

Value Creation Analysis on Indonesian Furniture Manufacturers: A Case Study of PT. Furniture Indonesia

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Submission date: 08-Aug-2019 08:35PM (UTC+0700)

Submission ID: 1158609478

File name: lysis_on_Indonesian_Furniture_Manufacturers_-_SSRN-id1645790.pdf (337.06K)

Word count: 7997

Character count: 43308

1 Value Creation Analysis on Indonesian Furniture Manufacturers: A Case Study of PT. Furniture Indonesia

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1 Abstract

PT. Furniture Jerman ("PTFJ") is a German furniture wholesaler that has operated in the furniture industry for about twenty years. In mid-2006, PTFJ decided to build PT. Furniture Indonesia ("PTFI"), as an exclusive supporting unit in Semarang, Indonesia, PTFI acts as the sole furniture manufacturer for PTFJ.

Taking on the perspective of theory of the firm, including its later development, and taking into account the importance of factors of productions for firms, this paper attempts to analyze the value creation of PTFI, and investigate ways to enhance the existing value and competitiveness in international market.

Qualitative and quantitative methods are incorporated in the study to learn detailed activities of PTFI, which include; interview sessions, observations, and secondary data gathering from the organization's financial records, will also be integrated in this paper to learn the underlying production process in PTFI. These analyses cover the period from early opening production activities of PTFI up to the year of 2008. Few selected strategic management measurements are included to show comparisons of figures on the most likely value creation of the firm. Low cost labors and manufacturing overheads appear to become the basic reason to set up PTFI.

Keywords: value creation, furniture, low cost production

1. Introduction

Furniture is regarded as a term for the movable objects that support human body (such as seating), and may provide storage compartment, and/or shelving. Furniture can be made of numerous materials, such as; teak, wood, plastic, iron, glass, stainless steel, aluminum, rattan, stones, water hyacinth, metal, and other materials.

Generally, the term "furniture" is divided into three categories; outdoor furniture, indoor furniture, and accessories. Basic materials to made up the furniture, particularly wood, can be classified into two types; hardwood (from oak and broad-leaves trees), and softwood (from pine). Besides making the furniture, producers of furniture often engage also in

upholstery, to provide furniture with seat's pads, springs, webbing, fabric, or leather covers.

Outdoor furniture, or commonly known as "garden furniture", is typically made of water-resistant, and/or weather-resistant materials, to have ability to adapt to different climates. The most frequently used raw materials for garden furniture is teak. Teak naturally contains silica that makes it resistant to fungal decay, effects of water, chemical, fire, acid, and weather (adverse effects of being outside). Other raw materials, which are often used for outdoor furniture, are aluminum, rattan and plastic. Aluminum is typically robust and long lasting. Plastic is typically waterproof to leave-out year round. Rattan is also another good material for outdoor furniture because it is lightweight, durable, and

flexible (Abonyi, 2006; Tambunan, 2006).

1.1. Furniture Demand

Worldwide demand for furniture increases over time. This furniture industry offers attractive growth opportunities for multinational players to enter the market. According to ASMINDO (2006), or otherwise known as “Asosiasi Industri Permebelan dan Kerajinan Indonesia”, world furniture production is estimated to be about US\$ 352 billion. This market is primarily driven by demand from the United States, Japan and Europe, particularly in the sub-market of home furniture, which comprises about 65% of all furniture sales (Yudha, 2009). This portrays a considerable justification to transform the home furniture market into a competitive sector, with the presence of global brands, emergence of large players, and the resultant consolidation.

In terms of the European market for home furniture, Germany represents the largest demand for furniture. German’s market for furniture is about 22% of the total furniture market in Europe. The total approximate purchases were €17,036 million in 2005, and half of those purchases were imported from foreign countries. Germany’s total import value by 2005 is about €6,375 million, or 2,251,000 tons (ASMINDO, 2006).

1.2. Indonesian Furniture Products

There are two types of teakwood producers in Java; producers on state forests, or producers outside state forests. Perum Perhutani¹, a state enterprise, is the major producer of teakwood. It manages about 1 million hectares of teak plantations, of which 0.6 million hectares is under production

¹ This is referred to as the Indonesia’s state owned enterprise, Perusahaan Umum Perkebunan, Perhutanan, dan Pertanian, which is responsible to manage the Indonesian various types of plantations, forests, and agricultures.

forests. Since the world’s teak plantation is only about 2.7 million hectares, the Indonesia’s Perum Perhutani’s 1 million hectares, represents the largest teakwood plantation in the world (Roda, 2007).

Teakwood has been known and important for centuries in the island of Java. The city of Jepara, in the northern coastal area of the island of Java, is an industrial district devoted to the production of various wood furniture and wood carving. The city groups about 14,000 small workshops, and over 1,000 medium and large enterprises (Yudha, 2009). Most of the furniture made in Jepara uses teakwood as the raw material. To this day, Jepara is popular for its mass production of teakwood furniture and wood carving products.

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In Jepara, a total of 15,271 units of production have been identified, which employ approximately 170,000 workers. Such wood furniture and wood carving production are able to bring considerable revenue of up to Rp. 12.3 trillion per year of added value, or about €1 billion per year. This revenue is equivalent to the use of around 9m³ of round wood, which is able to sustain 1 fulltime employee per year (Roda, 2007).

Besides teak and wood, rattan is also another Indonesia’s precious natural resources. The Indonesia’s islands of Kalimantan, Sulawesi, dan Sumbawa are the house for 70% of the world’s rattan population (Abonyi, 2006; Tambunan, 2006; Roda, 2007; Yudha, 2009; <http://www.encyclopedia.com>, accessed in April 2009).

1.3. The Growth of Indonesia Furniture Export

Furniture is one of the ten main products, which have been driven heavily to increase the total export in non-oil and gas sector. The Indonesian government is very committed to engage in trade liberalization by increasing furniture products besides shrimp, coffee bean,

crude palm oil, cacao, textile, electronics, automotive parts, rubber and sandals.

Furniture exports, particularly from Jepara, have increased substantially since 1998. This created a boom of the teak industry, which is mainly based on cheap wood and labor. As any other products from any countries in the world, teak furniture prices may seem to have been dictated to Indonesian by the international demands. A single teak chair, which may be sold for only less than US\$ 10 in Jepara, could be priced much higher in foreign countries (Roda, 2007).

Indonesia's furniture exports are constantly expanding. Exports grew from US\$ 1.58 billion in 2004 to US\$ 1.65 billion in 2005 (Yudha, 2009). An estimated of 7% increase is possible for the coming years (Roda, 2007).

1.4. The Growth of Germany Furniture Import

World consumption rate of wooden furniture is around US\$ 32.1 billion in 2001. United States is the biggest market, with a total import of around US\$ 11 billion alone in 2001. European market and Japan represent the other two major markets for wooden furniture (Roda, 2007; Schiller and Martin-Schiller, 1997; Yudha, 2009).

With 22% of all imports of wooden furniture, Germany has the largest portion on furniture market in Europe. Germany is a good market for various furniture products since kitchen furniture is often regarded as a focal point for Germans, and many live in the countryside with a relatively large garden. This pushes up demand for outdoor furniture, especially during the summer months (Roda, 2007; Schiller and Martin-Schiller, 1997; Yudha, 2009).

2. Research Objectives

This paper attempts to analyze the value creation of PTFI, and investigate ways to enhance the existing value and competitiveness in international market.

2.1. Problem Identification

There are issues in relation to the manufacturing of goods in Indonesia. It has become a public knowledge about the minimum quality of Indonesian products, which may basically pertinent to internal problems, such as; ineffectiveness and inefficiencies of production process, quality control, as well as distribution.

Quality of Indonesian raw materials may have been deteriorated due to illegal logging. In addition, Indonesian labors may not be perceived as having the necessary qualifications in accordance with the international labor standard. Indonesia may also be seen inefficient due to minimal infrastructure. This influences the efficiency and effectiveness of distribution.

2.2. Research Limitation

This paper contains the following limitations;

1. The analysis on value creation is limited to PTFI, as the subsidiary of PTFJ.
2. The analysis covers only the period of 2006-2008, where the actual financial statements of PTFI are available for the purpose of this research.
3. The analysis focuses on the shareholders' perspective only of PTFI.

2.3. Research Object

PTFJ is a German-based company that runs a business in furniture trading. As a wholesaler, PTFJ distributes furniture to retailers in Germany and surrounding countries. The furniture products are all manufactured in PTFI, the subsidiary of PTFJ, which is located in Semarang, Indonesia. PTFJ

has set up PTFI in Semarang as a supporting unit to focus on the quality control for the goods manufactured by Jepara suppliers. PTFI is categorized as a monopsony, since PTFI manufactures and sells products only to PTFJ. All operation and production process are under close supervision of PTFJ.

Prior to 2006, Jepara artists and suppliers ship the furniture directly to PTFJ. Nevertheless, since PTFJ experiences relatively high rejection rates from the European customers, due to the minimal quality control, PTFJ decided to open-up PTFI, a subsidiary office in Indonesia. The main focus for PTFI is to handle the issues on quality control, including working on adding more values to the products so those furniture are acceptable in the European market. This is to say that PTFI merely acts as the cost center for quality control for PTFJ.

2.4. Framework of Thinking

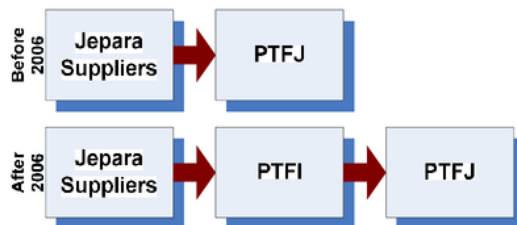


Figure 1: Distribution of PTFJ & PTFI
Source: PTFI, 2009

This study uses the following framework of thinking in order to build up sufficient arguments against the value creation of PTFI to PTFJ. Theory of the firm, particularly the resource-based theory of the firm, is used as the foundation theory to build hypothetical investigation toward firm's factors of production, analysis on firm's resources and capabilities, which may affect organizational value creation.

2.5. Questions & Hypothesis

Based on the above explanation, one



Figure 2: Framework of Thinking

major question is proposed to guide the research process in trying to find out the value creation of PTFI, including investigation on ways to enhance the existing value and competitiveness in international market. That is, are there any evidences to support the value creation of PTFI to enhance product value for PTFJ in Germany? Concerning this question, it is hypothesized that financial records of PTFI support the value creation of PTFI in enhancing product value for PTFJ in Germany. Hence,

H_0 : PTFI's financial records **SHOW** the value creation of PTFI in enhancing product value for PTFJ in Germany.

H_1 : PTFI's financial records **DO NOT SHOW** the value creation of PTFI in enhancing product value for PTFJ in Germany.

3. Literature Review

3.1. Theory of the Firm

Theory of the firm is a microeconomic concept, which describes the nature of the company, including its existence, behavior and its relationship with the market. The company interacts with the market to determine pricing and demand, then allocates resources that can maximize net profits (Anantadjaya, 2009; 2008; 2007; Rasmussen, 2007).

Theory of the firm attempts to respond to the basic questions on why do companies produce, what do they do, and what motivates their choices in allocating capital and labor. The neoclassical theory of the firm views firms' production processes and activities as a black box. This established the principal of profit maximization, in which the marginal

revenue is equal to marginal cost. This theory described various issues, such as; strategic pricing and barriers to entry (Anantadjaya, 2009; 2008; 2007; Kantarelis, 2007). Four main issues are addressed by the modern theory of the firm (Yudha, 2009), which are concerning to the boundaries of the firm, the internal organization of the firm, the formation, growth, and diversification of the firm, and the role of entrepreneurs².

The business of the firm is to generate income that is to be distributed to owners, employees, suppliers and public goods recipients. The activities of the firm create a value for organization and customers. This is also known as value-based management theory. Firms need resources³ and capabilities⁴ to create a strategic value that is superior to competitors (Kantarelis, 2007).

The resource-based theory of the firm proclaimed four necessary conditions underlying the ability of an organization to create a sustained competitive advantage from its capabilities. The conditions are (Hubbard, 2004); organizations are heterogeneous and can remain so for long periods, some of the capabilities they have are rare and valuable, these capabilities are difficult to imitate, these capabilities are not easily traded. In 1991, Conner makes a strong case for resource-based strategy as a general theory of the firm. It expresses that the resource-based model fits with transaction cost economies, which are the basis for internationalization models for

foreign direct investment. It focuses on both protecting unique resources and applying core competencies in order to gain strategic competitive advantage (Yudha, 2009).

3.2. The Value Chain and Competitive Advantage

Referring to the previous explanation, firms must strive to secure unique resources to gain strategic competitive advantage. The idea on value creation that integrates and optimizes the value chain is certainly appropriate in this case. Effective management of the movement of materials, information, and cash along the demand and supply chains is critical to the firm's competitive advantage (Yudha, 2009).



Figure 3: The Resource-based Model of International Strategy

Source: Yudha, 2009

Value creation analysis looks at how each participant adding value to firms. Value creation analysis is usually an expanded version of cost and benefit analysis. Though asset utilization attempts to determine the firm's leverage on asset purchases and usages, asset utilization may proof to support the idea on value creation. Undoubtedly, the notion on value creation and the management proficiency in handling the value chain may boost the firm's competitive advantage. The better the usage rate on firm's assets, the better chance the firm has to encounter competition in marketplaces (Yudha, 2009). Considering the generic types of strategy, at the very least, firms can choose to play with few alternatives, which are; cost advantage⁵ (narrow or broad)

² An entrepreneurial theory of the firm covers major issues on the nature of the firm. The creation of entrepreneur's skills is closely linked to the core competencies of the firm (Rasmussen, 2007).

³ The term "resources" can be defined into 2 categories; tangible and intangible assets. Tangible assets are referred to physical assets that are easily to identify, such as; land, building, plant, equipment and financial resources. Intangible assets are referred to assets with no physical formation, which make them difficult to quantify, such as; copyrights, patents, skills, competence, and many others (Anantadjaya, 2009; 2008; 2007; Hubbard, 2004).

⁴ The term "capabilities" is referred to the process, systems or organizational routines which the organization used to coordinate its resources for productive use (Kantarelis, 2007).

⁵ The term "cost advantage" refers to better understanding on the firm's cost structures, and try to compress those variations of costs out of the value creation activities. Reducing costs can be done by introducing new production processes, distribution channels, or a different sales approach (Yudha, 2009).

and/or differentiation⁶ (narrow or broad). In order to successfully manage the strategy toward cost advantage and differentiation, firms must reconfigure the value chain via improvements on linkages, both internal and external linkages. Such linkages must be managed in such a way to connect primary activities and supporting activities. One way to ensure such improvements on various linkages is through outsourcing activities (Yudha, 2009).

International trade is critical for any countries around the world since it boosts economic growth by providing more marketplaces, and access to required resources. Companies can expand their business, seek growth opportunities in another nations, and make their production and distribution systems more efficient. It also reduces the reliance of the economies of their home nations (James, 2000; Yudha, 2009).

The company's decision to operate the business abroad is dependent on the factors, such as; availability, price, quality of labor, natural resources, capital, and entrepreneurship in the foreign country, also regarded as one of the factors of production. Since few countries can produce all goods and services, which are needed by their residents, international trade becomes the solution to meet the country's demands. If a country can focus on what things that they can produce very well, so it can export surplus domestic output and buy foreign products that it lacks efficiently produce. Hence, the term "comparative advantage", or may also referred to as "opportunity cost", where a particular country has an advantage in supplying certain goods to other countries, becomes essential in this context (Ebert and Griffin, 2005; Yudha, 2009).

⁶ The term "differentiation" refers to the management focus on activities that have become the firm's core competencies and capabilities in order to perform better than competitors (Yudha, 2009).

3.3. Measurements

In this study, measurements used to evaluate firm's value creation are mainly based on financial figures from PTFI, to come up with particular dimensions on firm's productivity, efficiency, effectiveness, cost and benefit analysis, shareholder's value model, and economic value added (Allee, 2006; Amit and Zott, 2004; Anantadjaya, 2009; Hubbard, 2004; O'Byrne and Young, 2000; Stein, et al, 2001, Yudha, 2009).

3.3.1. Productivity

Global competitiveness requires a company to work efficiently at producing goods. The several inputs that categorized as a factor of production will be used for maximizing the profit by producing a greater output. Since productivity refers to the relationship between output and input, productivity is often used as a measure of firm's efficiency. The concept of total factor productivity is measuring the overall performance of a factory in transforming a variety of inputs into products. It includes transforms labor, material, capital and energy into a single product has increased or decreased. Based on the previous study by Anantadjaya (2009), the level of productivity can be measured by calculating several ratios, such as; debt-to-asset ("DAR"), debt-to-equity ("DER"), return on equity ("ROE"), return on investment ("ROI"), return on assets ("ROA"), return on capital employed ("ROCE"), return on sales ("ROS"), and inventory turnover ("ITO").

3.3.2. Efficiency

As stated previously, measurements toward productivity are often used also to gauge the level of efficiency. According to Anantadjaya (2009), as human resources

become more efficient⁷, it is expected that there will be a higher rate on DAR, DER, and ROCE. This is simply due to the minimal human errors during tasks performance, which likely to boost utilization rate on assets, equity, and capital employed. The study also noted that the type of industry⁸ provides clue as to which industries are considered more efficient in utilizing their human resources.

3.3.3. Effectiveness

Effectiveness relates the inputs and the output to the final objectives. Though it may be relatively similar to efficiency, the measurements on effectiveness are related to the objective rather than technical quality of output (Yudha, 2009). Previous study has confirmed that as human resources become more effective⁹, it is expected that there will be a faster turnover in the organizational inventory. This brings about a normal phenomenon on organizational growth. Such an organizational growth is translated into higher ROS, ROE, ROI, and ROA.

3.3.4. Cost and Benefit Analysis

Cost and benefit analysis is a comparative method that can help to improve correction-related decision. Cost and benefit analysis can be measured in several ways, such as:

1. The net differences between costs and benefits.
2. The benefit-cost ratio, as the total benefit divided by the total costs.

⁷ In this study, "efficiency" is defined as "doing things right" (Anantadjaya, 2009).

⁸ According to Anantadjaya (2009), particular industries, such as; laundry/dry cleaning, delivery/courier, computer/internet rentals (*warnet*), cellular phone vouchers, garment, and textile, are making the most of their human resources to create higher organizational value than other industries, such as; bakery/cakes, hair-dressers/barbershops, copy centers, and tutorial centers for computer and language training (*kursus/bimbel*).

⁹ In this study, "effectiveness" is defined as "doing the right things" (Anantadjaya, 2009).

If it produces a positive net difference, and if the total benefit-cost ratio is greater than 1, it means that the company is cost-beneficial. On the contrary, if it results a negative net difference, and if the total benefit-cost ratio is less than 1, it means that the company's costs exceed the company's benefit (Yudha, 2009).

3.3.5. Shareholder's Value Model

The shareholder value approach leads to a concentration on measuring returns to shareholders. It also known as the shareholder value or value based management. This approach is based on the original work by Rappaport (Hubbard, 2004; Yudha, 2009), who identified the concept of value drivers which led to the financial outcomes. The example of value drivers are sales growth rate, margin, working capital, fixed capital, cost of capital, tax rate and debt equity ratio. By analyzing these financial drivers above, it will find the increases or decreases of the shareholder value. The purpose of a company is to maximize the shareholder value, within what is legally permissible. The profits are not only the result, but also a source of competitive health and wealth. It can be measured by the shares price, dividends and economic profit (Hubbard, 2004).

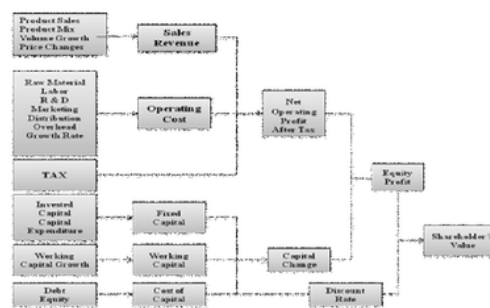


Figure 4: Shareholder Value Model
Source: Hubbard, 2004

3.3.6. Economic Value Added

Economic Value Added, or EVA, is a

registered trademark by Stern Stewart & Co, which is a variant of shareholder value management. In corporate finance, it estimates a true economic profit after making corrective adjustment to the accounting standard. It can be measured as Net Operating Profit after Taxes less the money cost of capital (Hubbard, 2004; O'Byrne and Young, 2000; Stein, et al, 2001; Yudha, 2009).

4. Research Methodology

The objective of this section is to describe how the data was gathered, and which methods were chosen, as with the reasons for using the methods.

4.1. Research Method

The research method that will be used in this thesis is both of quantitative and qualitative method. The data is obtained primarily by direct observation and interviews with the employees of PTFI in Semarang. Other data are also gathered from internet.

4.2. Place of Research

The research of this study is conducted mainly in the office of PTFI in Semarang, Indonesia.

4.3. Systematical Planning of Research

4.3.1. Problem Definition and Analysis

The initial and notable problem concerns with the general issues on the minimum of quality of the Indonesian production, which is regarded to be ineffective in terms of production and distribution. Moreover, the study also defined some risks that might be hindered in running the business in Indonesia. Afterward, analyzing the problem with some data gathered and followed by some solution to solve the problems. By collecting the internal data from the company and other external sources, then this study attempts to find out

what factors and reasons behind these problems.

4.3.2. Setting Objectives

As discussed earlier, there are two main objectives in this research. The primary objective is to analyze what value and benefits that are created by manufacturing in Indonesia for a German's furniture company. The secondary purpose is to enhance the existing value and competitiveness of PTFI in international market competition.

4.3.3. Research Design

Research design is designed around the framework of thinking, which used as a guide to collect and analyze data. This framework of thinking is the blueprint that is followed to complete a study.

Descriptive study is undertaken in order to ascertain and describe the characteristics of the variable in this situation (Sekaran, 2003). Besides describing specific characteristic, it also used when making specific prediction and estimating the proportion in a certain way. These descriptive studies are expected to describe the value creation by manufacturing the furniture in Indonesia, based on the qualitative data gathered during the data collection method. It is particularly concerned with the determination on the frequency of something occurs or the relationship between two variables.

4.3.4. Data Collection

Data collections were conducted from March 2008 until July 2008. To answer the main research questions on what the result of value creation in manufacturing the furniture in Indonesia, both of secondary and primary data sources were explored.

Primary data was collected to get qualitative and quantitative data and

information (Sekaran, 2003). Primary data in this study was conducted via (1) direct observation in the premises of PTFI in Semarang, (2) informal interview with the management of PTFI in Semarang, mainly, the Quality Control Manager, Production Manager, Commercial Manager, Finance Manager, Head of Labor, some suppliers from Jepara, and other employees who related to the research topic area, and (3) survey via questionnaires. Questions raised to the management of PTFI include queries on human resources, raw materials, production, distribution, and quality control.

In addition to the primary data, secondary data sources were also helpful in getting a deeper understanding about value creation that resulted from manufacturing the furniture in Indonesia. The secondary data sources were journals, reports in the internet, including previous research studies on related topics, proposals, publications, and also the data provided from PTFI in Semarang and some data from PTFJ in Germany. The internal sales data was used to analyze the company's productivity, the company's cost and benefits, the company's ways of manufacturing, and distribution which may address the concerns on value creation for PTFJ.

4.4. RESEARCH OBJECT

The research object in this study is PTFI. However, to have the better grasp on PTFI, it is necessary to also understand PTFJ.

4.4.1. PTFJ

Mr. Harald, as a founder, discovered teak garden furniture for the first time at his acquaintance's house in the 1990s. It was considered rare garden furniture in Germany then. He traveled to Indonesia to find about the origins and the production of this furniture. During the mid-1990s, demand for teak garden furniture became much higher than expected. Such a substantial jump in demand of garden furniture in Germany has forced Mr. Harald to

move his production into its current and bigger workshop of about 16,000 m² in Germany. Today, PTFJ has become the leading supplier of high quality garden furniture. PTFJ supplies the products from Indonesia and distribute them to retailers across Europe. The European retailers are located around Germany, including Austria, the Czech Republic, Denmark, Netherlands, and Switzerland (PTFI and PTFJ, 2009).

PTFJ specializes in innovative indoor and outdoor teak furniture along with the responsibility to environmental and social awareness. In spring 2005, for instance, PTFJ has raised over €300,000 from its stock clearance sale to help the tsunami victims, and rebuilt the city of Banda Aceh in Indonesia (PTFI and PTFJ, 2009).

4.4.2. PTFI

In the beginning, PTFJ was set up to directly received finished goods from various producers in Jepara. With this arrangement, PTFJ faces problems and issues concerning the international standards on quality control. Many producers in Jepara cannot afford the actual certification processes to obtain the international standard on quality. This situation forced PTFJ to consider setting up a supporting office in Indonesia to focus on the quality control prior to distribution to the European market.

Today, PTFI manufactures and trades teak furniture and accessories. It is located in Semarang, Indonesia. PTFI operates under the umbrella of PTFJ and directly managed by German representatives. Over 200 employees work in production and quality control. PTFJ's investment in setting the operation in PTFI represented the biggest foreign direct investment in Indonesia during 2005-2006.

The official opening was in July 2006, on a 3 hectares lot, which comprises of office, showroom, and workshop areas. PTFI's main

focus is controlling the quality from Jepara suppliers. It includes checking the quality of the products, re-assembling the products when necessary, and adding some more “values” to the products prior to shipment to Germany. Such additional “values” include; PTFI’s logo, packaging, and a forest certification.

4.4.3. Production

The major raw material that has been used so far is teak. In order to reduce the consumption of teakwood due to the scarcity of natural resources, PTFI uses other raw materials, such as; rattan and other hardwood. In order to differentiate, PTFI adds other components to mix with teakwood, including; stainless steel, aluminum, water hyacinth, iron, plastic, stones, and mosaic.

In general, the workflow of the production processes at PTFI are as follows; cutting, drying, production, assembling, sanding, spraying, packing, and storing into the warehouses.

Some of the product lines of PTFI include; tables (small/large rectangle tables, round tables, and oval folding tables), chairs (high chairs, benches, long benches, and sofa sets), and accessories (flowers, figurines, and terrace statues).

4.4.4. Quality Assurances

The products are stable, durable, weather-proof, easy to move around, and easy maintenance. The quality assurance is directly overseen by German representatives in PTFI, who conducts regular checks on every item prior to the actual loading. The high quality materials and components, besides the raw materials that used from massive and solid woods, including screws and hinges, form the basis for high quality furniture products.

In order to produce better goods, the company uses teakwood that has been popular and had a

great vogue to Europe market. Some advantages of teakwood are; hard-wearing and efficient, weather-proof, and able to adapt to large temperature fluctuations.

5. Data Analysis

5.1. Productivity

In order to calculate the level of productivity, various inputs and outputs are considered. The following table shows the comparisons of the productivity improvement in PTFI.

Table 1. Level of Output and Input in PTFI (Calculation on Productivity Measurements)

In Rp. thousands	2006	2007
Output (Rp)	343,580	3,481,169
Input (Rp)	3,643,834	974,410
Productivity	0.09	3.57

Source: PTFI, 2009

The figures in the above table are calculated from various inputs, such as; human resources (permanent/temporary labor, skilled/unskilled labor, amount of wages), price of raw materials, selling price, and price of machinery.

5.2. Efficiency

As stated previously, efficiency is simply defined as “*doing things right*”. It was also suggested that the level of efficiency can be measured by DAR, DER, and ROCE; that the higher these ratios means the company uses its resources more efficiently (Anantadjaya, 2009). Using the internal data of PTFI, the following figures can be gathered.

Table 2. Selected Financial Figures of PTFI (Calculations on Efficiency Measurements)

In Rp. thousands	2006	2007
Total Debt	4,805,094	12,805,463

(Rp)		
Total Assets (Rp)	6,544,303	13,978,628
Total Equity (Rp)	1,661,000	1,173,165
EBIT (Rp)	78,208	-84,144
DAR	0.73	0.92
DER	2.89	10.92
ROCE	0.04	-0.19

Source: PTFI, 2009

The above table indicates that PTFI's liabilities and assets increased rapidly in 2007, with a sharp decline in EBIT. Perhaps, this was due to the combination of marginal sales and relatively high costs of production in the beginning stage of production as a newly set-up firm.

5.3. Effectiveness

The level of effectiveness of human resources and raw materials as resources is measured by ROS, ROE, ROI, ROA, and ITO. As human resources become more effective, there will be a faster turnover in inventory, which results in higher level of returns (Anantadjaya, 2009).

Table 3. Selected Financial Figures of PTFI (Calculations on Effectiveness Measurements)

In Rp. thousands	2006	2007
Net Income (Rp)	61,708	-93,413
Total Sales (Rp)	9,905,156	35,864,926
Total Equity (Rp)	1,661,000	1,173,165
Total Investment (Rp)	1,218,765	1,583,970
Total Assets (Rp)	6,544,303	13,978,628
COGS (Rp)	8,333,333	30,675,867
Average Inventory (Rp)	332,284	371,298

ROS	0.62%	-0.26%
ROE	3.72%	-7.69%
ROI	5%	-5.9%
ROA	0.94%	-0.67%
ITO	25.07	82.61

Source: PTFI, 2009

Referring to the above calculations, it appears that PTFI have failed to bring about improvement on effectiveness as it experienced decline on its returns. One plausible explanation to this situation is that employees may still build up their learning curve in adapting to the new work processes, as required by PTFJ via its German representative in Indonesia. In terms of ITO, however, PTFI was able to improve its ITO to about 83 times in 2007. It may mean that PTFI financed the production costs for a shorter period of time. Since fewer funds are tied up in inventory, funds can be put to work elsewhere to earn greater returns. The higher turnover may indicate the efficiency of operating procedures, efficient in inventory management and sales management (Yudha, 2009).

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5.4. Value Creation Analysis

The value creation analysis measures shareholders' value and economic value added.

5.4.1. Shareholders' Value Model

In trying to maximize the shareholders' value, several drivers are noted; revenue, operating margin, cash tax rate, incremental capital expenditure, investment in working capital, cost of capital, and competitive advantage period (Yudha, 2009).

Table 4. Selected Financial Figures of PTFI (Shareholders' Value Calculations)

In Rp. thousands	2006	2007
Net Operating Profit (Rp)	78,208	-218,313
Capital Charge	6,466,094	1,173,164

(Rp)		
Equity Profit (Rp)	-6,387,885	-1,391,477
Discount Rate	0	0
Shareholder Value (Rp)	-6,387,885	-1,391,477

Source: PTFI, 2009

5.4.2. Economic Value Added

As mentioned earlier, EVA attempts to evaluate the overall performance of an organization. From the perspective of corporate finance, EVA is regarded as more appropriate than ROS since it considers both income and the level investment. It is to say that EVA estimates a true economic profit after making corrective adjustment to the accounting standard (Yudha, 2009).

Table 5. Selected Financial Figures of PTFI (EVA Calculations)

In Rp thousands	2006	2007
Net Operating Profit (Rp)	78,208	-218,313
WACC *	5,696,719	988,406,758
Capital Employed (Rp)		
EVA (Rp)	-5,619,511	988,625,072

Source: PTFI, 2009

From the above table, it is apparent that PTFI's net operating profit in 2007 declined drastically. It may indicate a large capital expenditure in setting up the initial operational activities in PTFI.

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5.5. Cost and Benefit Analysis

5.5.1. Cost Analysis

The following table shows the cost figures in PTFI (Yudha, 2009).

Table 6. Selected Financial Figures of PTFI (Total Cost Calculations)

In Rp thousands	2006	2007
Direct Material (Rp)	1,510,114	5,282,472
Direct Labor Cost (Rp)	521,367	1,953,174
Manufacturing Overhead Cost (Rp)	655,244	892,773
Total Cost (Rp)	2,686,725	8,128,419

Source: PTFI, 2009

5.5.2. Benefits Analysis

Based on the interview and observation directly in PTFI, the following diagram attempts to provide a much clearer illustration on the approach on this benefit analysis at PTFI.

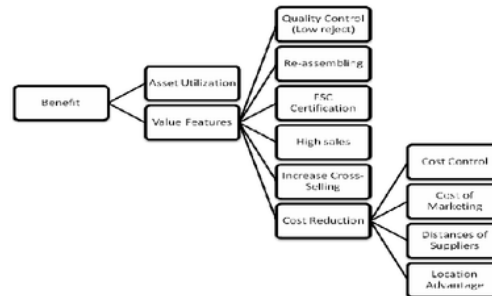


Figure 5. Benefits Analysis

Source: based on interview and observation in PTFI, 2009

5.5.2.1. Asset Utilization

The company also has additional benefit when they produce woods. If the woods are acceptable to the standard of quality control, PTFI is able to produce better tables and chairs. On the other hand, if the quality wood is not fully acceptable to produce tables and chairs, PTFI is able to produce other products, particularly accessories. In this sense, PTFI attempts to utilize the available raw materials rather efficiently. PTFI is also able to increase its cross-selling among various products and accessories.

5.5.2.2. Value Features

- **Quality control (Low reject)**

The major benefit from opening PTFI as a supporting unit for PTFJ is on the quality control.

Table 7. Selected Financial Figures of PTFI (Value of Defective Products)

In Rp thousands	2006	2007
Value of Defective Products (Rp)	6,000,000	144,906

Source: PTFI, 2009

From the data above, it is shown that PTFI is able to produce a better quality of products. Prior to 2006, PTFJ had experienced many product rejections, approximately above 50% from the total product distributed from Jepara suppliers, and had experienced losses which amounted to Rp 6 billion. This figure represents the cost of those rejected products from customers, including cost for shipping back to Jepara to get a new product with better quality. Following the establishment of PTFI, product rejections declined substantially. Between 2006 to 2008, the product rejection rate are merely about 3 – 5% in every shipment to PTFJ.

Based on the informal interview with the quality and production manager, PTFI attempts to standardize the criteria of quality control of the finished goods supplied from Jepara artists. Usually from 100 pieces supplied, only about 25% is acceptable for direct shipment to Germany. Another 50% is also acceptable with minor reassembling works necessary to produce better quality of products. About 20-25% is rejected due to unconformity to the international standards. Those products might have a fatal error or damage and could not be repaired by PTFI's labors. Sometimes, rather than returning the rejected products to Jepara artists, PTFI offers those products at a very low

price (Yudha, 2009). The quality control is performed by the Production and Quality Manager, who is also the German representative from PTFJ. Generally, the Manager will conduct re-check after the first quality control is performed by the Head of Production and Quality in PTFI.

- **Re-assembling**

PTFI provides additional benefits in producing the greater output. PTFI often re-assembles the products, especially for the products that are not adjusted to international standard. PTFI purchases the finished goods in low price, perform the necessary repair and put additional components in order to conform to international market standards. The cost of re-assembling one piece of furniture is about 10% of the cost of purchasing the products from Jepara suppliers.

- **Forest Stewardship Council Certification**

PTFI is adding more value by providing a Forest Stewardship Council Certification¹⁰ in every product. Products from FSC certified forests have the tendency to create more business value than products from non-FSC certified forests. PTFI puts FSC label on each product they produced in order to protect the brand name and reputation of the company, for both PTFI and PTFJ.

This FSC Certification creates more benefits for the market of PTFJ in Europe. Mostly, the European customers are fond to buy products with FSC label. This label shows that PTFI and PTFJ is concerned of the consumption of forest products that well-

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¹⁰ Forest Stewardship Council is an international non-profit organization that responsible to forest stewardship by providing benefits to firms, such as: principles for responsible forest stewardship, no barrier to trade under World Trade Organization, monitor compliance with standards, powerful product labeling systems to recognize policies, systems, performance, and demands for FSC's certified products and services (<http://www.fsc.org>)

managed to meet social, economical and ecological needs of present and future generations.

- **Higher Sales**

Aside from low rejection in products, other value that PTFJ has experienced is the higher number of sales. Although there is no detail of the actual PTFJ's sales, the information could be derived from sales of PTFI. Since PTFI is the sole supplier for PTFJ, the higher sales of PTFI means sales of PTFJ are also increased.

Table 8. Selected Financial Figures of PTFI (Total Sales)

In Rp thousands	2006	2007
Total Sales (Rp)	9,905,156	35,864,926

Source: PTFI, 2009

The above table shows a drastic increase in PTFI's sales. This may indicate that sales of PTFJ are also escalating. Because of the effective and efficient used in performing the manufacturing process, PTFI can reduce the base pricing for PTFJ. With the quality check and re-assembling works, PTFI is able to increase the overall value of about Rp. 26,000 for every piece of furniture that it sells to PTFJ. The approximate margin between PTFI and PTFJ is averaged Rp. 500,000 for every piece of furniture that PTFJ sells in the European market. This shows the boost in profit margin on selling price in the European market.

- **Increase Cross-Selling**

At the first time, 70% of order from PTFJ is chair, and only about 30% is table. When PTFI was established, it had increased the percentage of table sold to 40%, and accessories have increased to 10% of total sales.

Table 9. Selected Financial Figures of PTFI

(Cross Selling Between Products)

	Chair	Table	Accessories
% of Total Sales in 2006	70%	30%	0%
% of Total Sales in 2007	50%	40%	10%

Source: PTFI, 2009

- **Cost Reduction**

Based on Porter's generic strategy (Yudha, 2009), low cost is one avenue to concentrate on low cost strategy that aims to have a lower cost structure than competitors. By doing the production in PTFI, it attempts to develop a lower cost structure via the following issues;

- Cost Control

It includes improving controls on raw materials, direct labor, factory overheads, and administrative overhead. By setting up PTFI Indonesia, PTFJ is able to reduce the cost of production. PTFJ can reduce the labor costs by taking advantage of the lower rate on Indonesia's workforce. PTFJ can also take advantage of the strong currency rate of Euro relative to Rupiah. Moreover, the abundance of resources in Jepara, is also beneficial in improving the overall efficiency in PTFI.

- Cost of Marketing

Since PTFI manufactures and produces solely to PTFJ, PTFI incurs no marketing costs, in terms of advertising and promotion.

- Distances of Suppliers

Another benefit for PTFJ in setting up PTFI is being closer to all suppliers. The time required to ship the goods from Jepara becomes more rapidly. This improves the quicker turnover of inventory.

- Location Advantage

For both PTFI and PTFJ, distribution is considered as an important factor. By locating PTFI in free-trade location (*kawasan berikat*), it reduces costs of distribution to Germany. This is coupled with relatively cheap labors to support the overall low-cost strategy.

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6. Conclusion and Recommendation

6.1. Conclusion

Based on the analysis above, it becomes apparent that the establishment of PTFI was indeed enhancing the product value for PTFJ in Germany. Some selected evidences are;

- Productivity of PTFI has increased from 0.09 in 2006, to 3.57 in 2007.
- Except for ROCE, the other level of efficiency ratios has improved. DAR increases to 0.92 in 2007, and DER jumps to 10.92 in 2007.
- Although the level of effectiveness ratios has failed to show improvement, nonetheless, the result of ITO shows a drastic leap from 25.07 times in 2006, to 82.61 times in 2007.
- The calculations on shareholders' value have also shown a significant accomplishment from a negative value of Rp. 6.4 billion in 2006 to reach a staggering Rp. 1.4 billion in 2007.
- The calculations on PTFI's EVA shows a strong recovery from a negative EVA of about Rp. 5.6 billion in 2006 to about Rp. 988 billion in 2007.
- The information on defective products is also indicating an unbelievable perfection in PTFI's quality control; from Rp. 6 billion in 2006, to only a mere of Rp. 145 million.

Hence, referring to the initial hypothesis in the beginning of the study, it is safe to conclude that PTFI's financial records are able to show the value creation of PTFI in enhancing product value for PTFJ in Germany.

6.2. Recommendations

6.2.1. Business Growth

In order to be more effective and more efficient in using the low-cost labor in Indonesia, it is recommend that PTFI expands its destination, not only to PTFJ. Because the season that appropriate to sell the outdoor furniture is only in summer, which impacts the productive month for the labor is only eight months, PTFI could distribute to another countries that has the opposite seasons with the European market.

6.2.2. Product Expansion

Since the products are mainly outdoor furniture, PTFI could expand into the indoor furniture market, which can be sold in all seasons. PTFI may also want to engage in updating information on the demand of furniture from the European market, including; tastes, design, color, or current trend.

6.2.3. Quality Control Improvement

PTFI needs to maintain its best of quality control by selecting the most appropriate artists from Jepara, which can be monitored to produce a high quality product.

6.2.4. Cost Budgeting

Though PTFI's sales are rapidly increasing, but they are insufficient to generate revenue. It is apparent that PTFI need to pay a closer attention to cost structure and capital budgeting. It is expected that the combination of cost structure and capital budgeting is able to produce higher in return on investment.

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