Taking Decision to Export based on Existing Factors at Manufacturing Firms: Study on 5 Major Islands in Indonesia

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"Ask, and it shall be given you; seek, and ye shall find; knock, and it shall be opened unto you." (Matthew 7: 7)

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List of Acronyms

B2B	Business to Business
BPS	Central Bureau of Statistics (Badan Pusat Statistik)
FDI	Foreign Direct Investment
FEM	Fixed Effect Model
GDP	Gross Domestic Product
IBRD	The *International Bank for Reconstruction and Development*
IGGI	Inter-Governmental Group on *Indonesia*
IHPB	Wholesale Price Index (Indeks Harga Perdagangan Besar)
ISS	Institute of Social Studies
LPM	Linier Probability Model
R&D	*Research and Development*
REM	Random Effect Model
SMEs	Small and Medium-sized Enterprises
SMIs	Small and Medium Industries

Abstract

This study is required to capture what factors in the manufacturing firms in Indonesia that make them choose to export or not, and how the influence of factors proficiency level on export activities. Using data at the enterprise level, obtained from the Central Bureau of Statistics through surveys that they do, then obtained variables as follows: export proportion (as the dependent variable), then the firm productivity, firm size, firm capital, firm age, foreign ownership , and the area of the firm (independent variables). The data used are also using data from 2006 to 2011 using 48.134 observations, based on 5 biggest island in Indonesia. Regression analyzes were performed using binary logit, and to know how much percentage of goods exported by using tobit models. The result is that a significant factor, and positively influence the company's decision to export and the percentage of exported products is the productivity of the company, the company's ownership by foreigners, as well as the capital of the company. For a company, the size and age of the company have varying results, and not entirely significant in both models. Factors area companies also considerably stimulus the proportion of exports.

Keywords: Export decision; firm factors; manufacturing firms; Indonesia

Relevance to Development Studies

Relations in the field of trade between countries is very important for the economic development of each country. Circulation of products between countries could not be separated from the performance of companies that produce commodities. With the macro environment facing the same, not all companies want to export their products. This condition of course relates to the nature of heterogeneity which is owned by their respective companies. With more and more research on the company level, is expected to be a reference for corporate and government policy makers to make more and more companies participate in international trade activities. We also expect the more productive industrial sector in Indonesia, as well as transform Indonesia from countries as its main export on primary products be relied upon as a country that has a high value added product, with the ultimate goal of improving the welfare of society equally.

Keywords

Export decision; firm factors manufacturing firms; Indonesia Corporate

Chapter 1
Introduction

1.1 Background

Looking at the great potential of manufacture products which can give a huge profit in the future, it is worth a consideration to advance the manufacturing industry. The advancement could be in a form of production amount improvement, product variety improvement, or any strategies which could stimulate the industrial advancement.

This great potential has unfortunately been remained ignored by the government of Indonesia, which can be seen in the lack of revolutionary strategies to stimulate the manufacturing industries. If the reason behind this ignorance is the small income of the sector has given to the country, maybe the government should look and learn carefully at the snowball effects of manufacturing industries have given to the neighbouring countries.

It takes a long time and thoughts until this sector will eventually give a huge income to the national income, but it is worth a wait and works. Later, if this sector is given a proper attention and development, it will not only give benefit to the national income in the future, but also give more worthy jobs to the society and improve the societies economic.

Fortunately, the recent strategy introduced by the Indonesian government in 2015 seems to be promising and ambitious. The government, through the strategy, decides to increase the export of manufacture products and decrease the export of primary products, which is in contrast to the current trend. This is promising because the global need is dominated by manufacturing products instead of primary products.

In order to reach the target, hard works and revolutionary development is of great importance. Encouraging policies should be developed in order to stimulate the domestic industries to increase the amount of manufacturing products export, without ignoring the primary products industries.

However, not all of the firms are able to fulfil the target that has been set by the government. Some firms are easily successful, while the others are suffering hard obstacles. One possible thing that differentiate the result could be the minor condition; the characteristics, because it can be assumed that all of the firms are in the similar macro conditions. These characteristics are worth a research to shed a light on the reason of the different export performance.

1.2 Motives and Objectives of Research

The globalization era has made the world as a small village, where the macro conditions faced by the industries are not radically different. Thus, the attention has been given more to the firms and products, because they can differentiate a firm with the other firms significantly. This shift of attention was triggered by the emergence of various micro characteristics that determines firm performance. Following this trend, many models are developed by experts to explain it.

It is assumed that firms which sell their product into international markets, meaning that they are exporters, are bigger in size, higher in productivity, have more expert employees, and have more stock of capital than those who only sell their products in domestic markets. The explanation to this is that exporter firms are big not because they are involved in exporting activities, but the other way around. They are already big, productive, more skilled, and rich of capital stock, which make them able to stay competitive in international markets (Chang & Van Marrewijk, 2012).

The widely used model on researches in this field is the one developed by Melitz. It argues that the micro characteristics play significant roles in determining a firm's aggregate outcomes. Furthermore, this model takes the impacts of globalization into account which was not included in the previous models. For example, when the export rate goes down, giant firms will possibly enhance their export while the small firms most likely lose the competition.

As the world of trading develops as the time goes on, the theories about micro data are also following the development, refining the older versions, and even predicting the further possible direction of development. Melitz's model has helped the development of that of Krugman's and led us to a better framework that is applicable in the analysis of international trade. Based on the model introduced by Melitz (2003), there is a possibility that firms enter an industry by investing some amount of entry cost. As a newcomer, no one could guarantee the whether the firm will survive in the exporting business or not. Firms who can produce more high than product that exported cut-off will survive, while those who are below will eventually quit the industry.

However, there is no consensus about the clear level of productivity for a firm to be categorized as viable because there are many factors influencing the productivity. For instance, the same type of firms with even the same size will have different challenges if they are in different countries, and so on.

The assumption about the international trade above is quite understandable, because even some firms in the same country or at the same size, same sector, same productivity level, or any other possible similarity will always be different from each other. This heterogeneity is still potential for further and deeper researches,

since up to this day it is still unclear the level of firm heterogeneity in developing countries and how the heterogeneity related to development policies and strategies.

Supporting this field of research, Van Bergeik et al. (2013) argued that works on micro data or firm data are beneficial to give a better understanding about how globalization affects the firm in developing countries. Furthermore, this understanding will be helpful for the firms and even the country policy makers in formulating a set of policies and strategies which are beneficial for the developing country like Indonesia.

Thus, the firm heterogeneity in Indonesia is potential to dig up. Theoretically, this study will give a good contribution to the self-selection hypothesis in international trade with firm heterogeneity. Practically, the result of this study will be helpful as one of the references for the policy makers in developing policies or strategies in supporting the current 2015 strategy.

Based on those explanations, it is interesting to elaborate more about firm heterogeneity in Indonesia, what makes those manufacturing firms in Indonesia engage in export activity. This research also tries to contribute evidence from a developing country to the self-selection hypothesis in international trade with firm heterogeneity. We further examine exporting behaviour of firms in Indonesia to contribute some hints for trade policy implications in Indonesia that support the "Strategy to Triple Non-oil Exports Period 2015-2019", how to respond to conditions of global trade by changing the export strategy of the primary sector becomes manufacturing sector.

1.3 Research Questions

Constructed by the background, motives, and objectives of research, we have two research questions that have to be answered:

1. What factors are owned by companies that determine the company's decision to export, based on 6 major islands in Indonesia?
2. What changes and how the decision to export occur in the manufacturing industry in Indonesia based on these factors?

1.4 Organization of Research Paper

This research paper is divided into five chapters namely introduction, theoretical framework and empirical studies, research methodology, result and analysis, and finally conclusion. The first chapter contains background as well as context of the research, research questions, research objectives, significance of the research, and the research writing organization. Furthermore, the second chapter presents the theoretical concepts used as the basic framework of this research, and the

research hypothesis. The next chapter deal with research methodology, sampling mechanism, and methods of analysis. The fourth chapter will describe the analysis of the data that have been collected. Finally, the last chapter presents the summary of the research as well as suggestion for further researchers.

Chapter 2
Theoretical Framework and Empirical Studies

2.1 Firm Determinant to Export Performance

In explaining international trade, a well-known model was developed by Hecskcher-Ohlin which proposed some conditions for exporter countries to achieve the wanted advantage. This model was followed by some refinement and enrichment from several economists by giving more elaboration at the firm level.

Decades of research on export behaviour have resulted in various substantial features that distinguish exporter and non-exporter firms. One of those interesting research was conducted by Cavusgil and Naor in 1987 which revealed that what makes exporter and non-exporter firms different are how good they manage their business, the size of market they work on, how they respond to possible risks in expanding their trading, and finally how big the firms are. Exporter firms are more active in finding any opportunity for exporting through their wide networks and advancing their capabilities than the non-exporter firms.

Furthermore, the exporter firms are always challenged to expand their market beyond the domestic market, begun with adjusting their products quality to match the global requirements. This can be due to the optimistic view they have in business, which is in contrast to how the non-exporter firms view the market expanding and risks that come with it. The non-exporter firms view the exporting decision as a risky step that could endanger their business. Lastly, size does matter in this case. The bigger the firms, the better capability they have which resulted in better export performance. The smaller the firms, the less capability they have which then resulted in lower export performance.

What revealed by Cavusgil and Naor reflects the lack of old trade theory in elucidating the effects of firm characteristics on export behaviour. To this day, many researches on firm level characteristics have emerged which elucidated the effects of availability of technology, the firms' capabilities in facing challenges in markets, policies the firms made for marketing, ownership, the place they run their business in, and economies of scale.

Firm-level characteristics as determinants of export decision

Referring to those theories presented above, it is now clear that there are distinctions in characteristics between exporter and non-exporter firms which later influence their export performance. These findings have triggered further researchers to dig up more and deeper information about how those characteristics affect the export decision and performance. Rolling the dice in the exporting business needs a big courage, indeed. Dixit (1989) and Krugman (1989) argued

that the firms who want to enter this business have to sacrifice a big amount of sunk cost. Adding this assumption, Roberts and Tybout (1997) then assume the sunk cost paid by the newcomer firms will bring some snowball effects to the firms themselves. They assume that due to the big amount of sunk cost sacrificed by the firms, which could not be returned if they fail, the firms will become more efficient and smarter to prevent a big loss. They will eventually learn to respond to the increasing demand of the new markets efficiently, they will also find some innovations in order to be successful in global competition. Once the decision of export is taken, sunk cost cannot be avoided, and there is no other option than survive the new challenges through creativity and capability improvement. This assumption is supported by Clerides et al. (1998) who noted that the sunk cost is related to improving the employee's capability, expanding the size of the firm, enhancing the experience, and new ownership status. That is why bigger firms are more likely to take the export decision because they can handle the big sunk cost better than small firms.

Before a firm begin to join the tight competition on the international markets, the firm is required to be excellent in the domestic market first. It is understandable because the international markets will be much more demanding than the domestic; it requires products with better quality, premium service, innovative strategies, and many new challenges that do not appear in the domestic markets. In studying the effects of firm characteristics on their performance in exporting, it is good to choose multiple firms competing in the same industry. The structure of market should also be considered, like what was suggested by Schumpeter.

Lots of works on this field has left an interesting and challenging question, it is that whether the export activity that improves the productivity of a firm, or the productivity of a firm that trigger the export activity. These two assumptions sound logical, but need a good analysis to get a clear description. The explanation for the first assumption is that in entering an international market, a firm needs to improve their capability in management, marketing, quality, and prepare anything to develop itself before entering an international market. The development done by the firm means an improvement in productivity, which lead us to the conclusion that a firm with higher productivity has a bigger opportunity to be an exporter (Wagner 2007: 61).

Meanwhile, the explanation for the second assumption is that as a firm hops into the international market, there will be lots of new things to be learn and adapted into the firm. The new environment which is surounded by new and more experienced competitors, consumers, and networks could give new ideas and innovations to the firm for development which will lead to productivity improvement.

Each product has its own life cycle, which reflects how long it can last in the market. In order to stay longer and survive in competition, innovation cannot

be avoided. Furthermore, the theories of Krugman (1979) and Vernon (1966) suggested that innovation cannot be separated from the availability of technology. The R&D department of a firm will need a proper technology in developing a new or upgrading the current products. It is not saying that technology is the only thing needed in product development, but there are many factors that could influence an R&D capability in developing products like planning, ideas, etc. Though, the factor of technology will be controlled in this research since the relationship between technology and export activity differs in different firms' R&Ds.

Another vital factor which is influential in export performance is capital. The higher capital a firm has the better performance it will show. The big amount of capital available in a firm will enable the firm to adjust its production to meet the new markets demand. As a firm enters an international market, the chance is that the demand of its products will increase eventually, and by the availability of capital the firm can fulfil the increasing demand easily. However, a research conducted by Campa & Shaver (2002) suggested that the total spend of capital varies among market orientations. They confirm that exporting is not only a strategic outcome of export behaviour but it also has a significant effect on export behaviour such as capital investment. This means that market orientation will influence the expenditure of capital. Exporters will have higher tendency to increase their capital rather than non- exporters because firms with more than one country market will tend to expand their markets to enjoy diversification benefits. Therefore, we try to control the expected significant effect of capital on export propensity by including this component in the empirical analysis and expecting a positive coefficient in the outcomes.

It is generally accepted that firms with bigger size can compete better than small firms can do. It is understandable because bigger firms are easier to get resources they need in improving their production, which will give them more profit. That is why bigger firms, as noted by Bernard and Wagner (2001), have bigger chance to be exporters than small firms. The researchers used the word 'tend' because sometimes size does not guarantee multiple profit; there is a condition where size does not come along with profit (Van Dijk 2002:2). In big firms who just joined the international markets, expanding their size will cost them much, and the profit resulted from the export will be used to cover the spend they have when the expanded their size. Things could be worse if the profit from the export could not cover their expansion cost.

However, there is no consensus about the standard of a firm can be categorized as big or small. This can be the reason behind the proposition that argues size does not have any correlation with export performance (see Bonaccorsi, 1992). This proposition is supported by research findings that revealed some small firms can perform well in exporting. It is important to note that the term big or small varies in different countries. It sounds logical if we refer to the previous

explanation above that about the profit the big firms use to cover the expanding cost. Due to this complication, this research will be aimed at revealing the non-linear relation by taking into account the size-squared variable in the model.

Also, export propensity is also influenced by a firm's age which is correlated with experience it has. Firms which have been established since a long time tend to have more experience that makes them dare face possible risks that come as they enter international markets. They could adapt and adopt easier, manage better, adjust faster, and respond the global challenges better. But, this is not an independent factor; other factors will also play their rules too. For example, the competencies of the leader and the mission of where he wants to take his firm to. Even if the firm is smaller than its competitors, there is a chance that the firm could perform well in export activities. This can happen if the leader has an excellent competence turning limitation into advantage. The limitation of market in domestic market could encourage a creative leader to apply state of the art technologies that will bring the firm into a competitive position in international markets (Sousa et al. 2008).

Another advantage that small firms have is their flexibility in adjusting their core capabilities to meet the international market demands, which cannot be done easily by big firms. Big firms that have been trapped in their core capabilities cannot turn their direction instantly, and it could disadvantage them if the products do not have good demands in international markets. The real example of this case was found by Van Dijk (2002), he found that younger firms in Indonesia are more inclined to international markets than the more mature ones. This finding led to assumption that age does not guarantee export propensity. Based on this case, the age squared variable will be used. The age variable will also be analysed later.

Furthermore, FDI is also considered to be vital in determining firms' export performance. It is generally assumed that FDI in developing countries such as Indonesia is significant to improve export behaviour. The explanation to this assumption is that through FDI, there is a bigger opportunity for the firms to get investment additions, new technologies transferred from abroad, as well as competencies and experience enrichment. With those advantages in hand, a firm owned by foreign investors are more ready to face the challenges waiting in international markets, much more ready than local firms without those advantages, which means that they have higher export propensities. Supporting this description, Ramstetter (1999: 44) stated that the significant difference between foreign multinational firms and local firms is their export propensities.

Nevertheless, it does not mean that a local firm does not go through transfer of technology at all. As what happens in markets anywhere, they will learn from their competitors which are owned by foreign investors and will try to adopt new technologies they have learned that could benefit them. Unfortunately, not

all big firms is involved in FDI because their technologies are already advanced enough to compete in international markets. If local firms are already advanced enough, they will keep themselves away from foreign investors, because it can possibly reduce their margins. In preventing the margins reduction if they involve foreign investors, the firm will discuss and set the proper percentage of capital share with the foreign owner so that the decision of FDI could benefit them.

Location to establish a new firm should be taken into consideration, and need a well-structured preliminary study. Choosing to establish a firm in an area which has been the concentration of economic activities seems to be a good choice. The theory of localization economics studied by New Economic Geography (NEG) claimed that by entering this kind of area, the new firm could be more efficient (Arvanitidis et al. 2009). This kind of area is usually concentreated near airports, harbours, or natural resources which mean the firms do not have to spend much cost for transportation, infrastructure, and so forth.

Related to the location of resources, there is a difference of location selection between exporter and non-exporter firms. The exporter firm most likely choose the nearest place to the sources to prevent resources quality deterioration along the way to the factory. Meanwhile, non-exporter firms tend to consider locations near to their potential customers in order to reduce transport costs. Due to this difference, this research will take into account the location of firms in the analysis. The location will be categorized based on some characters of location into 5 regions.

2.2 The Melitz Model

One industry model that is flexible to any condition is the Melitz model; it could be merged with the framework of monopolistic competition introduced by Krugman (1979). Actually, the basic version of the Melitz model only contemplates a context of symmetric countries, one factor, and one industry. However, this model might be used in studying asymmetric countries too. Every country is filled with continuum of firms which are different in many factors including their rate of productivity. As they enter the new market, all of these firms experience an unstable condition due to the great amount of investment they have spent. If the productivity level cannot reach the threshold level, the unproductive firms will quit by force of circumstance because they cannot get enough profit to cover the fixed costs. Meanwhile, in explaining the demands, we can refer to Dixit-Stigliz model.

There should be a careful calculation of fixed costs and variable costs before firms decide to enter international markets, and they should also know to what productivity level they can work on. It is safe to hop into international markets if the calculation showed the ability to cover the fixed costs they will spend for

exporting products. The equilibrium distribution of exporter and non-exporters can be seen in the zero cut-off profit condition, a condition when there is a great potential to enter a market due to the very low entry cost. The calculation of both "fixed cost" and "variable costs" will possibly show that by reach high productivity level, firms could join in the exporting activities.

However, piles of researches on the correlation between export performance and characteristics of firms have left a challenging question about the direction of cause and effect. It is still debatable whether the decision to enter international markets stimulates the improvement of productivity level or vice versa. There are lots of researches support the assumption, as well as researches against it.

The reason to be disagree on the stand of export will stimulate productivity level is the cost of entering international markets which is not cheap and also irreversible. The costly sunk cost will make any firms who want to export their products think twice before deciding to do so. They have to calculate whether the profit they will get can cover the exporting cost, and whether they can fulfil the demand of international markets in terms of amount and quality. This consideration defines that only firms with high productivity level could enter international markets and compete with other exporter firms, while those firms which seem to be unable to face the challenges will not take the risk of suffering a big loss of sunk costs.

2.3 Empirical Evidence of the Firm-Export Relationship

Researches on firms' export propensity have taken costs and benefits as main considerations of firms to enter international markets or not. The costs and benefits toward firms are different among firms even within the same industry; it depends much on the characteristics of the firm. The characteristics of firms which determine whether certain condition is beneficial for them or not are their status of ownership, the size of the firms, maturity of the firms, capital available for the firms, wages they have to pay, level of productivity, the sunk entry costs needed to join international markets, and the location of the firm is also worth a consideration.

Almost two decades ago, Bernard and Jensen (1997) conducted a research on how the export propensity is correlated with the firm-level characteristics of 13,500 manufacturing companies in the US. The result of their big scale research showed that there is a correlation between firm level characteristics and export propensity. They found that the bigger a firm, the higher export propensity it has, and the more productive a firm, the higher export propensity it also has. In addition, their findings also confirm that the size of firms and wages they have to pay influence the behaviour in exporting.

In another context, Republic of Ireland, Ruane and Sutherland (2004) also conducted a similar research investigating the relation between firm characteristics and export propensity. The result is in accordance to what was found by the previous research presented above, they also found that bigger firms and high productive firms have higher export propensity. In addition, the high intensity of export is also influential in increasing the firms' propensity to export their products. Interestingly, the status of ownership works uniquely in their context. If in general the foreign-owned firms perform better in exporting than domestic firms, it is quite unique in their research. They found that the domestic firms have higher propensities to be exporter firms. This could happen because when foreign-owned firms export more of their products for international markets rather than selling them for domestic markets, domestic firms will take advantage of this to win the domestic markets competition. Eventually, when the domestic firms are strong enough they will tend to be exporter firms later. In this case, the presence of foreign-owned firms benefits the domestic firms domestically and internationally.

The importance of location selection is supported by the finding of Joane Freeman's (2009) research recently. She revealed that the success of Small and Medium Enterprises (SMEs) in Australia are significantly correlated to the location of their firms. When talking about location selection of exporter firms, it must be related to resources availability. When a firm can dominate the resources that the other competitors cannot do, they will be able to handle any challenge in the markets more easily and efficiently. However, the importance of location selection seems to be context-bound. It does not occur in the context of Uganda markets. Niringiye and Tuyiragize (2010) a year later revealed that location does not play a significant role in determining the performance of export of Uganda's firms.

Another research that investigates the relation between firm characteristics and export propensity was conducted by Javalgi et al. (1998) on 20,204 firms in the US. The research concluded that bigger, more mature and multinational firms tend to have higher export propensity, and vice versa. There was an exception on service provider firms, in which the status of ownership does not affect them significantly. Several years later, Javalgi et al. (2000) conducted another research investigating the relation between firm characteristics and export propensity and intensity. They found that almost all of the firms being investigated are positively influenced by the numbers of employees they have, age of the firm, and status of ownership.

Move to Asia, the finding of research conducted by Michael Van Dijk (2002) was conducted in a developing country; Indonesia. The general conclusion derived from the findings is that big firms perform better in exporting activities, while small firms cannot perform as well as those big firms, this conclusion is logical since Indonesian market is mostly played by big firms. In addition, most

foreign-owned firms perform better than domestic firms, and only few sectors are influenced by the employee's quality and capital. Another finding of his research is that in developing countries like Indonesia in this case, are lacks of R&D activities, which results in the low capability in the international competition. He further added that R&D activity is very important, so that the firm can use the current technology for their benefits.

The situation is not much different in a country next to Indonesia, Philippines. Duenas (2007) found the significant effect of ownership status in determining firms' export propensity and intensity. The firms being investigated which are owned by foreign investors can perform better in international competition, they are also active in technology development as well as employee skills development, which eventually benefit the firms in terms of productivity level. It happens to firms in all sectors, except the effect of capital intensity which only occurs on firms working on electronic business. Similar to what happened in Indonesia, the size of firms determines the export behaviour of firms in Philippines. In addition, more mature firms with tons of experience show better export behaviour; this finding confirms that age matters too. However, at certain peak point, the age and size of firm do not guarantee firms' export behaviour to be supreme. In its findings, also, Duenas (2007) emphasizes that the ownership of capital significantly influence the company's decision to export. Higher capital intensity affects productivity and positively correlated. Substantial capital and many can make the company expand its business.

In closing this section, many factors that affect the company's performance in determining export. Many also literature related to the research conducted at this time, but for research in Indonesia itself is still only 1 study, conducted by Michael Van Dijk (2002). It is certainly not enough and still need to be developed considering the current condition of the Indonesian economy has changed and the study by Van Dijk is using the data in 1995. It is also necessary in view of exports is one important factor in the economy that could increase government revenue.

Finally, along with the previous researches presented above, this research is expected to be able to give contributions on the field of firm-export relation study. Indonesian industries are selected as the focus of this research due to the future potential it has in Indonesia. In conducting this research, we will consider the age of firms, size of firms, technology, ownership status, productivity level, and capital the firm own. Panel data with huge numbers of industries will involve in this research. Furthermore, in the analysis, the location variable will be included to control various location characteristics found in Indonesian context.

2.4 Manufacturing Development Policy, 1965-2000

Indonesia has experienced at least three periods of manufacturing development policy since 1965. It is devided into three periods based on the characteristics of policy taken. Open-door economic period started the history of President Soeharto's era for almost a decade until 1975. The government at the time tried to invite foreign investors as many as possible in order to help increasing economy at the time. The decision was taken because the government was having a big problem with debt and economy situation which was shaky and unstable. Moreover, to ease the foreign investors, they were given import credits which were beneficial in controlling the growing inflation and long-term foreign loans for infrastructure rehabilitation (Robison, 1986:138).

The next period happened between 1975 and 1981, shorter than the previous period. Large companies in Asia which produces automotive products change the course of selling products in the country to be sold overseas. State is one of them is Japan that has been developed earlier than other Asian countries. With these sales, the surrounding countries also obtain advantages and benefits, such as Thailand, Indonesia, and Malaysia. Trade between countries is causing tar-anniversary currency flows between countries as well. Countries much surplus because of this exchange rate. For Indonesia itself, also rose much faster growth rate than in previous years, namely by 13% from 1985-1988. (Pempel, 1999: 67). This period is characterized by the comeback of economic nationalism. It was triggered by the increasing oil prices which eventually gives Indonesia extra state revenues. This situation encouraged the government to prevent remaining domestic capitals from being fully owned by foreign investors. Looking at this potential opportunity, Japan came to Indonesia and spent enormous amount of money to build their industries, which contributed to the 8% growth of manufacturing in that period (Soesastro, 2000).

The fall of oil price, followed by the fall of domestic and foreign exchange revenue has left Indonesia no option but to seek for loans. IBRD and IGGI suddenly became important. What happened next was predictable; it became difficult to refuse foreign investment, free market strategy, open-door policies. Moreover, it was more difficult to hold on to the nationalist economy.

As one of the main sources of Indonesian revenue, the falling oil price has led to the decreasing revenue. The impacts were, the dream to nationalize potential industries became more difficult, the infrastructure projects were slowed down, as well as lots of industrial and resources projects (Robison, 1986:375). Realizing the economic situation that needed immediate respond, the mission to nationalize all potential industries was put aside and the decision to start export-oriented industries was taken. Fortunately, the local firms were not forgotten at all, there was a policy that required the foreign investors to involve local firms in their

businesses. This quick respond to the economic situation resulted in the moderate contribution given by manufacturing exports, which reached 11% of total exports in 1984 (Ministry of Industry, 1998).

In responding the economic situation at the time, Indonesian government has taken some brave decisions. In order to stimulate more investment, the policy of investment licensing and limit of loan was erased so that it became easier for foreign investors to come in. The government also made the administration system simpler, and many other policies that ease infestation. Later in 1986, Rupiah suffered 30% devaluation, which was continued by 5% devaluation every year. The superiority of dollar, however, brought positive impact to the improving export competition just like what was aimed.

The economic situation of Indonesia entered its dark period in 1994 - 1997. The decrease on manufacturing exports growth from 27% to 8% has led to the fall of manufacturing value growth. Despite these fall of growth on manufacturing, there are some sectors that remain stable. The products of plywood, textile, garment, and footwear remained stable during the crisis.

In describing how dark the Indonesian economic situation during the 1997 crisis, the data provided by Dhanani and Hasnain (2000) seem to be able to describe it. The gross domestic capital by 1999 had drastically decreased from 32% to 19& of GDP, and Foreign Direct Investment decrease was even worse, from US$6.5 billion in 1996/97 to $1.6 billion in just one year. There were lots of factors that caused this regression.

In order to build the economy again, Indonesia has recently been trying to increase investment by inviting foreign investors to come again. The strategies used in inviting foreign investors were similar to those used in 1998 which focus on administration and bureaucratic revolution to simplify and ease the investment processes (Soesastro et al., 2010).

Chapter 3
Data and Methodology

3.1 Data and Analysis

In investigating factors affecting Indonesian manufacturers in deciding whether to export or not, we will investigate the characteristics of the firms and how those characteristics related to their export decision. In achieving this, the dependent variable would be the firms' choice to sell their product out of the country. One means the firms choose to export, and when they select to just sell the product in their own country, the dependent variable is zero.

Linear probability model will be employed in analysing the relationship between export propensity and the characteristics of firms under investigation. Then, in explaining the binary or dichotomous variable, Logit model will be employed, and the result from Logit model will be compared to LPM result. In addition, this research will examine autocorrelation in the models.

This research will also include some important variables such as the age square and the size square of firms. Those variables are included in accordance to what have done by Duenas (2007) in her model developed in her research. Only those two out of eight variables which was introduced in Duenas's model will be included in this research because those two variables have been widely used by some researchers to test non-linearity relation between them and propensity of export.

Research Model

In the data analysis, this research will employ the "time series" and "cross sectional" observations. Main consideration by panel data in this research is "having multiple observations on the same units allows us to control for certain unobserved characteristics of individuals, firms and so on…A second advantage of panel data is that they often allow us to study the importance of lags in behaviour or the result of decision making" (Wooldridge 2012:11). Thus, below is the equation:

$$(EXPORTS)_{it} = \alpha + \beta(PRODUKTIVITY)_{it} + \beta 2ln(F\_CAPITAL)_{it} + \beta 3F\_AGE_{it} + \beta 4F\_AGE^2_{it} + \beta 5F\_SIZE_{it} + \beta 6(F\_SIZE)^2_{it} + \beta 7f(FOREIGN\_OWNERSHIP)_{it} + \beta 8D\_AREA_{it} + \varepsilon_{it} \quad \ldots\ldots\ldots (1)$$

The variables that used in this research are 7 variables. The EXPORTS is for dependent variable that explained as export propensity. While the 6 independent

variables are PRODUCTIVITY for firm productivity, F_CAPITAL for firm capital stocks, F_AGE for firm age and the square of F_AGE, F_SIZE for firm size and the square of F_SIZE, FOREIGN_OWNERSHIP for foreign ownership for firm in Indonesia, and the last one is D_AREA, that is dummy area that grouped into 5 biggest islands in Indonesia.

Fixed effects panel model used in this research when analysing the firm-export relation is to control the various characteristics throughout firms and regions. Controlling the possible variety of characteristics is needed because we cannot avoid finding differences throughout firms and regions. Therefore, below is the model:

$$(EXP)_{it} = X'it\beta + \mu i + \varrho t + \varepsilon it \qquad \ldots\ldots. (2)$$

The dependent variable refer to Propensity of Export, and the independent variables is variables that explain and affect the change in export propensity.

In addition, this research will employ Tobit estimation[1] which has been widely used in researches on export performance. Tobit estimation will be used in estimating the relation between proportion of export to total production which is the dependent variable (in percentage) and explanatory variables presented in equation (2). Thus, the following is the regression model:

$$(PORTION\_EXPORTS)_{it} = \alpha + \beta(PRODUKTIVITY)_{it} + \beta 2ln(F\_CAPITAL)_{it} + \beta 3F\_AGE_{it} + \beta 4(F\_AGE)^2_{it} + \beta 5F\_SIZE_{it} + \beta 6(F\_SIZE)^2_{it} + \beta 7f(FOREIGN\_OWNERSHIP)_{it} + \beta 8D\_AREA_{it} + \varepsilon_{it} \qquad \ldots\ldots\ldots.. (3)$$

Source of Data

The data used in this research is from the survey done by Central Bureau of Statistics (Badan Pusat Statistik, BPS) in Indonesia annually since 2006 – 2011, using data IBS (Industri Besar dan Sedang) survey, or Large and Medium Industries survey. The data of that survey cannot be obtained easily because it is not for general publication, only those who need the data for their researches are allowed to have the data.

The problems of the data from IBS survey have made it controversial to be used in research purpose. Some data are not complete, which will compound the analysis processes. These missing data is mostly caused by the firms which did not report their fixed capital data. Furthermore, the reported data in the IBS Survey are not completely true or in line with the reality on the field. Some firms reported that they are not involved in export activities, but they are actually big exporter firms. It would be a great idea if a researcher using the data conducts a cross-checking in order to get a better and more reliable set of data.

The number of companies used in this analysis are 8085 manufacturing companies that scattered throughout Indonesia, which is divided into 5 area or biggest islands, namely Sumatra, Java, Bali and East Nusa Tenggara, Kalimantan, Sulawesi, and Maluku and Irian. If specified, there are 452 types of industries that classified into this manufacturing industry (BPS Data, 2015). During the observation of 8085 manufacturing firms from 2006 to 2011, we got the total of 48134 observations, that data already selected from panel data sets of some firms are missing.

Variables

For the objective of this research, the data and variable used in this research are:

- Export propensity of firms. This data is beneficial how strong the tendency of a firm in deciding to export their products or not. As mentioned earlier in this chapter, OLS and Logit estimations will be used, thus, the data from 2006 to 2011 used in this research is in a form of binary number. A value of "1" refers to the decision of a firm to join export activity, and a value of "0" refers to the decision of a firm not to join export activity. Meanwhile, for the Tobit estimation which requires data of export propensity in a form of percentage ranging from 0 to 100%, the data from 2006 to 2011 will be used.

  Dependent Variables: **EXPORT (OLS model and Logit model) and PORTION_EXPORT (Tobit model)**

- Firm's productivity. Data that analyzed from 2006 to 2011 will be used in order to measure manufacture produced based on the calculation of percentage of output per input. The value of input and output product are in Thousand Rupiah in base year 2005 with index of wholesale price (IHPB). The result is shows in percentage.

  Independent Variable: **PRODUCTIVITY**

- Fixed capital of firms. This data is derived from 2006 to 2011 and will be used in measuring capital stock. The total of capital stock can be generated by summing all of fixed capitals including buildings, land, equipment, etc. The result will be in a form of value (Rp. Thousand), thus, it needs to be valued in base year 2005 with IHPB.

  Independent Variable: **F_CAPITAL**

- The size of firms. Analysis used to determine the size of firms is by use all the data obtained from the average number of workers from 2006 to 2011. In this case, the status of the company that later die or survive in

the years subsequent ruled out. Similarly, the status of the firms, it is new or not.

Independent Variable: **F_SIZE**

- The age of firms. To identify and analyze the age of the firm in the manufacturing industry, we used data from year of established companies. The results are derived from the 2011 minus the first year of the company run. The company that suddenly went bankrupt and closed after 2006 does not in-fill in this calculation. The data used is the company that is still remain in operation until 2011.

  Independent Variable: **F_SIZE**

- Status of ownership. It can be measured by identifying how many of the total capital is owned by foreign investors. Firms will be categorized into foreign ownership if more than 50% of the total capital is owned by foreign investors. In analyzing the relationship between ownership status and export performance, dummy variable will be used in the model. 1 refers to firms owned by foreign investors, and 0 refers to domestic firms.

  Independent Variable: **FOREIGN_OWNERSHIP**

- The area of firms. The data of firms' area is needed to investigate the relationship between location and export performance. We all know that manufacture firms depend much on the availability of resources, then it is understandable that the nearest firms to the location of resources most likely to be more advantageous. In terms of the dummy variable, 1 refers to a firm located in the dummy island, and 0 refers to a firm located not in the dummy island. Related to that, there are 5 categories of area based five large islands in Indonesia from 2006 until 2011. They are Sumatera Island (Category 1), Java, Bali, and Nusa Tenggara Timur (Category 2), Kalimantan (Category 3), Sulawesi (Category 4), and the last is Maluku and Irian (now the name is Papua) in Category 5.

  Independent Variable: **D_AREA**

3.2 Descriptive Analysis

In studying the characteristics of the data set, we employ a descriptive statistics analysis. Moreover, we will also study the descriptive statistics of variables used in this research. Below is the table of statistics of the data set.

Table 3.1 Summary of Descriptive Statistics

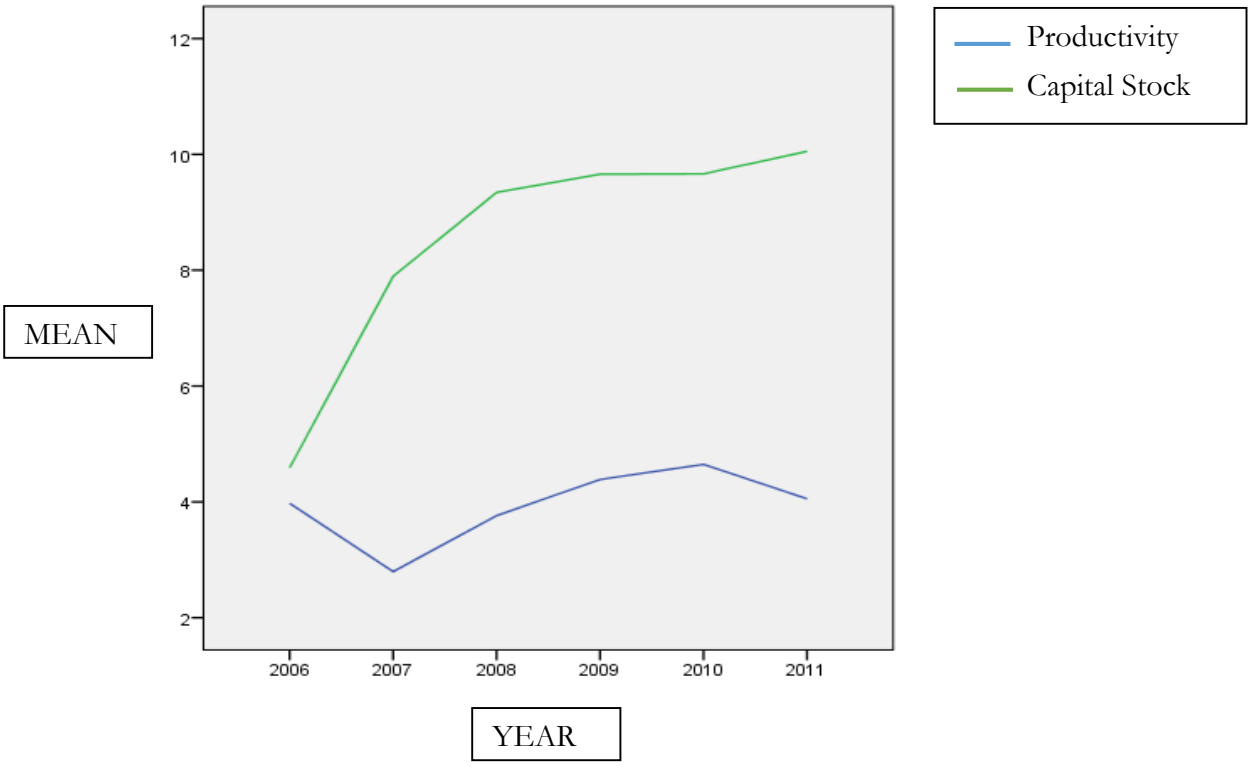
VARIABLES	N		MEAN	MEDIAN	STD. DEVIATION
	VALID	MISSING			
PRODUKTIVITY	48486	27	3,9359675	1,6424892	38,78606372
FIRM FIXED CAPITAL	48513	0	355210025,89	132800,00	69434830422,017
SIZE	48513	0	247,77	60,00	904,898
AGE OF FIRM	48161	352	20,28	18,00	12,535
FOREIGN OWNERSHIP	48513	0	0,1189	0,0000	0,32367
ISLAND 1 - SUMATERA	48513	0	0,1289	0,0000	0,33513
ISLAND 2 - JAVA, BALI, AND NTT	48513	0	0,8238	1,0000	0,38099
ISLAND 3 - KALIMANTAN	48513	0	0,0202	0,0000	0,14062
ISLAND 4 - SULAWESI	48513	0	0,0260	0,0000	0,15905
ISLAND 5 - MALUKU AND IRIAN	48513	0	0,0011	0,0000	0,03334

Source: By own calculations
Note : The number of observations for manufacturing firms is for the year 2006-2011.

From Table 3.1 above, this table explaining that the original data for this analysis are 48 486 observations, but because there is a small part of data that was missing, as many as 379 data, then the entire data that can be used is 48 513 observations.

Completing the table above, Figure 3.1 is presented to see the productivity and fixed capital of manufacturing firms. The figure shows that productivity of firms have suffered decrease in 2007, meanwhile the capital stock increase from 2006 -2009, constant from 2009-2010, and finally began to increase in 2011.

Figure 3.1 Comparative Overview the Mean of Productivity (%) and Capital Stock in 2006-2011



Source: By own calculations

Based on the picture above, these two variables showed a trend in the same direction, which increases in value over the years. For the capital stock, the trend is always positive and increase every year. It is only did not have significant increase in 2009 to 2010. For the variable productivity, the improvement does not befall every year. The increase in capital stock is not always followed by an increase in productivity. It can be seen significantly in 2007 and 2011 that decreased productivity due to economic conditions which led to the weakening demand for goods of manufacturing industry export. The condition most noticeable difference is when capital stock increased sharply in 2006- 2007, but productivity has decreased. This may be due in the year the economy began to deteriorate due to the crisis in the years 2007 - 2008 in Indonesia and other countries. So the company reduce production because of declining demand from abroad and within the country.

FIRM FEATURES

Table 3.2 Firm Size And Firm Age Description

		N	Mean	Std. Deviation	Std. Error Mean
F_SIZE	NON EXPORTER	6527	95186,28	705,993	3,568
	EXPORTER	1495	505,27	1441,737	14,908
F_AGE	NON EXPORTER	6481	20,34	12,517	0,063
	EXPORTER	1514	20,06	12,609	0,131

Source: STATA output, by own calculation.

From the size, the non-exporters companies have an average number of workers less than half the average number of employees a company that does export. Comparison between the number of non-exporter companies and exporter is 4:1.

While the average age of both exporters and non-exporters firms is 20 years. However, the ratio of the number of non-exporters and exporters companies nearly equal to the comparison on the characteristics of size, that is 4:1.

Increases in the company's age can make the company richer in experiences and information on the manufacturing industry in Indonesia, including manufacturing industries in other countries that are competitors in backing gain market share. Despite an increase in this age will benefit the continuity of its production, it can also be a barrier if company did not attempt to adjust to developments in terms of technology and innovation. It can be concluded that the increase in the age of the company can be beneficial or harmful depending on how companies respond and deal development.

FOREIGN OWNERSHIP

Among all of the firms we investigated, there was 1558 of the firms are owned by foreign investors, and the remaining firms are belonging to locals. Despite the low percentage, uniquely, the firms belong to foreign investors are larger in number of employee even though they are younger than the domestic firms. Moreover, these foreign owned firms are higher in terms of export propensity, which is possibly caused by the strategies, technologies, knowledge, and networks brought by the investors.

Indonesia is a country with a sequence 4th most populous in the world after China, India, and the United Stated. Which attract investors to buy shares or open a factory in Indonesia, one of which is due to the cheapness of labor workers. So that Indonesia becomes one of the favorite countries for labor-intensive industries based.

Table 3.3 Description of Firm Ownerhip

LOCAL OWNERSHIP				FOREIGN OWNERSHIP			
Mean	**Median**	**Mode**	**Std. Dev**	**Mean**	**Median**	**Mode**	**Std. Dev**
0,0827	0,0000	0,0000	0,27537	0,2706	0,0000	0,00	0,44431
Valid	39161			Valid	9352		
Missing	0			Missing	0		

Source: Based on own calculation

LOCATION CHARACTERISTICS

Location characteristic reflects the unintended cost such as condition of infrastructures, transportation, and distance from material resources. Like other research, we agree that firm which located in relatively more advance infrastructure and transportation systems has a larger benefit than other firms outside Java. From the Table, more than 80% of manufacturing firms located in Java, Bali, and Nusa Tenggara Timur. The second island that more preferred by the firms located in Sumatera.

In contrary, only 54 firms located in Maluku and Irian Island. The logical explanation from this condition might be those islands have less population and relatively worst infrastructure condition and expensive transportation cost. Furthermore, lots of exporter firms located in Java and Sumatera Island, which is 8738 exporter firms.

Table 3.4 Exporters and Non-exporters Firms Based on Area

	FIRMS		TOTAL
	NON-EXPORTERS	EXPORTERS	
SUMATERA	730	312	1042
JAVA, BALI, AND NUSA TENGGARA TIMUR	5517	1144	6661
KALIMANTAN	114	49	163
SULAWESI	158	52	210
MALUKU AND IRIAN	7	2	9
TOTAL	6526	1559	8085

Source: Based on own calculations

3.3 Hypothesis

Based on the research that has been developed by some scholars, this paper attempts to analyse the relationship between the firm and the export performance characteristics with some expected results. The hypothesis developed as follows:

1. PRODUCTIVITY
   Productivity of companies (**PRODUCTIVITY**) significantly affects the propensity of then firms to export. Its value positively affect the export decision. The more a company be productive then the probability of the company to sell their product to foreign country become higher.

2. FIRM CAPITAL
   The capital stock **(F_CAPITAL)** that firm have very important in order to run their production, and also significant and positive influencing the decision to export. The larger the capital, the greater the production capacity.

3. FIRM AGE
   The expected results if we examine from the Age of the company (**F_AGE**) is positive and significant. Positive value affects the ability to survive (P). It is based on the results of some previous research in which the relationship between the lives of the company with the ability to survive the company is positive. Getting old (mature) a company then the company has probability to endure greater. But this does not apply to the square of age $(\mathbf{F\_AGE})^2$, where the results expected is negative. Companies that are old and not growing possibility cannot compete with a company that uses technology and innovation better.

4. FIRM SIZE
   The number of workers of the company (**F_SIZE**) is expected to give a positive value to the tendency of companies to export, and of course significant. It is based on the results of previous research conducted by Bernard and Jensen (1997) in which the relationship between firm size with the propensity to export is positive. The bigger a company, the greater the company, the behavior of the firm doing the expansion to the growing niche market, and they hope can have the market power so that the probability of the company to survive the greater. For the square of firm size $(F\_SIZE)^2$, the sign is expected negative sign because of diminishing in productivity and probability to have smaller return by increasing the cost for labor.

5. FOREIGN OWNERSHIP

   Duenas (2007) and Bernard and Jensen (1997) agreed that foreign ownership (**FOREIGN_OWNERSHIP**) has a significant and positive impact on the opportunity of activity to export. Following their opinion, the expected outcome is positive and significant. The main reason is the company has to have a connection with the state shareholder or owner of the company. So they are easier to take and consumer market with the approach of the owner of the company that came from outside Indonesia. Moreover, in general foreign multinational companies are deliberately making the location of a plant in Indonesia, invest and cooperate with businessmen in Indonesia, and then sell their products abroad. In fact there of industries that do not distribute their products in Indonesia, but is specifically for market share abroad.

6. AREA

   On the way to get the cheaper cost of providing raw materials and transportation, the firm is expected to locate their plant resources nearby. Therefore, the firm was placed near the resource has a high tendency to become exporters. Because the basic dummy in this model is Java that has largest manufacturing production, expected signs from other areas (**D_AREA**) are negative and significant.

Generally, Table provide details the predictable signs:

Table 3.5 The Predicted Sign

Variables	The Signs
Productivity	+
Firm Capital	+
Firm Size	+
Square of Firm size	-
Firm Age	+
Square of Firm Age	-
Foreign ownership	+
Firm Location	-

Chapter 4
Empirical Analysis and Result

Data used in the study of the factors that determine the actions of the company to sell the product and expansion into overseas are using panel data. Estimation model has been described in the methodology section of the study. Before performing regression using Logit and Tobit models, it is done using Ordinary Least Squares regression, as a comparison and convinced that a better method used is the Logit and Tobit. In the explanation result of OLS regression, logit and Tobit, also conducted a regression to include the time factor and area companies. Afterward, the study presents the models to control the specific characteristics of the firm and the area between the companies by fixed effect. Then, we analyze Also with uncontrolling firm characteristics and the region (random effect). The next part, we use Hausman test to choose between FEM and REM that more proper approach in Econometrics. Next section examine the relationship exporting firm using Tobit models. Finally, we resume the overall result.

4.1 Firm Factor Impact on Export (OLS Method)

Indeed, most studies using OLS method in the analysis. However, if we use censored dependent variable, or the dependent variables are limited or deliberately limited, so this method is not appropriate used. The reason is the parameter generated by this OLS is inconsistent and being biased. But we can analyze to know the results of OLS and later compared with logit and Tobit method. As has been explained beforehand, the following formula is used in this study:

$$(EXPORTS)_{it} = \alpha + \beta(PRODUKTIVITY)_{it} + \beta 2ln(F\_CAPITAL)_{it} + \beta 3F\_AGE_{it} + \beta 4F\_AGE^2_{it} + \beta 5F\_SIZE_{it} + \beta 6(F\_SIZE)^2_{it} + \beta 7f(FOREIGN\_OWNERSHIP)_{it} + \beta 9D\_AREA_{it} + \varepsilon_{it}$$

In this OLS result, we do in two stages. The difference is in the second stage, the addition of area factor and time factor. The results are as follows:

Table 4.1 Calculation results using OLS method

EXPORT	*COEFFICIENT*	*STD. ERROR*	*P-VALUE*	*COEFFICIENT*	*STD. ERROR*	*P-VALUE*
PRODUCTIVITY	-0.0002035***	0.000438	0.000	0.0002072***	0.0000431	0.000
LN(F_CAPITAL)	0.0095084***	0.0002528	0.000	0.0099305***	0.0002593	0.000
F_AGE	-0.0011035***	0.0003455	0.001	-0.0009776 ***	0.0003402	0.004
F_AGE²	9.11e-06*	4.90e-06	0.063	6.88E-06	4.83E-06	0.154
F_SIZE	0.0001101***	3.41e-06	0.000	0.0001087***	3.35E-06	0.000
F_SIZE²	-3.13e-09***	1.32e-10	0.000	-3.08E-09***	1.30E-10	0.000
FOREIGN_OWNERSHIP	0.2269491***	0.0054586	0.000	0.2206872***	0.0053937	0.000
SUMATERA				0.1516964***	0.0502597	0.003
KALIMANTAN				0.0587608	0.050076	0.241
SULAWESI				0.1705338***	0.0514038	0.001
MALUKU AND IRIAN				0.1339223***	0.0511012	0.009
Y_2007				-0.0022811	0.0059068	0.699
Y_2008				-0.1559806***	0.0057637	0.000
Y_2009				-0.0930099***	0.0055435	0.000
Y_2010				-0.1074953***	0.0057377	0.000
Y_2011				-0.1109269***	0.0057387	0.000
CONS	0.0774302	0.0053414	0.000	0.0751459	0.0503347	0.135
OBSERVATIONS	48134			48134		
R-SQUARED	0.1024			0,1318		

Source: By own calculation

Table 4.1 above is the result obtained by performing a regression using OLS with observations number 48134. In general, most of the independent variables gave significant effect on the propensity to export. However, variable's sign is not entirely in accordance with predictable results, which are PRODUCTIVITY, F_AGE, and F_SIZE^2. In the calculation of OLS, productivity gave a significant negative impact on the possibilities for companies to export. This can be caused by the increased number of products manufactured to encounter the needs of domestic consumers more than the overseas market. A company trying to break

into foreign markets by not easy, they should seek market share in advance, for example by conducting surveys, following the procedures and regulations established for the products imported by the destination country, the competition with the firm another, and so forth.

While the variable F_AGE, either by excluding variable control time and area or not, firm age variable is significantly affecting export, yet shown signs is negative. Companies that exist in Indonesia is largely a company that has established, with an average age of 19-20 years. But this does not make the companies interested in exporting their products. There is a possibility that the company has been established tend to seek safe by selling only to local consumers, and do not want to take the risk of experimenting add market share to other countries.

For F_SIZE^2variable, consistent with the hypothesis that formed, wherein when the number of workers continues to grow by not seeing the efficiency of the company, it does not help the company in raising the capacity of the company in the long term, in other words the firm experiencing diminishing. Thus the formed sign is a negative sign.

In addition to the above the resulting sign is positive and significant. But for the OLS regression, we also need to see whether this regression is an appropriate way to determine the company's decision to export or not. Dependent variables used in the OLS is not binary, while we need only two options, namely "yes" and "no". Therefore, this method is not appropriate to use. We also look at goodness of fit regression, has a very small value, by 10.24% and 13.18%, thus the dependent variable explained for only the R-square value.

4.2 Result for Logit Method

Now, we see the results given by logit models. These results also consists of two tables, the first table is without consideration of variable control area and time, and the second by entering the two variables in the calculation.

Table 4.2 The Results of Logit Method for Firm Factor on Export Decision

	LOGIT			*Mfx*		
EXPORT	**COEFFICIENT**	**STD. ERROR**	**P>z**	**dy/dx**	**Std**	**P>z**
PRODUCTIVITY	0.0149576***	0.0024937	0.000	0.0021089***	0.00035	0.000
LN(F_CAPITAL)	0.0666633***	0.001872	0.000	0.0093988***	0.00026	0.000
F_AGE	0.0085471***	0.0024825	0.001	0.0012051***	0.00035	0.001
F_AGE^2	0.0000705**	0.0000349	0.043	9.95e-06**	0.00000	0.043
F_SIZE	0.0006248***	0.0000246	0.000	0.0000881***	0.00000	0.000
F_SIZE^2	-1.79e-08***	1.11e-09	0.000	-2.53e-09***	0.00000	0.000
FOREIGN_OWNERSHIP	1.201404***	0.0323155	0.000	0.2202433***	0.00705	0.000
CONS	-2.249583	0.0409029	0.000			
Observations	48134					
Pseudo R^2	0.0947					

Source: By own calculation

When compared with the results shown by the OLS method, the logit regression entirely to yield significant results. That is, all the explanatory variables significantly influence the dependent variable. However, not all significant at the 1% level, variable F_AGE results at the level of significance of 5%.

The main visible difference is the variable PRODUCTIVITY, where the OLS regression gives a negative direction, while the logit regression has a positive direction. By looking at the marginal effect of the above table, increasing productivity increases the tendency of companies to export at 0.21% age point on average.

Variable *F_AGE* proven to significantly affect the company's ability to survive in the manufacturing industry in Indonesia at a significance level of 1%. The regression results also answer the initial hypothesis is formed that with the increasing age of the company, the more experience and improvement of the company's effort to increase production and opportunities to develop the company by selling its products to customers outside Indonesia. Thus, the company is likely to take steps to export their products. The coefficient value of 0.0012051, which means that with the increasing age of the company as much as one year it will increase the tendency of companies to export goods to overseas by 0.12% age points on average. In contrast to the sign on the OLS regression, for F_AGE^2 on logit regression models still show significant positive signs, while the OLS there was significantly negative.

Can be seen in the table above that the independent variables *F_SIZE* proved significant at a significance level of 1% in the same direction with the hypothesis that has been discussed before, positive sign. With the addition of 1 person workforce will increase the likelihood of the company's decision to choose the export amounted to 0.008% age point on average. Normally the company want to be able to increase production in the future. To achieve it required additional manpower owned. The addition of the size of the company makes it easy to increase production that can be sold to foreign countries.

But unlike the variable F_SIZE^2, the result is a negative sign. Logically, the relationship between the variables is not linear. An increase in size of company does not always providing continual returns for them. When the number of workers has been optimized, while they increase the workers, then there is diminishing in which the production process is no longer effective and efficient. So that the sign be significantly negative.

Value of Pseudo R^2 have the value as if it is the same as the value of R^2 in OLS models. However, this value is not as accurate as ^{R2} or Adjusted R^2 in OLS.

Allowing Time and Area Effect

Next we try to do regression by inserting variable control of time and area. Here are the results:

Table 4.3 Logit Result using Time and Area Effect

EXPORT	*LOGIT*			*Mfx*		
	COEFFICIENT	**STD. ERROR**	**P>z**	**Ey/ex**	**Std.**	**P>z**
PRODUCTIVITY	0.0157137***	0.0025461	0.000	0.004245***	0.00088	0.000
LN(F_CAPITAL)	0.071934***	0.0020071	0.000	0.442157***	0.01217	0.000
F_AGE	0.0074531***	0.0025299	0.003	-0.1028968***	0.03582	0.004
F_AGE²	0.0000496	0.000356	0.164	0.0202879	0.01425	0.154
F_SIZE	0.0006399***	0.000025	0.000	0.1404759***	0.0045	0.000
F_SIZE²	-1.81e-08***	1.10e-09	0.000	-0.0141606***	0.00061	0.000
FOREIGN_OWNERSHIP	1.208562***	0.0334507	0.000	0.1365944***	0.00354	0.000
SUMATERA	1.183499***	0.4428074	0.008	0.1018558***	0.03376	0.003
KALIMANTAN	0.5916003***	0.4419919	0.181	0.2509481	0.21387	0.241
SULAWESI	1.304224***	0.4481654	0.004	0.0179964***	0.00543	0.001
MALUKU AND IRIAN	1.096623**	0.4470916	0.014	0.0180882***	0.0069	0.009
Y_2007	0.0548676	0.0402816	0.173	-0.0018791	0.00487	0.699
Y_2008	-1.20459***	0.0467705	0.000	-0.1283221***	0.00487	0.000
Y_2009	-0.6027455***	0.0390334	0.000	-0.872851***	0.00526	0.000
Y_2010	-0.7063891***	0.0409954	0.000	-0.0883762	0.00478	0.000
Y_2011	-0.7349133***	0.0412451	0.000	-0.0911378***	0.00478	0.000
CONS	-2.551454	0.4435469	0.000			
Observations	48134			48134		
Pseudo R²	0.1272					

Source: By own calculation

Differences shown in the second regression are not all independent variables yielded significant results. These variables are F_AGE^2 and time in the year 2007. In addition, the difference is the coefficient, the marginal effect has the value greater than the previous regression. This means that changes in the unit on the factors of the company, more giving the company the possibility to decide to export.

According to the table, productivity does have a positive effect on the firm's decision to export or not, and significantly affect the firm whether it will appear on a global scale or not. The results show that the productivity between the two groups of companies does have effect. The firm's decision to export was significantly affected by how much they can produce for the domestic market is able to absorb production and how much foreign consumer interest in the products.

Another explanation may come from the characteristics of manufacturing companies in the availability of raw materials, which is in Indonesia they can get material from domestic and also import from outside. This export dominated by most of the large and medium manufacturing industry.

This result also revealed a positive and significant impact on the share capital on the export tendency. Positive marginal effect indicates that the amount of capital increases, the tendency will increase exports 44.21% age points on average. This is a big point, and also this evidence supports the theory that the high capital a firm can increase their production capacity and the ability to meet increased market demand (Aw and Hwang 1995). Therefore, a firm with a higher capital can collect their knowledge and technology to perform in a competitive market abroad.

The effect of foreign affiliates positive and also significant performance boost to exports. Multinational companies are more likely to participate in export activities than local companies. Marginal positive effect shows that if the firm is affiliated with the tendency of foreign investors from exports will rise 13.66% age points on average. In terms of networking, information and global marketing strategy, multinational corporations have greater experience and access than local companies. Therefore, these advantages can facilitate them to expand their market. With affiliated with global investors that a firm can benefit from the transfer of technology and skills, and then they should have good management, high technology and skilled labor, which in turn is essential to compete on a global scale (Ramstetter 1999: 55). In addition, most of the multinational companies are involved in the manufacturing of downstream. Most of the downstream manufacturing companies sell their products as raw materials for their partners or other companies owned by the same investor abroad.

Furthermore, we discuss about dummy variable of area. All the results showed a positive and significant sign at different levels. However, the highest coefficient found on the Kalimantan. This indicates that the location strong enough to influence the company's decision to export. Companies set up factories for production in accordance with the location of the nearest sources. Just as in Java, Bali and Nusa Tenggara Timur, that long time ago are islands which have natural resources the most, though now much diminished. Similarly, the other islands, each of them has its own natural resources. Such as the Kalimantan and Irian (which is now Papua), the island is rich in mining products. The reason they choose to export can be justified explained that companies that export does not see the potential of the domestic market, but they saw the potential of capitals. They also see that there is no big potential market in Indonesia. Hence, the island with greater access to the supply of raw materials manufacturing and other areas such as Kalimantan, Sulawesi, Maluku and Irian preferred to be exporting companies.

The nearness of the resource or input factors affect the reduction in transport costs. Similarly, the importance of infrastructure available in each region. Java Island in which there is the nation's capital, DKI Jakarta, does have most excellent infrastructure among all the islands, such as highways, there are two big port of the most active in exporting and importing goods (port of Tanjung Priok in Jakarta and Tanjung Perak in Surabaya), etc. So many companies are choosing to operate on Java Island, Bali, and Nusa Tenggara Timur.

4.3 Selection of Panel Data Regression Model (Fixed Effect and Random Effect Model)

The next section we try to find relationship between firm specification factor in different area and the export using fixed effect and random effect model of panel data.

Table 4.4 Regression Using Fixed and Random Effect

EXPORT	*FIXED EFFECT(1)*	*P>z*	*FIXED EFFECT(2)*	*P>z*	*RANDOM EFFECT*	*P>z*
PRODUCTIVITY	0.0091047***	0.002	0.0118922***	0.001	0.0132074***	0.000
LN(F_CAPITAL)	0.0523618***	0.000	0.053618***	0.000	0.0712082***	0.000
F_AGE	(omitted)		(omitted)		-0.0180104	0.041
F_AGE^2	(omitted)		(omitted)		0.0001925	0.117
F_SIZE	0.000048	0.526	-0.0000495	0.580	0.0008423***	0.000
F_SIZE^2	-1.52e-09	0.662	4.94e-10	0.910	-2.42e-09***	0.000
FOREIGN_OWNERSHIP	0.5665626***	0.000	0.7326095***	0.000	1.909486***	0.000
Y_2007			-0.929726***	0.000		
Y_2008			-3.227.963***	0.000		
Y_2009			-1.751.543***	0.000		
Y_2010			-2.110.279***	0.000		
Y_2011			-2,169,805***	0.000		
Observations	13769		13769		45800	
Number of firms	2297		2297		7643	

Source: By own calculation

Table 4.4 above displays the approximate. For fixed effect, by guessing the specifications, there are about 32,031 observations 5346 number of firms decrease on the estimate because there is a wide range of results across the enterprise. In addition, the variable D_AREA will be eliminated because there is no variance in the group. Also for variable F_AGE that omitted from the model.

Afterward, for sign and significance level produced by this fixed effect, not all variables give significant results. The variables is not significant F_SIZE and F_SIZE^2. Indeed, since the beginning of this analysis, variable in the regression is inconsistent. The meaning is, the number of employees in a company cannot stimulus the company's decision to export.

To enrich the results of this study, we also continue to analyse the relationship between export companies using a random effects model (correlated error). From table of random effect above, indicates that the random effects model runs the model with 7643 companies and 45,800 observations. This means that the random effects model using the entire firm without the change of non-exporters either to exporters or exporters from non-exporters. The estimation also provides that the productivity, capital of the enterprise, size, age, and foreign ownership has a significant effect on the export tendency, but some of them has a different sign with fixed effect model. Those are F_SIZE variable that has positive sign, and F_SIZE^2 that has negative sign.

The model results using random effects greatly differ significantly from the results from fixed effect models in terms of coefficient signs. This is possible because the values are included in the dataset is lost. To further investigate the changes in results between the fixed effect and random effects, we do Haussmann Specification Test.

4.4 Hausman Test

Hausman test is a statistical test to select whether the Fixed Effect model or Random Effect model most appropriately used. This test using chi-square distribution. The null hypothesis (Ho) is a random effect, whereas Hypothesis 1 (H1) is a fixed effect. We reject Ho if the Hausman statistic is greater than the critical value of chi-square statistics. This means that the right model for panel data regression is a model rather than the model Fixed Effects Random Effects.

Table 4.5 Hausman Test Result

(V_B)	COEFFICIENTS			
	(b)	(B)	(b-B)	sqrt(diag(v_b_V_B)
	FIXED	RANDOM	DIFFERENCE	S.E
PRODUCTIVITY	-0.0091047	-0.0132074	0.0041027	-
F_CAPITAL	0.0523618	0.0712082	-0.0188464	0.0008861
F_SIZE	0.000048	0.0008423	-0.0007943	0.0000378
F_SIZE^2	-1.52e-09	-2.42e-08	2.26e-08	2.17e-09
FOREIGN_OWNERSHIP	0.5665626	1.909486	-1.342924	0.075612

Source: Based on own calculation
b = consistent under Ho and Ha; obtained from xtlogit
B = inconsistent under Ha, efficient under Ho; obtained from xtlogit
Test: Ho: difference in coefficients not systematic
chi2 (4) = (b-B)'[(V_b-V_B)^(-1)](b-B)
= 1563.91
Prob>chi2 = 0.0000
(V_b-V_B is not positive definite)

The data results are presented in Table and of these tests, it can be concluded that the Fixed Effect Model is more efficient in explaining this model because the value Probability > Chi2 is 0.0000.

4.5 Tobit Model

The last process in this research is to conduct Tobit regression models. Following the results of the regression:

Table 4.6 Reression Result by Tobit Model

	Estimation (1)			*Estimation (1)*		
PORTION_EXPORT	*COEFFICIENT*	*STD. ERROR*	*P-VALUE*	*COEFFICIENT*	*STD. ERROR*	*P-VALUE*
PRODUCTIVITY	0.0.2385119***	0.0567348	0.000	0.24608***	0.055013	0.000
LN(F_CAPITAL)	1252.965***	0.3339966	0.000	12.202***	0.337691	0.000
F_AGE	-0.8914275**	0.4542617	0.050	-0.6681115	0.4408148	0.130
F_AGE²	0.0032429	0.0064555	0.615	-0.0000641	0.0062636	0.992
F_SIZE	0.14872***	0.0048534	0.000	0.1489136***	0.0047349	0.000
F_SIZE²	-4.23e-06***	1.82e-07	0.000	-4.40e-06***	1.77e-07	0.000
FOREIGN_OWNERSHIP	292.2903***	7.417.143	0.000	286.3409***	7.231173	0.000
SUMATERA				186.0923***	65.00613	0.004
KALIMANTAN				63.68705	64.7575	0.325
SULAWESI				205.5812***	66.53316	0.002
MALUKU AND IRIAN				165.5166**	66.10956	0.012
Y_2007				-136.2068***	7.746646	0.000
Y_2008				-327.5156***	7.523539	0.000
Y_2009				-249.786***	7.26129	0.000
Y_2010				-268.6012***	7.511653	0.000
Y_2011				-271.5581***	7.512878	0.000
CONS	101.1296	7016.972	0.000	221.3497	65.10149	0.001
Observations	48134			48134		
Pseudo R²	0.0081			0.0130		

Source: Based on own calculation

What distinguishes this Tobit regression to Logit regression is the dependent variable. But the number of observation is the same as in Logit regression model. The dependent variable we used is PORTION_EXPORT, that is how big the amount of exports to the total productivity of the company. Values of

that form was no longer binary, but the value of 1 to 100. Both the results without include area and time factor and result with area and time factor, almost all give the same result. The difference lies in the variable F_AGE2, which previously is positive, in the next result becomes negative. But both give significant results. Thus, the age of the company increased to a certain level cannot explain the increase or decrease in the company's desire to increase their exports to overseas.

In addition to F_PAGE variable, the negative sign is indicated in the variable F_SIZE^2. This is in line with the view of researcher named Van Dijk (2002), which has been described in Chapter 1, that is not always the size of the company provide great benefits as well. When the company decided to increase the workforce in order to increase production capacity, there will be some costs to be incurred. Companies must provide salaries to the employees. The increasing number of output not always coupled with the increasing number of workers. There is a possibility the company sought to maximize the use of the machine by using the number of employees who remain. It is certainly different for each type of industry. Industries that use more production machines (e.g. automotive industry) is different from the industry which relies more on workers or labor (e.g. textile industry and food processing industry). If that meant labor-intensive industries, it is true the addition of labor can increase company profit. But if the industry is a capital intensive industry, so companies only need to add fewer workers to operate the machine and buy the machine.

Variables which has a significant influence here is PRODUCTIVITY, F_CAPITAL, FOREIGN_ OWNERSHIP, area and time. For example, when we look back in detail from the table above, for variable F_CAPITAL, an increasing number of capital stock owned by the company amounted to 1 unit can give the effect of increasing the proportion of the company's export amounted to 12.202%.

As for the coefficient, the estimated value of the added variable area and time is greater than not. For variable area, which has the highest coefficient is Sulawesi, with a value of 205.58 and yield significant results. While the lowest result is Kalimantan, at 63.68 but the results were not significant. The possibility of exports performed much influenced by other factors.

Results In Overall

To further ease in seeing the results of the regression whole model, can be explained in detail through the table below:

Table 4.7 Overall Result

Variables	Predicted Signs	OLS		LOGIT		TOBIT	
		Without Time and Area	Include Time and Area	Without Time and Area	Include Time and Area	Without Time and Area	Include Time and Area
Productivity	+	(-) Siginificant	(+) Siginificant	(+) Siginificant	(+) Siginificant	(+) Siginificant	(+) Siginificant
Firm Capital	+	(+) Siginificant	(+) Siginificant	(+) Siginificant	(+) Siginificant	(+) Siginificant	(+) Siginificant
Firm Age	+	(-) Siginificant	(-) Siginificant	(+) Siginificant	(+) Siginificant	(-) Siginificant	(-) Not Siginificant
Square of Firm Age	-	(+) Not Siginificant	(+) Not Siginificant	(+) Siginificant	(+) Siginificant	(-) Not Siginificant	(-) Not Siginificant
Firm Size	+	(+) Siginificant	(+) Siginificant	(+) Siginificant	(+) Siginificant	(+) Siginificant	(+) Siginificant
Square of Firm size	-	(-) Siginificant	(-) Siginificant	(+) Siginificant	(-) Siginificant	(-) Siginificant	(-) Siginificant
Foreign ownership	+	(+) Siginificant	(+) Siginificant	(+) Siginificant	(+) Siginificant	(+) Siginificant	(+) Siginificant
Firm Location	-		(+) Siginificant		(+) Siginificant		(+) Siginificant

Note: (-) = Negative

(+) = Positive

From the table, variable which has the consistent results from all models are variable capital firm, firm size, foreign ownership, and firm location. These four variables yielded positive results and significant affect the company's propensity and decision to export, and linearly to the proportion of exports in Tobit models. The most unstable is square of firm variable, age of firm and firm size. So, the more believed and more accurate is the logit regression and Tobit regression.

Chapter 5
Conclusion

5.1 Empirical Finding

This paper contributes to the study of the level of the firm which has been developed by some scholars to discover the factors in determining the enterprise level export performance. In particular, the paper examines the various factors that may affect the level of firm export propensity in manufacturing companies in Indonesia.

From the research that has been done, and by using several methods anyway, we will conclude the results obtained include the whole results. These results are expected to answer the research questions that have been mentioned at the beginning. Based on these questions, then that becomes the determinant factor that is significant for the company to take steps in doing export is the productivity of the firm, firm size, capital of the firm, and status of the company based on ownership, is wholly owned by the local community, or there are some percentage or all the firm ownership by foreigners. The location where the company run their product is quite affecting, but not evenly, because there are islands that are not significant in influencing the decisions of exports, namely Kalimantan.

After learning the significant variables (except square of age), the next step is to answer the second research question. We want to see the effect of what is given by each of these factors.

The method used is to use Logit and Tobit models. By using the logit model, we able to describe more specifically the influence of these factors on the company's decision, in which the desired answer only two options, that is choose to export (1) or does not export. This is what distinguishes this calculation with the usual OLS regression.

From the results of regression, variables that have a positive relationship with the decision to export is a whole explanatory variables except the squared of size variable, which has a significantly negative relationship. The regression results indicate the same direction with the hypothesis that has been set, with the exception of the square of age. Despite having a positive sign (if the time factor and the area is added), but this was not a significant independent variable effect on the dependent variable.

By adding the variable area and time, finding in logit regression showed no big difference. A distinct mark is the dummy variable area. The whole area indicating the positive sign, and not a negative as expected in the previous hypothesis. This means that in all areas suggests that the location of each company's influence

with each export specifications and types of companies as well. For example in Kalimantan and Sulawesi more established mining companies, whereas in Java more processing and textile industry.

Furthermore, the finding for Tobit regression. Variable productivity, firm capital, foreign ownership and the firm area gives a positive result and significantly, according to the hypothesis. But incompatibility on firm age variable for the negative result, and squared variables of age, which the result is not significant but positive.

Through Hausman test, known and proven that in this case the fixed effect model is more appropriate to use. Data used in the calculation of fixed or random effect becomes much smaller than the data used in the Logit regression or Tobit regression. This is occur because some of the data omitted from the regression. The study also represents two different results with fixed effects and random effects model. Based on the test specification Hausman, fixed effects model was chosen to be a model that is more reliable than explain export propensity in Indonesia Manufacturing.

The productivity of the company was preferred and may affect the company's decision to expand. Normally, the company wants to continually improve profit. But when the domestic market tends to slow down and do not thrive, in order to survive and it furthers the company, business owners are certainly looking for ways to add to the consumer from outside the country. More demand from abroad, the company also constantly improve the sustainable production of goods.

Capital ownership, especially for capital that directly support the production process greatly help the performance of the company. Capital increase in the form of advanced machinery, transportation and distribution of goods are good, the purchase of land for expansion, entirely a good investment, which in the future can support the survival of the company. The company certainly think, if it is to meet market demand from the outside, the company should be able to meet in accordance with the target buyer. If the company feels capable, the order was received. Thus, the greater the amount of capital you have, the greater the chances of the company to decide and export.

Firm age has become a debate of its own. In fact, not all the established companies willing to export, and not all companies that are new or younger can directly penetrate foreign markets. The logic is, for companies that are old, they may not be able to compete in terms of technology and innovation. These companies are still struggling to use the old machines, no response in the world to use the Internet, tend to want to be safe and do not want to take the risk of loss in the future, as well as many other factors. Unlike the case with a young company, changes may still occur in the management of the company, because it is still flexible. As happened in Indonesia today, many new companies owned by young

entrepreneurs as well. With the ability thoughts and ideas are still fresh, and with the use of high level technology, did not rule out such companies can be accepted by the market share overseas. Even companies like this more precisely understand the willingness of consumers and how to satisfy consumers. So, we cannot see the company be exporting only from the age of the company.

As for size, just as the theory of diminishing return, that at certain levels increase the amount of labor will reduce corporate profits. The amount of labor that is exceeding the company's production capacity. So companies need to optimize the amount of labor available, and taking into account how many need additional labor if it is to meet the demands of foreign markets.

Foreign ownership has a positive and significant relationship to the propensity to export. As mentioned previously, that the multinational company put its factory in Indonesia by reason of cheap labor. These companies usually did actually produce in Indonesia and sells its products in their home country or other countries. With foreign ownership is also, owned technology tends to be better and more sophisticated. The ability of foreign workers stationed at the company even better and can teach his knowledge to local workers.

Then, factors of production location, the closer enterprise location to the resource location, the less the costs incurred. Similarly, the location of the plant from the port, which should not be far away. The farther the plant from the port, the longer the product can be shipped overseas. Therefore, companies that set up factories near international ports tend to be the exporting company. Indeed, inequality is still going on, where the most advanced island and have the most active harbor are Java and Sumatra. Therefore, the expected future development of Indonesia is becoming increasingly prevalent in all fields.

5.2 Policy implications

Macro Level Policies

Through the above results, we expect an increase in exports of Indonesia in the field of manufacturing industry. Because exports in manufacturing is much more beneficial for the economy as compared to export raw materials that do not have value added. Indonesia certainly do not want to forever depend on the import of goods from countries that have bearing as the largest exporting country in the world, like China for example. Moreover, major demand of the world market today is finished goods, rather than raw materials. To achieve these objectives, the government has rightly launched a "Strategy to Triple Non-oil Exports Period 2015-2019".

From CNN Indonesia website, the latest news about Indonesia is that according to a survey conducted by Price Waterhouse Coopers (PwC) today Indonesia has been placed in the list of countries which are the leading destinations of investment in the Asia Pacific region. This sequence is in exactly under the state of China, and has been defeated and ranked above Singapore. This is achieved by the reason that the investment climate in Indonesia has been favourable because the government has been trying to fix the bureaucracy and policies in terms of investment. (cnnindonesia.com, 2015).

Thus, from the finding above, despite the efforts made by the government several years has been good, the authors convey some consideration to further improve the performance of Indonesia in the field of economics, particularly international trade. The first is that the government should continue to encourage businesses to sell manufactured products that have higher value added, because main demand of the world is manufactured products. So the Indonesian market in the world can increasing. The government also needs to improve infrastructure and logistics systems that support the product distribution process, including the delivery of goods from the port. Because as long as this happens, there are still many illegal levies that would added to the cost of a company that is not unexpected. Infrastructure such as roads from the factories to the port will be very helpful, especially in the regions outside of Java. Moreover, in the islands that are in the eastern region of Indonesia is still have worse condition when compared to Java.

Indonesian government, specifically the Ministry of Trade has trade representatives in countries that cooperate with Indonesia in the field of trade. Trade attaché as representative of Indonesia should seek more active in promoting the original Indonesian products to the public in these countries through businesses and distributors. Exhibitions that promote Indonesian products, both domestically and abroad in order to be further improved. Such as the Trade Expo which is routinely performed each year, by inviting businessmen from many countries that the potential market is large enough, to be able to buy products from Indonesia and sold in the country. Not just once, but regularly into consumer products from Indonesia.

Then, the government should facilitate entrepreneurs or prospective entrepreneurs who want to ask for export licensing, and not to complicate by convoluted bureaucracy. The government also needs to simplify the process, if the company wants to make its product patents. One good example is the patent for the batik made in Indonesia. Thus, everyone will know that batik is a genuine product of Indonesia, and them do not should consider and recognize batik fabric of the country. Products that have this particularity certainly can attract buyers from abroad to buy original products from Indonesia.

Beside of that, the government need to do promoting FDI-based partnership in-termediate technology between foreign and local SMEs. So that developed in Indonesia is not only big companies and multinationals alone. By helping and working with small-scale enterprise, the small-scale enterprises can be helped, it has become increasingly larger. Resulting in equalization revenues and profits both companies with a large size and small-sized companies. We certainly do not want the country's economy entirely controlled by foreigners, what is needed is equal income society as workers in Indonesia. Precisely, small business more likely to survive and not go broke when crisis occurred in Indonesia in 1998. So we hope the other economic problems, namely income inequality between regions can be reduced.

Lastly, the government should ensure the availability of raw materials and auxiliary materials needed in the production process. Similarly, the provision of energy, such as electricity. If the material is reduced there is scarce, the production process can be inhibited. Companies can also be losses due to production stops. Especially with the availability of electricity. If on the island of Java, the availability of electricity tends to be more stable, but for other islands, power supplies tend to be limited and even sometimes often outages. For a large company certainly can easily cope with power reserve, but for a small scale, it can shut down the business if it regularly occurs. That is why in the eastern Indonesian company that stands just a little, because of the facilities and infrastructure available many are inadequate anyway.

Firm Level Policies

The first step that should be taken to the level of the company is to improve the technology in the production process as well as product packaging. By replacing the machinery operation is still traditional and low-tech, the production capacity can be increased. For Small to Medium Industries (SMI), the government can provide subsidies or free assistance to help entrepreneurs in small scale. While large companies, to develop research and development and creating new innovations. So, Indonesia will not always adopt technologies from developed countries. Because in order to catch up and compete with the developed countries, the most important thing today is technology. Indeed, the author cannot show empirical evidence of the influence of technology on exports due to data limitations, but from existing studies, it has been proven.

Companies as the users of labor services need to seek both of firm and the labor can be mutually beneficial. Wages given must comply with local minimum wage set by the government in their respective areas. The government also needs to consider the welfare of workers and not just siding with businesses. Central and local governments should assess the feasibility of the wage given each year for the workers to make them do not always strike and demonstration as often happen nowadays. Because of the strike and demonstration activities is certainly

hamper the production and harm the businesses themselves. Thus, businesses should not be only concerned with high profit for its own sake.

Then, in order to increase the productivity of each worker and the employee, the company can provide training and schools in order to improve their skills. By investing in the human resources in the short term, the company can get more profit in the long term.

Another path to be able to make other countries interested in the products sold by Indonesia is to do product differentiation. This step is quite capable of attracting consumers who do not want the product are mediocre. Especially with Indonesia, which is a country that has a lot of creative young people. Processing of natural resources are abundant and packed in a modern will attract customers from abroad. For example, the rattan industry, the industry is expected to exist in Indonesia can compete with synthetic rattan industry are produced by China. With government assistance to small entrepreneurs, and training of creativity, can make people prefer the original rattan processed products, although more expensive, than using products with synthetic rattan that has a smaller value added.

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Appendices

Appendix 1. Map of Indonesia

Map 1. Map of Indonesia