



ESCALATION OF SMALL INDUSTRY COMPETITIVENESS IN SUPPORTING ECONOMIC GROWTH IN INDONESIA

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Abstract

Small industries are growing rapidly in business units and employment, but are still very low contributing to GDP compared to medium and large industries with a smaller share of business units and labor. This has an impact on the widening gap in labor productivity between small industries and large industries and competitiveness in both domestic and global markets. This condition is very worrying considering that the small industrial sector is highly expected to be the engine of growth because of its significant role in employment. Data used secondary data in the form of provincial panel data in Indonesia from 2010-2015. The analysis uses panel regression method with two equations for small industry competitiveness and economic growth in Indonesia. Based on the Hausman test obtained the right model is the common effect. The results show that in the small industry competitiveness equation, production value and labor productivity have a positive effect on the competitiveness of small industries, labor wage variables have a negative effect, while technology does not affect the competitiveness of small industries in Indonesia. The economic growth equation obtained by the results of competitiveness, investment, and small industrial business units have a positive effect on economic growth in Indonesia.

Keywords: Economic Growth; Competitiveness; Small Industry.

Introduction

Industrialization that has occurred since Pelita I to date has resulted in structural transformation in Indonesia. The pattern of sectoral economic growth in Indonesia is in line with the trend of structural transformation processes in various countries. The trend is a decline in the contribution of the agricultural sector (primary sector), while the contribution of the secondary and tertiary sectors tends to increase (Kuncoro, 2010). The agricultural sector accounted for 51% of the Gross Domestic Product (GDP) in 1968, the manufacturing industry sector accounted for only 8.5%. After that year the phenomenon that occurred was the contribution of the agricultural sector to decline from year to year, on the contrary the manufacturing industry continued to experience a significant increase.

In general, in the past 6 years the industrial sector contributed an average of 23.56 percent and the agricultural sector only contributed an average of 14.46 percent. So that it can be concluded that the industrial sector is the dominant sector that provides the largest contribution to Indonesia's economic growth. But judging from the growth in its contribution, the manufacturing sector continued to decline until it reached its lowest level during that period. This is very worrying considering that this sector is an expectation to be a driving force for national economic development.

Considering these conditions the government is committed to ensuring the sustainability of national industrial development which is the 6th program of NawaCita by including it in the national development agenda of Indonesia

stipulated in the 2015-2019 National Medium-Term Development Plan (RPJMN). One of the priorities is increasing people's productivity and competitiveness in the international market by increasing the acceleration of national economic growth through accelerating the growth of the manufacturing industry (Ministry of Industry, 2015) .

The role of small and medium industries is one of the world's recognized instruments to measure a country's economic development and growth (Loveman and Sengenberger, 2014). Several empirical studies in developed countries of Europe, Asia, and North America, have proven that small and medium industries are important engines to encourage economic growth in the country (Ghobadian and O'regon, 2004; Ates and Bititci, 2007).

But despite the government's efforts to maintain the small and medium industrial sector and to ensure its growth and survival, in fact in some developing countries, this sector still cannot find its "legs". This situation is more disturbing and worrying compared to what other developing and developed countries can achieve with their SMI (Small and Medium Industry) (Bowale and Akinlo, 2012). This phenomenon also occurs in SMIs in Indonesia as indicated by empirical data in Table 1.

Table 1 Contribution of Small, Medium and Large Industries to Processing Industry in 2010-2014 (in percent)

Business unit	2010	2011	2012	2013	2014
Small Industry	99,15	99,23	99,30	99,34	99,30
Medium Industry	0,60	0,53	0,49	0,46	0,48
Large Industry	0,25	0,24	0,22	0,21	0,21
Labor	2010	2011	2012	2013	2014
Small Industry	58,89	64,18	65,07	66,18	61,75
Medium Industry	5,78	4,73	4,30	4,51	5,22
Large Industry	35,34	31,10	30,64	29,31	33,03
GDP	2010	2011	2012	2013	2014
Small Industry	7,83	3,08	9,98	12,97	12,41
Medium Industry	10,72	7,59	8,47	7,56	10,06
Large Industry	81,45	89,33	81,55	79,47	77,53

Sumber: BPS. Statistic IBS, Statistic SMI, 2011-2015.

This empirical reality shows that what the government hopes for the development program carried out so far has not provided optimal results (Kumorotomo, 2008; Kuncoro, 2010). The phenomenon of SI (Small Industry) performance is seen from its contribution to GDP formation, although its growth shows an increase, but its share is still very small compared to Medium and Large Industry. This raises the question why the performance of the SI in Indonesia has not shown significant progress.

The success of the role of the SI in achieving economic development goals is determined by the performance of the industry itself (Tambunan, 2006; Bowale and Akinlo, 2012; Chugthai, 2014). Industrial performance is reflected by the competitiveness of the industry facing the global trading system (Kuncoro, 2010). Competitiveness is needed to improve standards and quality of life and to improve economic existence to be more market oriented (Robiani, 2004). The Vide and Tomine Study (2016) concludes that industrial competitiveness has a positive and significant effect on the economic growth of European Union countries. The contribution of the Indonesian SI to national exports is still relatively low compared to other countries in the Asia Pacific region (Kompas.com, January 30, 2017).

The type of commodity that is likely to be able to be actively traded on a competitive regional / global market is one that has a comparative advantage. The commodity mainly comes from the processing industry and small industry subsectors (Graha, 2010). The theory of comparative advantage explains that comparative advantage arises from differences in labor productivity (Cho and Moon, 2003). The technology used in the production process will determine the competitiveness of the products produced. Companies that master the latest technology in their fields have competitiveness because they are able to produce high added value compared to companies that do not have technological progress (Tambunan, 2006)

Based on a search of the previous study, it can be concluded that there are differences in research findings that discuss SI competitiveness and its influencing factors. Among other studies conducted by Wahyudin (2004) found that resource intensity has a significant effect on the competitiveness of export-oriented industries. Kristiningsih and Trimarjono

(2014) concluded that technology variables and product innovation did not significantly influence the competitiveness of SMEs.

The big problems facing the SI in Indonesia today are related to the problem of weak industrial performance caused by problems and obstacles that have been faced and cannot be overcome. Empirical data shows that there is a widening gap between SI, MI and LI in generating added value and labor productivity, which has an impact on competitiveness in both domestic and global markets. This condition is very worrying considering that the SMI sector is highly expected to be the engine of growth because of its significant role in employment.

Although there are quite a number of previous studies that discussed SI performance, there are still differences in research findings regarding factors that influence the performance of the SI in driving economic growth. The interesting thing from this research to be put forward and what distinguishes it from previous studies is the analysis that examines and correlates the performance of SI as measured by labor productivity, competitiveness (export performance) and the factors that influence it with economic growth.

Review of Literature

This study uses the New Growth Theory, or better known as the Endogenous Growth Model, which is considered quite relevant to this study. There are two types of New Growth Theory [(Todaro & Smith (2013), Romer (2006)], namely (1) Human Capital Model and (2) Research & Development Model Human Capital Model focuses on capital accumulation in various forms of physical capital, human capital, effective labor and so on, which results in endogenous growth, while the Research & Development Model places more emphasis on technological advances that will produce innovations to increase productivity and produce endogenous growth

The concept of competitiveness begins with Adam Smith's thinking with the theory of absolute excellence. The theory explains that if a country produces a commodity more efficiently and is less efficient in producing a second (alternative) commodity from another country, then the profit can be obtained by specializing in producing the superior commodity. Adam Smith's theory was expanded by David Ricardo who was popularized through his book *Principles of Political Economy and Taxation*, namely the theory of comparative advantage (Hadi, 2004). David Ricardo first introduced the concept of comparative advantage in the early 19th century with the law of comparative advantage which states that each country has a comparative advantage in something and benefits by trading it to be exchanged for other goods (Lindert and Kindleberger, 1995). Heckscher-Ohlin then developed Ricardo's theory of comparative advantage by stating that countries export goods that use intensively abundant production factors and import goods that use scarce production factors intensively (Hadi, 2004)

Anwar, Fathul, Darsono, and Agustono (2014) analyzed competitiveness of the rattan furniture industry with Porter's Diamond, RCA, and OLS. The results showed that the rattan furniture industry has strong competitiveness, variable export prices, exchange rates, and government policies that have a significant effect on power competitiveness (RCA). Raf (2012) The competitiveness of the factors of small industries, using the Porter's Diamond model, factor analysis and OLS methods. There are significant effects on human resources and technology, human resources and technology, while there are significant effects. Help, Lantu, Triady, Utami and Ghazali (2016) conducted a study on the development of models for improving the competitiveness of MSMEs in Indonesia. The results include that there are six main variables forming the competitiveness of MSMEs in provinces, namely the availability and conditions of business environments, business capabilities, policies and infrastructure, research and technology, financial and partnership support, and labor productivity productivity variables. This study aims to analyze and empirically test the level of labor productivity produced and the ability of small-scale competitiveness industries and the factors that influence it, as well as its improvement strategy in supporting economic growth. The initial analysis of small industry performance is measured by labor productivity work and competitiveness.

Methodology

This research is an explanatory research type due to analyzing the causal relationship between the influence of production value, labor productivity, wages, and technology on the competitiveness of small industries in Indonesia. The approach used to analyze is a quantitative approach, which includes quantitative analysis as the main method and qualitative explanation as a supporting method.

Based on the research objectives, the analysis model used in this study is as follows.

Small Industry Competitiveness Model:

$$DS_{it} = \beta_0 + \beta_1 NP_{it} + \beta_2 PR_{it} + \beta_3 W_{it} + \beta_4 TEK_{it} + \varepsilon_1 \dots \dots \dots (1)$$

Economic Growth Model:

$$PE_{it} = \alpha_0 + \alpha_1 DS_{it} + \alpha_2 INV_{it} + \alpha_3 UU_{it} + \varepsilon_2 \dots \dots \dots (2)$$

PR (SI labor productivity), DS (SI competitiveness), PE (economic growth), NP (Production Value), Law (SI Business Unit), INV (SI Investment), TEK (Technology), W (Wages), t = year to-t, where t = 2010 to 2015, β_j , α_j = parameter estimation, β_0 , α_0 = intercept, $\varepsilon_{1,2}$ = error term.

Data Analysis

This study uses panel data, namely secondary data related to small industries registered in the Indonesian Micro and Small Industry Statistics. Data was obtained from the Central Statistics Agency (BPS), Bank Indonesia, the Directorate General of Small and Medium Industries of the Ministry of Industry consisting of 34 provinces in Indonesia. Data related to the competitiveness of small industries is obtained from the World Integrated Trade Solution (WITS) Commodity and Trade Database. The analysis technique used in this study is panel data regression. Panel data is data that has a space dimension (individual) and time.

Results and Discussion

This study was analyzed using the Least Squares (PLS) Panel method which showed that the statistical model was representative enough to analyze the influence of technology, health benefits, and labor wages on labor productivity in small industries in Indonesia. In this study there are two equations analyzed 1) the influence of technology, health benefits, and labor wages on labor productivity, 2) the influence of labor productivity and competitiveness on economic growth. The results of the Hausman test, the selected model is random effect.

Regression analysis of equation 1) the results show a statistical F value of 184,958. The coefficient of determination obtained is 0.741. This value means that the variation in the value of labor productivity in Indonesia can be explained by technological variables, health benefits, and labor wages of 74.1 percent, while the remaining 26.9 percent is explained by other variables outside the model.

The results of the F test together show that technology variables, health benefits, and labor wages together have a significant effect on economic growth in South Sumatra. The calculated F value is 184,958 with a significance level of 0,000. The labor productivity function equation is as follows:

$$DS = 4043703 + 0.302248NP + 420.5226 PR - 9.712284W - 0.151339TEK$$

Table 2. Effects of Production Value, Labor Productivity, Wage, and Technology on the Competitiveness of Small-Scale Industrial in Indonesia

VARIABLES	NP	PR	W	TEK
Coefficient	0.302248	420.5226	-9.712284	-0.151339
Probability	0.0007	0.0000	0.0316	0.0614
t-statistics	3.441506	5.457192	-2.165788	-1.881790
R Square				0.602638
Adjusted R Square				0.594403
F-Statistic				73.17589
Durbin_Watson				2.058138

Source: Data Processed, 2018

Furthermore, the results of the t test indicate that the technology variable (TEK) is not significant because the probability value of 0.0614 is greater than 0.05. The Production Value (NP) variable has a probability value of 0.0007 less than 0.05 meaning that the Production Value (NP) variable has an effect on SI competitiveness (PR), labor wage variable (W) the probability value is 0.0316 smaller than 0, 05 means that the labor wage variable (W) has a significant effect on SI (DS) competitiveness.

The technology coefficient does not have a significant effect on the productivity of small-scale industrial provinces in Indonesia. This means that the value of technology calculated from the value of engine repairs in small industries

indicates that the increase in the value of machine repairs carried out by small industries has no impact on increasing competitiveness.

The coefficient of labor productivity (PR) has a significant effect on small industry competitiveness, indicating that the increase in labor productivity provided will increase labor competitiveness. It means that the increase in labor productivity will have an impact on increasing the competitiveness of small industrial labor. The coefficient of labor productivity (PR) has a significant effect on small industry competitiveness, indicating that the increase in labor productivity provided will increase labor competitiveness. It means that the increase in labor productivity will have an impact on increasing the competitiveness of small industrial labor.

The economic growth model after Hausman testing, the chosen model is the common effect. Regression analysis of the economic growth model shows a statistical F value of 98.63519. The coefficient of determination obtained is 0.604005. This value means that the variation in the value of economic growth in Indonesia can be explained by the variable competitiveness, investment and small industrial business units by 60.40 percent, while the remaining 39.60 percent is explained by other variables outside the model.

The results of the F test together show that the variable competitiveness, business units and small-scale industry investment together have a significant effect on economic growth in Indonesia. The economic growth model is as follows:

$$PE = 73821.78 + 0.005556DS + 0.004794 INV + 0.502766 UU$$

Table 3. Effect of Competitiveness, Business Units and Small-Scale Industrial Investment on Economic Growth in Indonesia

VARIABLE	DS	INV	UU
Coefficient	0.005556	0.004794	0.502766
Probabilitas	0,0000	0.0000	0.0000
t-statistic	5.995674	4.800810	4.169165
R Square	0.604005		
Adjusted R Square	0.597882		
F-Statistic	98.63519		
Durbin_Watson	2.041450		

Source: Data Processed, 2018

Furthermore, the results of the t test indicate that the small industry competitiveness variable (DS) has a significant and positive effect on economic growth because the probability value of 0.0000 is greater than 0.05. Investment variable (INV) probability value of 0.0000 less than 0.05 means that small industry investment variables affect economic growth (PE). Small business unit unit variables affect economic growth in Indonesia. The influence of competitiveness is positive and significant for economic growth in Indonesia, measured by the value of GDP based on constant prices according to provinces in Indonesia. It means that competitiveness as measured by the export value of small industries indicates that the increase in the value of exports, investments, and small-scale business units has a significant impact on increasing economic growth in Indonesia.

Conclusion

The results of the competitiveness estimation model show that the variables of production value and labor productivity have a significant and positive effect on the competitiveness of small industries, while the labor wage variable has a significant and negative effect on the competitiveness of small industries. Technology variables do not affect the competitiveness of small-scale provincial industries in Indonesia. Labor productivity has an effect on the competitiveness of small industries, variable labor wages have a negative and significant effect on the competitiveness of small industries. The economic growth model shows the variable competitiveness, investment and small industry business units have a significant and positive effect on economic growth in Indonesia

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