasing, the growth of the rubber industry, rubber and plastic goods decreases. This can be interpreted if the availability of BBI, AAI, ABJ, and NPI is equal to zero, then the growth of the Rubber Industry, Rubber and Plastic Goods decreases. This can be interpreted that if for the growth of the rubber industry, rubber and plastic goods are largely determined by the availability of Industrial Raw Materials, Industrial Budget Allocation, Allocation of Expenditures for Roads, and Industrial Production Value, if this variable is not available in the rubber industry, rubber and plastic goods there will be a decrease in the growth of the PHIBK processing industry in Jambi province because this variable directly affects the development of the Rubber Industry, Rubber and Plastic Goods in Jambi province. Furthermore, the variables KEL, BBI, AAI, ABJ, TKI, NPI, PED, and UMP affect the growth of the Rubber Industry and Rubber Goods by 97.38%, and the remaining 2.62% are influenced by other factors outside the model.

Summary of the Results of the Simultaneous Equation of the Rubber and Goods Processing Industry from Rubber and Plastic Areas of Jambi Province.

Based on the results of the simultaneous equation of the Superior Processing Industry, where the factors that affect the Growth of the Superior Processing Industry are the Rubber Industry and Goods from Rubber and Plastic, the factors that significantly affect the Growth of the Jambi Processing Industry can be summarized in the following table:

Table 3.

Summary of the Results of the Simultaneous Equation of Variables Affecting the Growth of the Rubber Processing Industry, Rubber and Plastic Goods in Jambi Province

Featured Processing Industry	Variable	Significant Variables
I. Rubber Industry, Rubber and Plastic Goods	Availability of Electrical Energy (KEL), Industrial Raw Materials (BBI), Industrial Budget Allocation (AAI), Road Expenditure Allocation (ABJ), Industrial Labor (TKI), Industrial Production Value (NPI), Regional Economic Growth (PED), Provincial Minimum Wage (UMP)	Availability of Electrical Energy (KEL), Industrial Raw Materials (BBI), Industrial Budget Allocation (AAI), Industrial Labor (TKI), Industrial Production Value (NPI), Regional Economic Growth (PED)

The Effect of the Development of the Subsector of the Rubber Processing Industry, Coal from Rubber and Plastic on the Regional Economy.

The Processing Industry (Manufacturing) in the Jambi region is one of the sectors that influences the province, as evidenced by the large GDP (Gross Regional Domestic Product) and the significant contribution of the Processing Industry. The Processing Industry that contributes the most to the GRDP of Jambi province is (1) Food and Beverage Industry, (2) Wood Industry and Wood Goods, (3) Rubber Industry and Rubber Goods, and (4) Paper Industry and Paper Goods. The development of this contribution took place from 2014 to 2018. (BPS Jambi Province, 2018).

To analyze the influence of the development of the Superior Processing Industry and its influence on the Jambi Regional Economy, namely the Rubber Industry, Rubber, and Plastic Goods, data processing is carried out using the Eviews 8 program, where the results can be presented as follows:

The Influence of the Growth of the Leading Processing Industry Subsector of the Rubber Industry, Rubber and Plastic Goods, on the Regional Economy of Jambi Province

The results of a simple linear regression analysis to prove the influence of the Development of the Rubber Industry, Rubber and Plastic Goods (PHIBK), on the Regional Economy (PED) of Jambi province can be seen in the following equations and schemes:

$$\text{LOGPED} = 1.80105943767 - 0.00406614103382 * \text{LOGPHIBK}$$

The simple regression schema and equation in Figure 1 are derived from the summary regression table in Table 4.

Table 4. Results of Simple Linear Regression Analysis

Dependent Variables	Independent Variables	Regression Coefficient	Significance
Regional Economy (PED)	Constant	1.801059	0.0000
	Rubber Goods Industry (PHIbk)	-0.004066	0.7929
	F	0.070927	0.792861
	R-squared	0.003719	

Source: EViews data processing

The results of the regression above can be interpreted as follows:

1. The value of the regression coefficient of Rubber Goods Industry Growth (PHIbk) is -0.0040 with a significance level of 0.7929; the value is greater than the level of $\alpha = 5\%$. It can be interpreted that the Rubber Goods Industry Growth (PHIbk) variable does not have a significant effect on the Regional Economy.
2. The F value can be seen from the results above of 0.0709 with a significance level of 0.7928. It can be interpreted that the Growth of the Rubber Goods Industry (PHIbk) does not simultaneously affect the Regional Economy.
3. The R-squared value of 0.003 can be interpreted as indicating that the Growth of the Rubber Goods Industry (PHIbk) affects the Regional Economy only by 0.3%, and 99.7% is influenced by other variables that have not been included in this equation.

Based on the results of the study that the development of the Rubber Industry and Goods from Rubber and Plastic (PHIBK) which is the Regional Flagship, which affects the Economic Growth of the Jambi Region, shows that the regression coefficient value of the Rubber Goods Industry (PHIbk) is -0.0040 with a significance level of 0.7929, the value is greater than the level of $\alpha = 5\%$. It can be interpreted that the Rubber Goods Industry (PHIbk) variable does not have a significant effect on the Regional Economy, as indicated by the F value of 0.0709 ($p = 0.7928$) in the results above. It can be interpreted that the Rubber Goods Industry (PHIbk) does not simultaneously affect the Regional Economy, and the R-squared value of 0.003 can be interpreted that the growth of the Rubber Goods Industry (PHIbk) affects the Regional Economy only by 0.3% and 99.7% is influenced by other variables that have not been included in this equation.

The Rubber Industry and Goods from Rubber and Plastic to the Regional Economy of Jambi province, the results of which have a significant effect or not on the economy of Jambi province, can be summarized in the table below:

Featured Processing Industry	Variable	Significant Effect/No Effect
Rubber Industry, Rubber and Plastic Goods	Development of the Rubber Industry, Rubber and Plastic Goods (PHIBK)	Not Significant to Regional Economic Growth (PED)

Competitiveness Conditions of the Rubber Processing Industry Subsector in Jambi Province.

This study, to determine the level of comparative advantage of the Jambi provincial Processing Industry, will compare the export value of Jambi provincial processing industry products to the total export value of Jambi province and the total value of Indonesian exports. Based on the results of the calculation of the comparative advantage of the processing industry (RCA) of Jambi province, as shown in Table 5 below.

The results of the Revealed Comparative Advantage (RCA) analysis for Processing Industry Commodities, namely CPO, Rubber Industry and Other Rubber Goods, Wood Industry and Other Wood Goods, and Paper Industry and Other Paper Goods which on average per five years are presented in Table 5. It is known that Jambi Province has a comparative advantage for commodities Rubber Industry and Other Rubber Goods and Paper Industry and Other Paper Goods has an average RCA value above one ($RCA > 1$) with an average score of 5.24 and 1.54 respectively.

Table 5.

Revealed Comparative Advantage (RCA) for Jambi Province Processing Industry Commodities

Commodity Processing Industry	NILAI RCA					Average RCA Score
	2014	2015	2016	2017	2018	
CPO	0.3418	0.3482	0.4768	0.2999	0.3894	0.3712
Rubber Industry and Other Rubber Goods	2.4249	16.2948	1.9063	2.7749	2.7842	5.2370
Wood Industry and Other Wood Goods	0.2037	0.2157	0.2928	0.2403	0.3719	0.2649
Paper Industry and Other Paper Goods	1.5888	1.5392	2.0290	1.4306	1.0977	1.5371

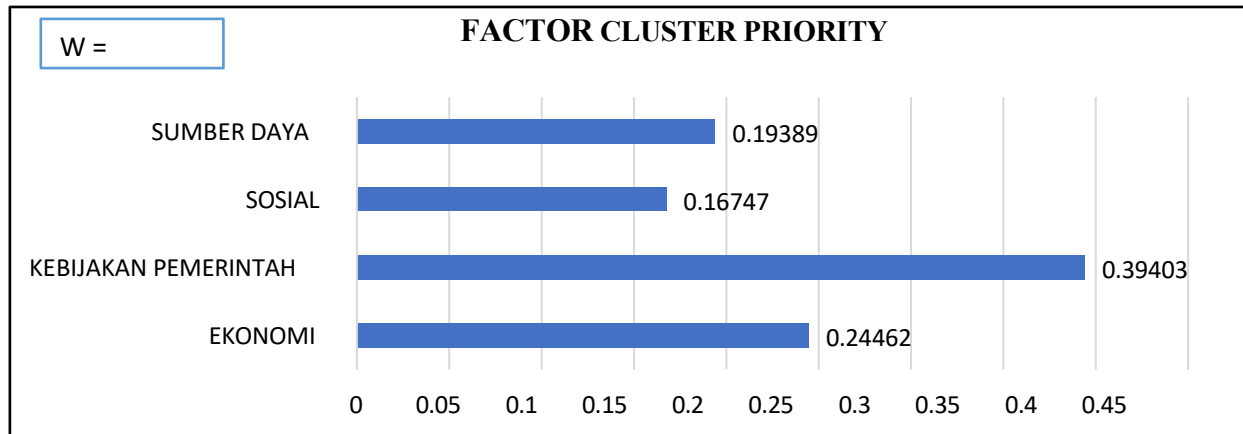
Source: BPS Jambi Province, data processed

Formulation of the Growth Strategy for the Rubber Processing Industry and Rubber Goods and Its Impact on the Regional Economy of Jambi Province.

The fourth analysis model used to analyze the purpose of this fourth study is to formulate a Strategy for the Development of Superior Processing Industries and Their Effects on the Regional Economy of Jambi Province, namely the Food and Beverage Industry, Paper Industry, Paper Goods and Rubber Industry, and Rubber and Plastic Goods, using the Analytical Network Process (ANP). The ANP method is a development of the Analytical Hierarchy Process (AHP) method. ANP is a method that allows interaction and feedback from elements in the cluster (inner dependence) and between clusters (Outer Dependence). The ANP method can improve the weaknesses of AHP in the form of the ability to accommodate linkages between criteria or alternatives (Saaty, 1999).

Analysis of Factor Cluster Synthesis Results

The results in the factor cluster show that government policy factors are the most important factor in the growth of superior processing industries. This can be seen in Figure 2 showing the results of data processing through the following super decision software:

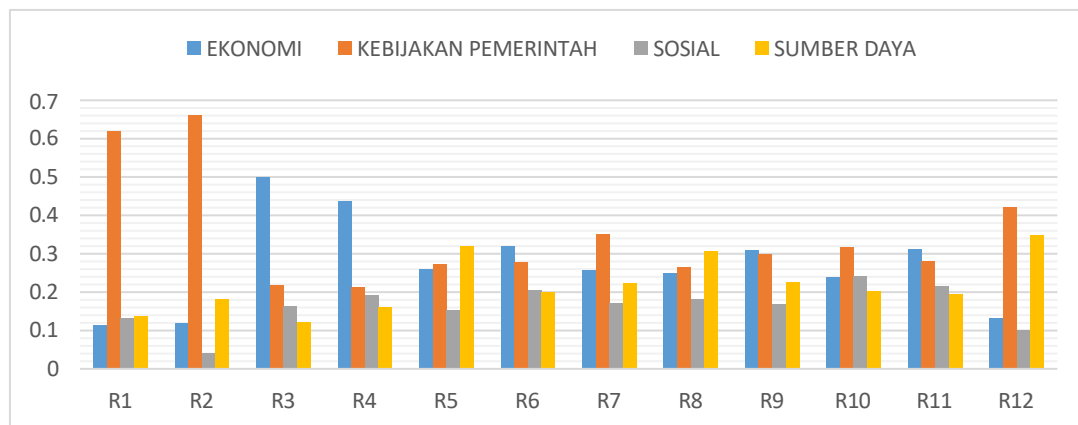


Source: Respondent Questionnaire Results, data processed

Figure 2. Results of Factor Cluster Priority Synthesis Based on Mean Geometric Value

Figure 2 of the processed data shows a rater agreement value of 38.06%. This means that the respondent's level of agreement on the priority order of the factor cluster in the form of Local Government, Economic, Resource, and Social Policies is 38.06%. Based on the combined value of respondents, each priority order of factors in determining downstream strategy is government policy at 39.40%, followed by economic factors at 24.46%. Then the resource and social factors were 19.39% and 16.75% respectively. Meanwhile, the synthesis results per respondent can be seen in Figure 3 below:

Figure 3. Results of Factor Cluster Priority Synthesis Based on Each Respondent's Value



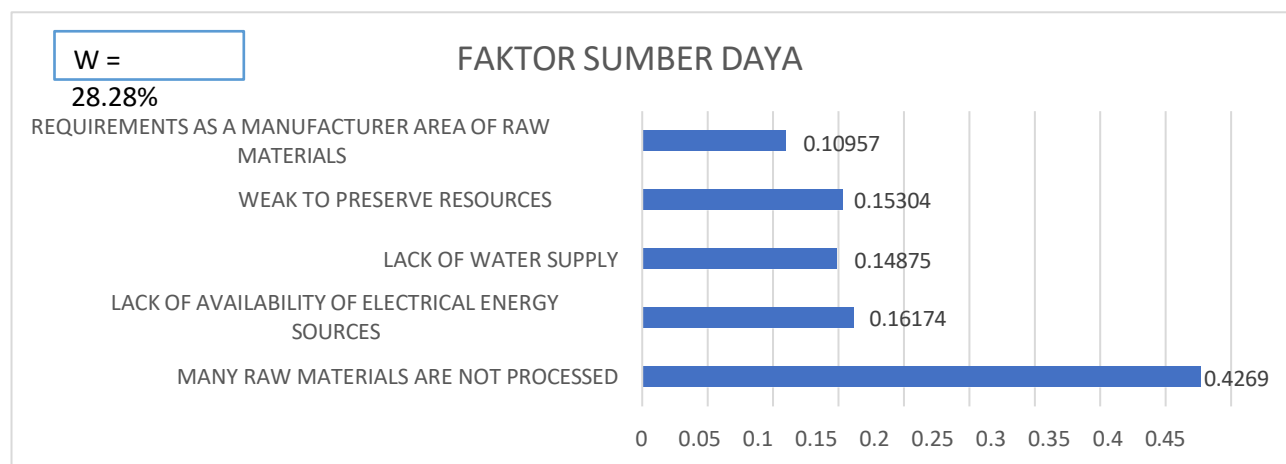
Source: Respondent Questionnaire Results, data processed

In Figure 3 it can be seen that from 12 (twelve) respondents, 10 (ten) respondents answered that the top priority cluster in determining the Leading Processing Industry Growth Strategy is Local Government and Economic Policy, while the other 2 (two) respondents answered that the main priority factor that determines the Superior Processing Industry Growth Strategy is Resources. As for the Social factor, it is not the main factor in every respondent's answer. But when these three factors can be implemented properly, social factors also become important factors in determining the growth strategy of the superior processing industry.

Results of Synthesis of Resource Factor Problems

Based on the results of data processing through super decision software, the priority of resource factor issues was obtained according to 12 respondents as in Gambar 4 below:

Figure 4. Results of Priority Synthesis of Resource Factor Problems Based on Mean Geometric Value



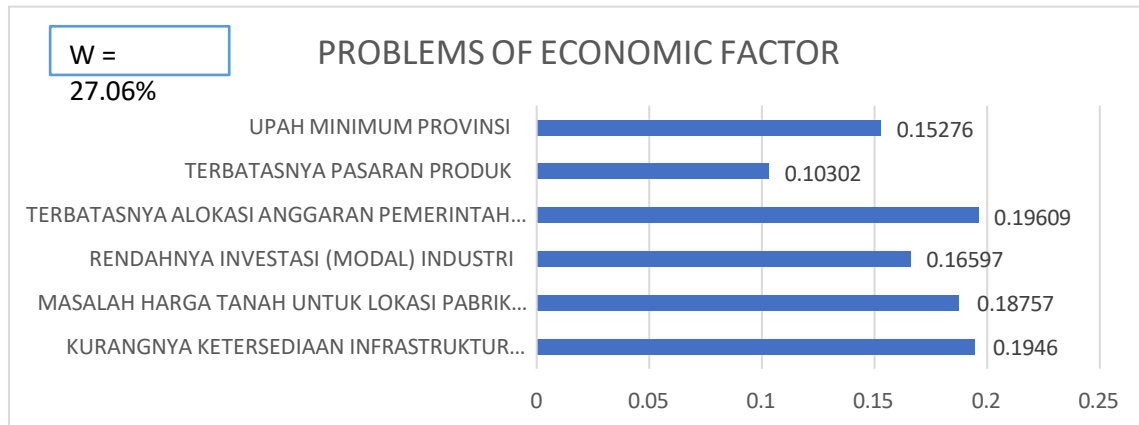
Source: Respondent Questionnaire Results, data processed

From Figure 4, it can be seen that the main priority for the problem of resource factors in determining the growth strategy of the superior processing industry is the problem of the number of raw materials that have not been processed. This result is the majority of respondents' answers with a value of 42.69%. Then the lack of availability of electrical energy sources is the second priority problem in determining industrial development strategies with a percentage of 16.17% followed by weak resource preservation and lack of water supply by 15.30% and 14.86%. While the last place is the designation as a raw material-producing area of 10.96%. The rater agreement of all respondents was 28.28%. This means that the level of respondents' agreement on the priority order of resource problems in the form of the number of raw materials that have not been processed, lack of availability of electrical energy sources, weak preservation of resources, lack of water supply and designation as a raw material producing area is 28.28.

Results of Synthesis of Economic Factor Problems

The results of the synthesis of economic factor problems that have been processed through super decision software can be seen in Figure 5 below:

Figure 5. Results of Priority Synthesis of Economic Factor Problems Based on *Geometric Mean Value*



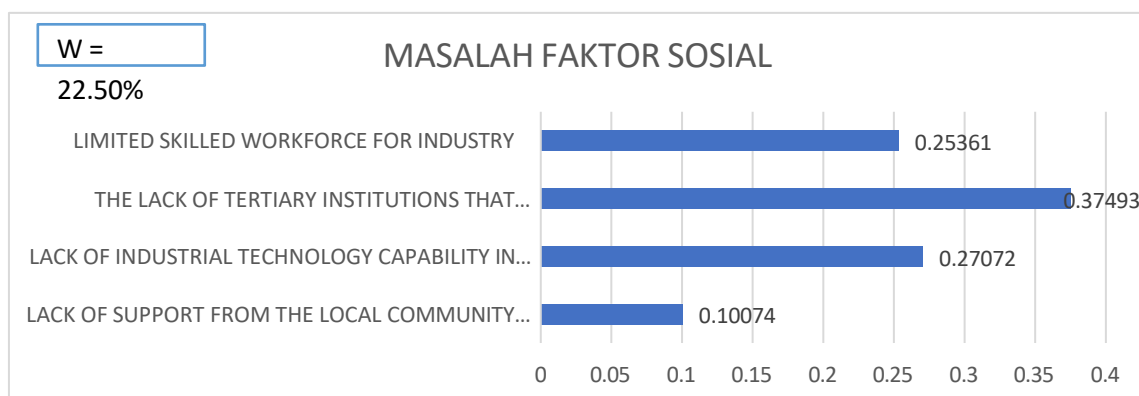
Source: Respondent Questionnaire Results, data processed

It can be seen in Figure 5 that the overall combination of respondents on average answers the main priority of economic factor problems in determining the strategy for growing the development of the leading processing industry is the limited allocation of government budget for industry with a percentage rate of 19.61%, followed by the problem of lack of availability of road infrastructure in good condition of 19.46%. What ranks third and fourth is the problem of high land prices for factory locations by 18.76% and low industrial investment (capital) by 16.60%. The last two priority orders are occupied by the provincial minimum wage and limited industrial product markets of 15.77% and 10.30% respectively. The rater agreement of all respondents was 27.06%. This means that the respondent's level of agreement on the priority order of economic problems in the form of limited government budget allocation for industry, lack of availability of road infrastructure in good condition, high land price problems for factory locations, low industrial investment (capital), provincial minimum wage and limited market for industrial products is 27.06%.

Results of Social Factor Problem Synthesis Analysis

Based on the results of data processing through super decision software, priority of resource factor issues was obtained according to 12 respondents as shown in Figure 6 below:

Figure 6 Results of Synthesis of Priority of Social Factor Problems Based on *Geometric Value of Mean*



Source : Respondent Questionnaire Results, data processed

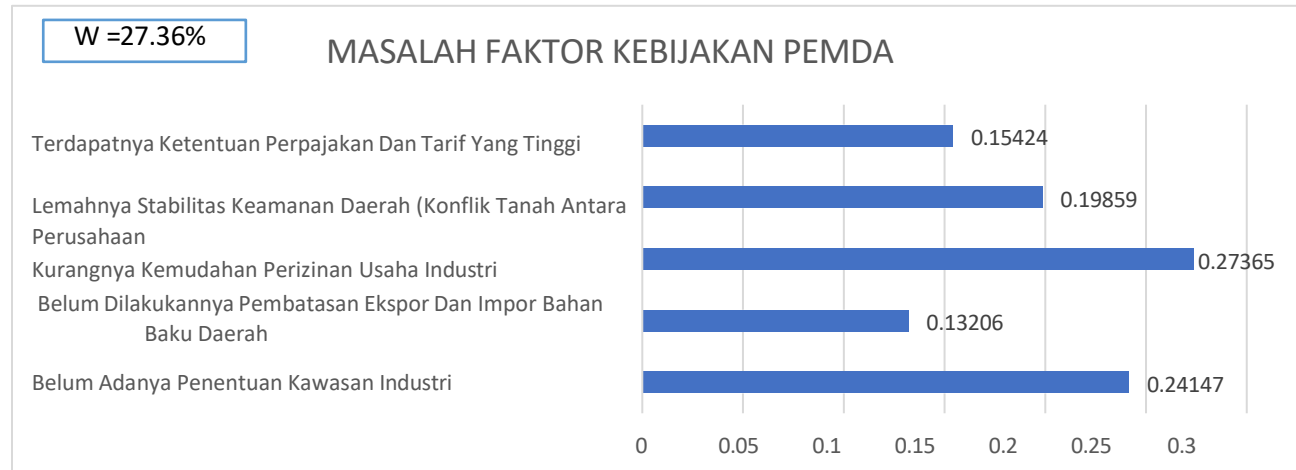
Figure 6 shows that as a result of the combined opinion of respondents, the problem of social factors in determining the strategy for growing the development of the leading processing industry is the most priority is the lack of universities that provide industrial vocational education in the regions, which is 37.49%, followed by the lack of industrial technology capabilities in the regions by 27.07%. The third order in the problem of social factors is the limited skilled workforce in the industrial sector by 25.36%. The last order for the problem of social factors is the lack of support of the local community for the existence of industry by 10.07%. The result of obtaining the rater agreement value of all respondents was 22.50%. This means that the respondent's level of agreement on the priority order of social factor problems in the form of lack of universities that provide industrial vocational education in the regions, lack of industrial technology capabilities in the regions, limited skilled labor in the industrial field and lack of local community support for the industry is 22.50%.

5. Results of Synthesis of Local Government Policy Factor Problems

Based on the results of data processing through super decision software, the priority of resource factor issues was obtained according to 12 (twelve) respondents, as shown in Figure 7 below:

Figure 7:-

Results of the Synthesis of Priority Problems of Local Government Policy Factors Based on Geometric Mean Value



Source: Respondent Questionnaire Results, data processed

From Figure 7, it can be seen that the average respondent answered the main priority of the problem of government policy factors in determining the strategy for growing the superior processing industry is the lack of industrial business licensing facilities by 27.37%. The second place in the priority of local government policy factors is the absence of a determination of industrial estates by 24.15%. Weak regional security stability (land conflicts between companies and local communities) was the third priority at 19.86%. The fourth priority order is the provision of taxation and high rates of 15.42%. And the last priority order with a percentage of 13.21% is that there have been no restrictions on exports and imports of regional raw materials. The rater agreement scores of all respondents in answering the priority of local government policy issues was 27.36%. It can be interpreted that the level of respondents' agreement on the problem sequence of local government policy factors in the form of lack of ease of industrial business licensing, the absence of a determination of industrial estates, weak regional security stability (land conflicts between companies and local communities), the existence of tax provisions and high tariffs and no restrictions on exports and imports of regional raw materials are 27.36%.

Results of Strategy Cluster Synthesis

Based on the results of data processing through super decision software, the priority of the Strategy Cluster was obtained according to 12 (twelve) respondents as shown in Figure 8 below:



Source: Respondent Questionnaire Results, data processed

Figure 8. Results of Synthesis of Strategy Cluster Priorities Based on *Mean Geometric Value*

It can be seen in Gambar 8 that, based on the combined opinion of respondents about the most priority strategy in determining the strategy for growing the superior processing industry, is the optimization of the government's role in policies and funding for downstream programs by 34.62%, followed by cross-sectoral coordination involving the business world for downstream industries by 27.87%. Carrying out infrastructure development and improvement (roads, ports, and availability of electrical energy) is the third priority at 21.70%. and the last priority is the socialization of the existence (existence) of processed industrial products in the Jambi area by 15.80%. The rater agreement score of all respondents was 18.06%. This means that the level of respondents' agreement on the order of strategy priorities is in the form of optimizing the government's role in policies and funding for industrial growth programs, cross-sectoral coordination involving the business world in industrial development, carrying out infrastructure development and improvement (roads, ports and the availability of electrical energy) and socialization of existence (existence) of processed industrial products in Jambi area is 18.06%.

Development Strategy for the Rubber Industry, Rubber and Plastic Goods

Based on the results of research using the ANP method, it is explained that to build and develop the rubber processing industry and rubber goods in the Jambi province area, everything is a point of departure and stems from the main priority, namely the strategy of Optimizing the Role of the Government in Policy and Funding for the Processing Industry Growth Program. As for the results of research in determining the regional leading processing industry, the Rubber Processing Industry and Rubber Goods are also the third selected leading processing industry in addition to the food and beverage processing industry and paper processing industry in the Jambi Province area, therefore with the role and function of the Regional Government that is focused and serious in policies for industrial growth and development, it will naturally drive other sectors and facilitate the business of growing the development of the processing industry in Jambi Province. As for the activities of the Rubber Industry, Rubber and Plastic Goods, which exist in the Jambi Province area, consist of the Brown Rubber Industry, Crumb Rubber Industry (Crumb Rubber), and Rubber Goods Industry for home use. Internally, Jambi province has potential for the continuity of rubber processing material production (BOKAR) because it is supported by the breadth of rubber plantations and market opportunities across large areas. In reality, the development of the rubber goods processing industry in Jambi province is faced with the problem of low quality of rubber processing materials (Bokar), limited marketing of finished goods, minimal financing capabilities and simple mastery of technology, large competitors

from other regions or countries (as market leaders), supporting materials and equipment that are still imported, and government policies that have not been supported.

Based on the above problems, the downstream growth strategy of rubber goods processing, namely the government, is encouraged by revitalizing Small and Medium Enterprises (SMEs) rubber processing based on simple technology that focuses on creative and innovative superior products. For this reason, the development of the rubber processing industry and rubber goods with a simple technology-based SME revitalization orientation, in this case, the government is required to prioritize the strategy of optimizing the government's role in policies and funding for the downstream program of rubber and rubber goods in Jambi province. Based on the results of research using the ANP method, it is explained that Government Policy Factors have a synthesis of priorities, meaning that all respondents stated that the development of the rubber and non-rubber processing industry is determined by the attention and determination of local governments, which are reflected in local government policies made or prepared. About Jambi regional government policies that can encourage the acceleration of industrial development, the local government can: (1) improve and facilitate industrial business licensing, (2) the local government immediately seek to provide area determination for industry, then (3) maintain and create regional security stability (related to land conflicts between companies and local communities), then local governments, (4) through related agencies prepare tax and tariff provisions by the development and capability of industrial companies, and (5) which needs to be affirmed and strong regulations on restrictions by local governments on exports and imports of regional raw materials, especially semi-finished rubber because this is to accelerate the growth of the rubber industry and rubber goods in Jambi province.

In addition to improving the pattern of local government policies in industrial development, what is very important is the serious attention of the Jambi provincial government to the growth of the rubber industry by supporting through the allocation of funding through OPD (Regional Equipment Organization) or related agencies, in this case, the allocation of the regional budget for the processing industry sector must be proportional by the government's efforts to grow the rubber industry and rubber goods. The Budget Allocation Factor for the Industrial sector (AAI) has a significant influence on the downstream development of the processing industry in Jambi province, where if the Budget Allocation for Industry is increased, the growth of the processing industry will also increase. For this reason, in the administration of government, local governments prepare budgets that serve as guidelines for carrying out various activities. A government budget is a type of plan that describes a series of actions or activities expressed in rupiah figures for a certain period. The budget in local government is commonly referred to as the Regional Revenue and Expenditure Budget (APBD). So far, in Jambi Province, the allocation of regional expenditures to the agricultural and service sectors has tended to be greater than to the industrial sector during 1998-2018. The allocation of regional expenditures like this must be improved, as it will slow the development of the processing industry, which in turn affects the industrialization process in the Jambi area. To create an economy, especially the growing processing industry sector in Jambi Province, government spending for the processing industry sector must be added or regulated by the regional government by its priorities.

So far, the budget allocation for the processing industry sector is quite small compared to other sectors, so based on the results of research with the ANP method, this is the top priority strategy and the government's focus if the Jambi provincial government wants to accelerate the growth of the rubber industry and rubber goods so that there is an increase in the added value of rubber raw materials and will eventually increase the welfare of rubber farmers and increase their contribution to the regional economy Jambi province. So far, Jambi province is very famous for producing the largest volume of rubber raw materials in Indonesia, and is known only as a producer and exporter of these materials to other regions or countries, so many Jambi regions lose the added value of these rubber raw materials.

Regarding rubber raw materials with the development of the rubber processing industry in Jambi province, in general, it is still faced with the low quality of BOKAR, especially in community plantations, so this will burden the natural rubber processing plant, namely in carrying out efficiency and maintaining the economic life of the factory because this will have an impact on the workload of many factory machines used to remove various impurities and other contaminants in the bokar. The development of the rubber goods processing industry is an activity built on a group of businesses or companies engaged in the supply of the main raw materials of natural rubber and/or synthetic rubber, auxiliary materials and molding makers (molding) and supported by several supporting institutions engaged in research and development

services, regulation, trade, transportation, finance and other services (Ministry of Agriculture, 2007). Because this rubber industry activity involves processing raw materials into final products or finished goods, the provincial region faces the problem of a still limited availability of human resources, both in number and quality. Because, in an effort to drive the rubber goods processing industry, human resources (HR) are needed in large numbers; moreover, they must also be supported by quality Human Resources (HR).

Based on the results of processed research from the ANP Method, it is explained that in Jambi Province, which is related to the growth of the rubber processing industry and rubber goods, it is faced with problems (1) the limited or lack of universities that provide industrial vocational education in the regions, (2) the limited skilled workforce in the industrial field, (3) the lack of industrial technology capabilities in the region, and (4) the lack of local community support industry. Based on the population growth rate and the level of the labor force available in Jambi province, both educated and uneducated, to accelerate the development of the superior processing industry of rubber and rubber goods and associated with the potential of quality Human Resources (HR) in Jambi province to become and provide strength for the business of growing the rubber processing industry and rubber goods. For this reason, universities in Jambi Province, both public and private, immediately open and organize industrial vocational education, and open short training related to industrial skills needs for the workforce, which can eventually be used as provisions to work as industrial workers in the Jambi province area.

Furthermore, to accelerate the growth of the rubber industry and rubber goods, the next strategy is to carry out cross-sectoral coordination with the business world to drive industrial growth in Jambi province. The acceleration of the growth of the rubber processing industry and rubber goods does not only involve the government and rubber farmers but also involves synergizing the business world and other cross-sectors, such as: the Rubber Entrepreneurs Association, Rubber Farmers Association, Rubber Exporters and Importers Association, Industry Office, MSME Office, Agriculture Office, Plantation Office, Rubber Processing Industry, Integrated Licensing and Services Office, Bappeda, Department of Public Works and other related sectors.

A very important strategy for the development of the Rubber Processing Industry and Rubber Goods is to develop and improve infrastructure such as roads, energy and electricity networks, telecommunications networks, water resource networks, transportation networks, industrial Human Resources (HR) strengthening facilities, facilities and infrastructure for areas/land for industry and ports. For the development of the Rubber Industry Processing and Rubber Goods, Jambi province requires adequate infrastructure. One of the basic infrastructure needs in the development of the rubber processing industry and rubber goods is the Availability of Electrical Energy (KEL) factor, and the results of the study show that variables have a significant influence on the growth of the processing industry in Jambi province. If the availability of electrical energy increases or the capacity is sufficient, the growth of the rubber processing industry and rubber goods will also increase. Electricity infrastructure is indispensable, as it supports production and daily life. The more developed a region, the greater the need for electricity becomes, a primary demand that must be met, not only for households but also for economic activities, especially industry. Electrical infrastructure has a positive and significant effect on economic growth because electrical energy is one of the most important forms of energy, supporting various activities in modern human life. Almost all fields of human activity require the benefits of electrical energy, for household activities, education, health, industry, and almost all other industrial activities.

Road infrastructure also plays a very important role in the development of the rubber industry and rubber goods. The availability of roads in good condition is needed in the development of the processing industry in the Jambi province area. However, the Jambi area still faces the problem of many roads being in damaged condition. Based on the results of this study, the Damaged Road Condition (KJR) factor is a variable that negatively and significantly affects the growth of the processing industry in Jambi province: as the Damaged Road Condition increases, the growth of the processing industry decreases. Road infrastructure in good condition is a key driver of economic growth, providing transportation facilities that allow people, goods, and services to be moved from one place to another throughout the world, across countries, and between regions. Its role is very important both in the production process and in supporting the distribution of export and import commodities.

Efficiency in economic activities must be supported by adequate infrastructure, especially well-maintained road infrastructure, to encourage sustainable development of regional potential. For now, the existing infrastructure is not adequate in the process of economic development. Many road infrastructures are still damaged in Jambi province, especially the roads leading to the port are in a state of severe damage so that many production products both agricultural commodities, raw materials, and other processed products are not sent through the port of Jambi area but sent through other regional ports, such as to the port of West Sumatra, the port of Medan and so on so that this condition will affect the difficulty of mobility of goods and people from one region to another. Due to damaged road conditions that greatly affect the growth of the processing industry, government policy prioritizing road repairs is a priority, especially on roads connecting industries with markets, warehouses, ports, and end consumers in Jambi province. Due to the government's lack of seriousness in road infrastructure development, the distribution of goods and services between regions is disrupted, which undermines the contribution of road infrastructure to economic growth. Therefore, local governments should seriously manage road infrastructure development to optimize economic outcomes for the road infrastructure itself and the industrial sector. Road infrastructure plays a supporting role in community economic activities because the current economic mobility of the Jambi area is very dependent on the road network. The distribution of goods and services is currently dominated by land transportation. The significant influence of land routes on the smooth running of the economy means that the Jambi regional government must always pay close attention to the condition and quality of roads, especially on the main economic routes.

To provide road infrastructure in good condition, the Expenditure Allocation for Roads (ABJ) factor, based on research results, shows that road expenditure allocation significantly affects the growth of the processing industry in Jambi province. If the government's road expenditure allocation increases to build or repair roads in damaged condition, it will promote the development of the processing industry in Jambi province. Road construction is indeed very necessary for the regional economy in the Jambi area because road infrastructure is the primary means of land transportation. In Jambi, roads are the main means of land transportation, which is cheaper and more efficient than air transportation, while the Jambi area has very limited ports. Due to a lack of focus and limited government spending on road infrastructure development, the distribution of goods and services from one region to another is disrupted, affecting the contribution of road infrastructure to the growth of the processing industry. So far, the regional budget has been dominated by routine rather than capital expenditures, especially in infrastructure. Local governments should seriously manage road infrastructure development to optimize economic benefits from well-maintained roads, which will eventually create new downstream industries with added value and competitiveness. On the other hand, the government budget is very limited because government spending is very dependent on state or regional revenues. Therefore, for now, the government must focus and be wise in allocating budgets, especially for road infrastructure in damaged condition, for its industry, markets, ports, warehouses and so on. The availability of well-maintained roads in Jambi province will naturally spur economic development, especially in processing and downstream industries.

For port infrastructure, it also plays a very important role for the growth of rubber and rubber goods in the Jambi province area, where the availability of this port is still limited. Currently, the ports in Jambi province include the main ports, namely the port of Samudera Ujung Jabung in East Tanjung Jabung Regency, the Port of Collector, namely the port of Kuala Tungkal in West Tanjung Jabung Regency, Muara Sabak Port in East Tanjung Jabung Regency, and Talang Duku Port in Muaro Jambi Regency, and is supported by the Feeder Port consisting of Nipah Panjang Port and Mendahara Port in East Tanjung Jabung Regency. In the future, port infrastructure that meets national and international standards must be adequately available to support the smooth growth of the rubber processing industry and rubber and plastic goods, thereby increasing the efficiency of the processing industry in Jambi Province.

An important strategy is also for the growth of the rubber industry and rubber goods, based on the processed results of this ANP. This is the strategy of the need to socialize the existence of Jambi Regional Industrial Processed Products, especially the finished goods industry from rubber. As explained, the Jambi area has market potential, supported by its large population. Market Potential: The processed rubber finished goods industry is supported by domestic consumption of engineering rubber finished goods in Jambi province. To encourage the

growth of the rubber industry and rubber goods on a large and medium scale, there are quite a lot of obstacles including the lack of investors in this industry, while the Jambi area has quite a lot of rubber farmers, therefore in line with government policy, it should start revitalizing rubber processing SMEs based on simple technology that focuses efforts to produce creative and innovative superior products made from rubber raw materials in among rubber farmers.

To encourage the emergence of the development of the rubber industry and because most farmers are still faced with the problem of lack of business financing and mastery of technology that is still simple, the government, with its budget policy, allocates a budget for these SMEs as an initial investment and provision of appropriate technology in assisting the growth of the rubber industry and rubber goods in Jambi province. In the future, this development will enable these SMEs to meet domestic demand for rubber-based goods, such as rubber gloves, rubber bands, tires, rubber threads, condoms, rubber footwear, pacifiers and so on. For this reason, the government and related parties need to socialize the existence of this processing industry while designing marketing access for this business. Socialization of the existence of downstream products of the rubber industry, rubber and plastic goods can be carried out both by the government, rubber industry business actors and related associations or institutions through promotional media such as the use of internet digitalization in line with the Industrial Revolution 4.0, and promoting through expos or exhibitions both at national and international levels.

In line with the results of the simultaneous equation, significant variables affect the growth of the rubber industry. Rubber goods are industrial investments, and investment in the industrial sector tends to fluctuate in the Jambi area due to low investor interest. This is also explained by the results of ANP, which reveal a lack of convenience in industrial business licensing. In addition, the variable Production Value also affects the growth of the rubber industry, rubber and plastic goods because the production value describes the ability of industrial capacity to produce output which eventually will be the ability to grow the development of the industry, then the variable of labor productivity is very influential on the growth of the rubber industry, rubber and plastic goods, this is related to the processed products of ANP where To get a productive workforce, a skilled workforce is needed in the industrial sector, mastering industrial technology, for that the Jambi province must be able to cooperate with both public and private educational institutions in the Jambi area such as organizing industrial vocational education (D3 and D4), so that the Jambi provincial workforce is ready to face the growth of the rubber industry, rubber and plastic goods. Meanwhile, the influence of the growth of the rubber industry, rubber goods and processed plastics with a simple regression model shows that the variable of industrial growth has an insignificant effect on the regional economy (economic growth) because the contribution of this rubber industry to added value (downstream) is still low in the Jambi area where most of the rubber processing industry in the form of crumb rubber is exported abroad or sent to outside the Jambi area which will be processed as finished goods. This situation causes so many regions to lose the added value of this industry, which should contribute greatly to the GRDP, and the creation or absorption of labor in the Jambi area.

Based on the description and discussion above for the rubber industry, rubber and plastic goods and can have an influence on the regional economy, according to the results of the Analytical Network Process method in general according to the three industry players, according to practitioners/experts and related Regional Equipment Organizations, namely Bappeda, the Licensing and One-Stop Service Office, the Plantation Office, and the Industry and Trade Office with a total of respondents as a whole a total of 12 people and conducted Indept interviews so as to produce a joint opinion (rater agreement) on the priority of the cluster of problem factors with the results of prioritizing selected strategies for the development of the leading processing industry in Jambi Province. The problem factor cluster is divided into four, namely:

(1) Resource Factors, (2) Social Factors, (3) Government Policies, and (4) Economic Factors. From the ANP results, it shows that the most agreed factor to be resolved according to respondents to the Development of the Superior Processing Industry is the Government Policy Factor (39.40%), and for the strategy cluster, all respondents give their highest agreement priority to the strategy of optimizing the government's role in policy and funding for the growth program.

3.0 CONCLUSION AND ADVICE

Based on the results of the research and its discussion, the following conclusions can be drawn:

1. Factors that influence the development of leading processing industries in Jambi Province, namely the Rubber Industry, Rubber and Plastic Goods (PHIBK) are influenced by the Availability of Electrical Energy (KEL), Industrial Raw Materials (BBI), Industrial Budget Allocation (AAI), Industrial Labor (TKI), Industrial Production Value (NPI), and Regional Economic Growth (PED).
2. The development of the Superior Processing Industry Subsector has a significant effect on the Regional Economy (PED) of Jambi Province. The Rubber, Rubber and Plastic Goods (PHIBK) Industry does not significantly affect the regional economy of Jambi Province
3. Jambi Province has a comparative advantage for the Rubber Industry commodity, which has an average RCA value above one ($RCA > 1$) with an average value of 5.24. This shows that in Jambi province, almost all rubber industry products are exported abroad. It seems that this has become the orientation of the Jambi region, as a producer of raw materials for the rubber industry, so this has an impact on the region with the lack of a downstream rubber industry or the process of creating added value for the region for this rubber commodity.
4. The strategy for the development of the leading processing industries in Jambi province is: (1) Strategy for optimizing the government's role in policies and funding for downstream programs, the next priority weight is a strategy that has an influence, namely (2) Cross-sectoral coordination involving the business world to downstream industry, and (3) Strategy for building and improving infrastructure (roads, ports and availability of electrical energy), and (4) Socialization of Existence (existence) of processed industrial products in Jambi area.

Policy Advice

Based on the results of the research and the conclusions above, the author provides policy suggestions as a form of implementation of the results of this study, as follows:

1. Entrepreneurs need to increase the value of industrial production through the use of technology and product diversification as well as make efficient use of raw materials and labor so that their industrial products are competitive
2. Workforce skills need to be improved by employers through in-house training (internal training) to increase labor productivity and business efficiency in terms of labor costs
3. The Jambi Provincial Government needs to build industrial estates and provide tax incentives for leading processing industry entrepreneurs, especially those that have an impact on the regional economy through active and dynamic regional promotion
4. The Jambi Provincial Government needs to build business and social partnerships, build a superior processing industry, and ensure the availability of environmentally sound raw materials and renewable energy.

Scientific Advice

Based on the results of the research, scientific suggestions can also be issued for scientific development, especially in Industrial Economics, as follows:

1. The next researcher can examine the governance of the Rubber Processing Industry and Rubber Goods micro or examine from its managerial aspect, because the author examines the growth of the rubber processing industry in terms of regional aspects such as the availability of road infrastructure, the availability of electrical energy, raw materials, regional economic growth, industrial investment, UMP, and budget allocation in the industrial sector.
2. This study discusses the entire processing industry, so for the next researcher, it is necessary to analyze this processing industry on a per-industry subsector, so that research on this processing industry can help the government or business people in determining policies to determine the priority or superior processing industry to be built downstream

rubber industry and rubber goods, processing, especially in Jambi Province to improve competitiveness of the processing industry and increasing regional economic growth.

3. The results of this study recommend the Rubber Industry, Rubber and Plastic Goods. The processing industry needs to be studied for its business feasibility to be developed in Jambi Province. Business feasibility needs to be studied so that the processing industry is attractive to investors.

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