

Variaton of Industrial Type Contributions on Working Performance

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Abstract—The purpose of this research is to see the influence of variation and types of large and medium industries in North Sumatera on the Absorption of the Labor force in North Sumatera Province. The type of research is descriptive quantitative. The data used are secondary data sourced from Statistics Agency of North Sumatera Province. The types of industries used as observation include Manufacture of Chemicals, Petroleum, Coal, Rubber and Plastics, Manufacture of Fabricated_Metal Products, Machinery and Equipment, Manufacture of Food, Beverages and Tobacco, Manufacture of Wood, Including Furniture and Other Manufacturing Industries have an impact on the absorption of labor. Partially, the type of industries used as observation includes Manufacture of Fabricated_Metal Products and Manufacture of Wood are significant variables in the absorption of labor. The implication of this research is to know the types of large and medium industries that give contribution of job field so that the government of North Sumatera Province and Regency of City can arrange the right budget policy program so that more effective invite investor entry to North Sumatera.

Keywords—*employment absorption; large industry; medium industry; local government; industrial stimulus*

I. INTRODUCTION

The industrial process is a sector that has a major contribution. Along with the rapid development of

industrialization and supported by the government's policy in facilitating the entry of foreign capital into Indonesia, this manufacturing sector has increased. An industrialization strategy that relies heavily on capital accumulation and High technology has led to polarization and dualism in the process development [1]. The facts show that the modern manufacturing sector lives alongside the traditional and less productive agricultural sector. North Sumatra Province based on cluster of BPS has various types of industries. The existing industrial types include industries used as observation include Manufacture of Chemicals, Petroleum, Coal, Rubber and Plastics, Manufacture of Fabricated_Metal Products, Machinery and Equipment, Manufacture of Food, Beverages and Tobacco, Manufacture of Wood, Including Furniture and Other Manufacturing Industries. Is it able to absorb the workforce?

II. METHOD

This study uses secondary data. The data were obtained from Central Bureau of Statistics. *North Sumatera In Figures* in the period 2000-2015. The types of industries used as observation include Manufacture of Chemicals, Petroleum, Coal, Rubber and Plastics, Manufacture of Fabricated_Metal Products, Machinery and Equipment, Manufacture of Food, Beverages and Tobacco, Manufacture of Wood, Including Furniture and Other Manufacturing Industries [6]. The hypothesis was tested by using Structural Equation Modeling

(SEM) with SMART PLS software. The data analysis technique in this research employed Structural Equation Modeling (SEM). SEM is a set of statistical techniques allowing testing of a series of relationships simultaneously. Furthermore, in the data processing, the writer used the aid from software SMART-PLS Structural Equation Modeling, which was one of the multivariate analyses capable of analyzing the variable relationships in complex manner [21], [22], [24] & [30]. The hypotheses were tested using Structural Equation Modeling (SEM) with Smart-PLS software tools. The equation is formed as follows:

$$Y_2 = \alpha + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + e$$

- X₁ = Manufacture of Chemicals, Petroleum, Coal, Rubber and Plastics
- X₂ = Manufacture of Fabricated Metal Products, Machinery and Equipment
- X₃ = Manufacture of Food, Beverages and Tobacco
- X₄ = Manufacture of Wood, Including Furniture
- X₅ = Other Manufacturing Industries
- Y = Absorption of Labor

- b₁... b₅ = Coefficient
- α = Constant
- e = Error

This phase is done to test the suitability of the model to evaluate the goodness-of-fit index. Analysis using SEM requires some suitability index to measure the correctness of data and models.

III. RESULT AND DISCUSSION

A. Result

1) Evaluation of Structural Model (Inner Model)

Inner model evaluation through the bootstrapping menu also generates T-statistics values that will be used to test the hypothesis. The criteria are T-statistic > 1.66 [19] & [23]. If the value of t_{count} < t_{table} then Ho accepted and when the value of t_{count} > t_{table} then Ho is rejected which means that the variable in question there is influence which is significant [25], [26] & [35]. This means that the independent variables tested have an effect significantly to the dependent variable. The result of T-statistics value in the table path coefficients is presented in the following figure:

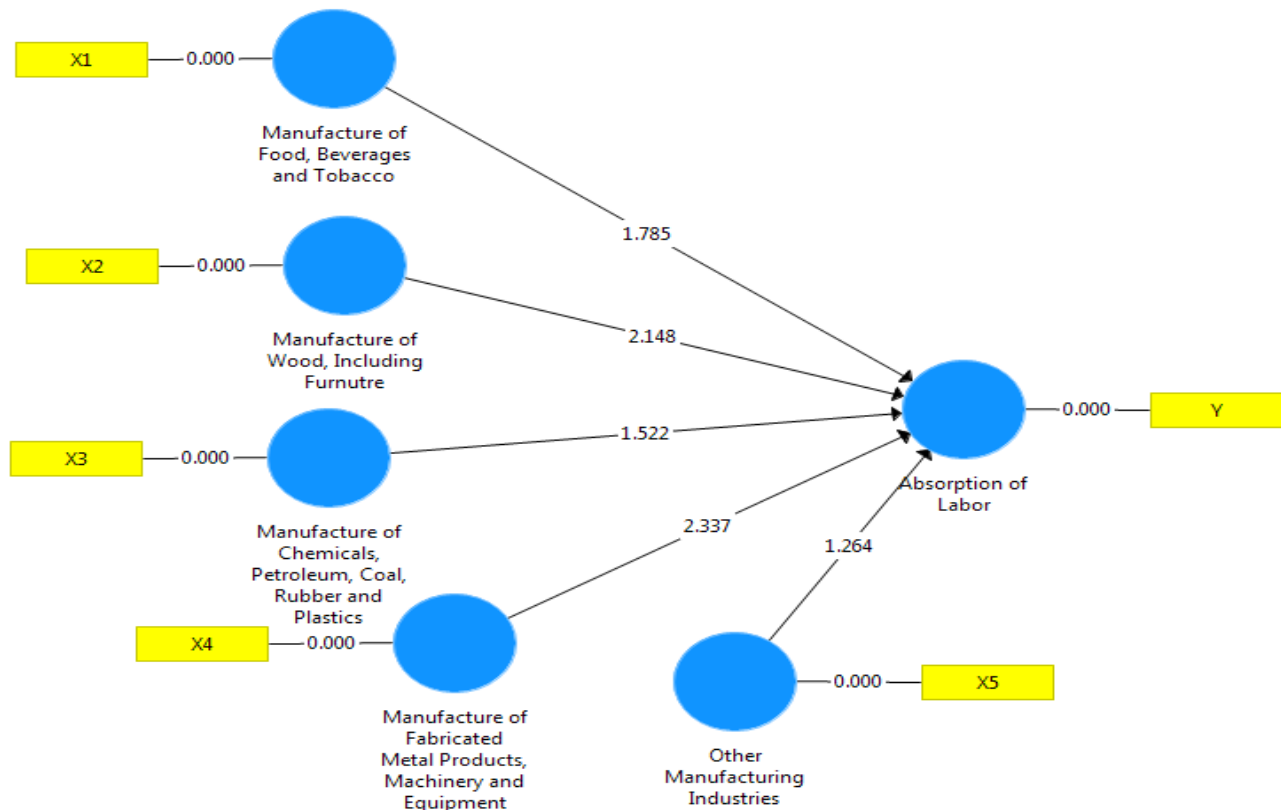


Figure 1. Overall Model with Coefficient

The effect test can be seen in the following Table:

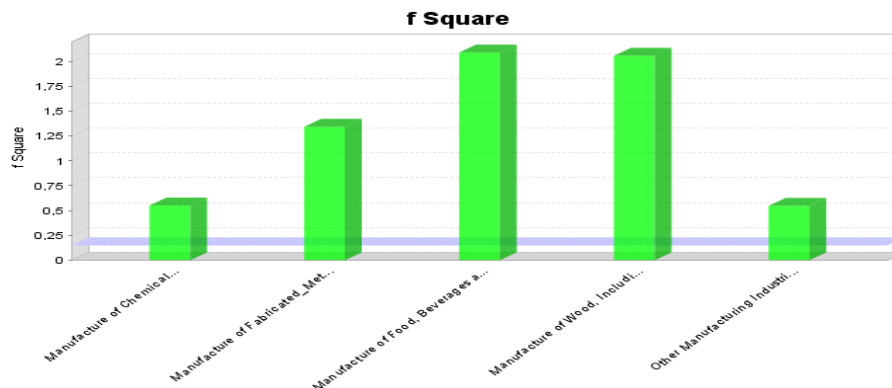
Table 1. The result of Bootsraping

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics	P Values
Manufacture of Chemicals, Petroleum, Coal, Rubber and Plastics -> Absorption of Labor	0,398	0,407	0,262	1,522	0,129
Manufacture of Fabricated_Metal Products, Machinery and Equipment -> Absorption of Labor	-1,472	-1,365	0,630	2,337	0,020
Manufacture of Food, Beverages and Tobacco -> Absorption of Labor	-0,783	-0,700	0,438	1,785	0,075
Manufacture of Wood, Including Furnutre -> Absorption of Labor	1,089	1,122	0,507	2,148	0,032
Other Manufacturing Industries -> Absorption of Labor	-0,709	-0,639	0,561	1,264	0,207

Source: PLS Output (2017)

Based on the above table produces coefficient of 0.005, smaller than 1.66 ($\alpha = 5\%$) then the decision of hypothesis testing reject H_0 and accept the hypothesis H_a [3], [7], [11], [12] & [13]. The results show that the variables of the type of industries used as observation include Manufacture of Fabricated_Metal Products and Manufacture of Wood are

significant variables in the absorption of labor. In addition to hypothesis testing through the bootstrapping menu that produces T-statistics, inner model evaluation is also done by reviewing the R-Square value [8], [9], [10], [15], [16] & [17]. The R-square value generated from the inner model evaluation is presented in the following table:



Source: PLS Output, (2017)

Figure 2. F Square

Table 2. R-Square Value

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ((O/STDEV))	P Values
Absorption of Labor	0,701	0,799	0,114	6,132	0,000

Source: PLS Output. (2017)

The variation of R-Square value of 70.1%. The existence of small industries also has a great contribution on economic development of a region, because with the number of business units that many will create jobs and be able to absorb labor so it has the potential to reduce unemployment in an area [2],[4],[5],[20]&[22]. Types of wood industry, wooden goods and other processing industries have enough influence on the industry in Indonesia. This shows that wood industry, wooden goods, furniture, recycling, goods wicker and other processing industries are quite potential in reducing

unemployment because it absorbs a relatively large workforce [31], [32], [33] & [34]. One of indicator to see how large an area is absorbing energy work is by looking at some variables that affect demand labor in a company [28]. Small industry development is the way that is considered a major role in the development of the manufacturing industry [18]&[29]. The development of small industries will help overcome unemployment problems considering the technology used is labor-intensive technology so it can increase employment and business opportunities, which in turn encouraging regional

development and rural areas [14]&[27]. The role of the home industry or small industry has an influence big on the economy in Indonesia due to build an industry this small does not require a large capital and able to absorb labor.

IV. CONCLUSIONS

The results indicate the existence of large and medium industries that stood in North Sumatra Province have not impact on the absorption of the number of workers. Partially the type of industries used as observation includes Manufacture of Fabricated_Metal Products and Manufacture of Wood are significant variables on the absorption of labor. The implications of this research with the existence of large and medium industry then North Sumatra provincial government should increase the allocation of local government expenditure funds to stimulate the entry of investors to North Sumatra so it can absorb labor in the City/District/Regency.

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