

The First Mover Advantage of Solar Module Players in Indonesia: A Case Study of PT. LEN Industri

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Abstract—Having great diversity of strategies acquired by company for winning the competition in the manufacturing industry. One strategy as a new concept that we proposed in this paper is, a strategy of beginning players or commonly known as the first mover, in renewable energy business. The study of literatures address in several different companies and the market conditions which vary. The discussion focus on the Indonesia market preparation that will soon facing on the Asian Economic Community (AEC) competition in 2015. PT. LEN Industri as the state-owned company for the case discussion, which is one of the renewable energy business in Indonesia. The importance discussion is a competitive strategy in terms of product innovation and the ability entrance to the new markets. The Ansoff matrix used in that competitive strategy formulation. At the end of this discussion, it was concluded that there are four main elements that should be concerned for the first mover, such as: asymmetric information, technology leadership, switch costs and regulation.

Index Terms—Product development, market development, the Ansoff matrix, the first mover.

I. INTRODUCTION

The higher education and training are the initial capital of a nation to move forward in all areas of business. To face the competition in the open market such as AEC, APEC, or even WTO, Indonesia should prepare its human resources with the higher education and training, especially directly related to Information Communication and Technology (ICT).

According to the Global Competitiveness Index (GCI) reported in 2014-2015, Indonesia with a GDP of USD 3.510 ranks 34th in GCI. To improve Indonesia's position in GCI, then Indonesia should seriously to increase the GCI components in Fig. 1, there are efficiency-driven, factor-driven, and innovation-driven past. The government should focus more on prioritizing improvement pillar 5 (higher education and training), pillar 6 (goods market efficiency), pillar 8 (financial market development), pillar 9 (technological readiness), and pillar 12 (innovation).

To support Indonesia's position in GCI, PT. LEN Industri has already run that five priorities. PT. LEN Industri is a company engaged in the electronic (high technology) field. The company has high level of sales growth. In winning the global business competition, this company strive able to achieve a significant jump in its performance, which is supported by a strong capital structure through innovation,

repositioning and business transformation. PT. LEN Industri engaged in the renewable energy business, manufactures solar modules, bidirectional inverter, solar charger, and Kwh meter.

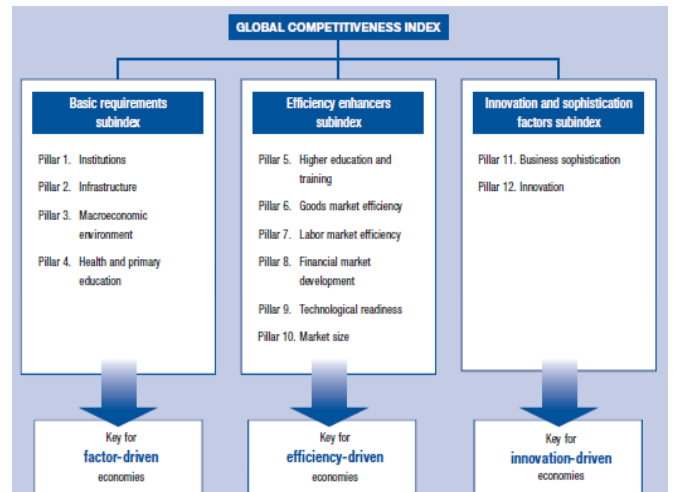


Fig. 1. Global Competitiveness Index

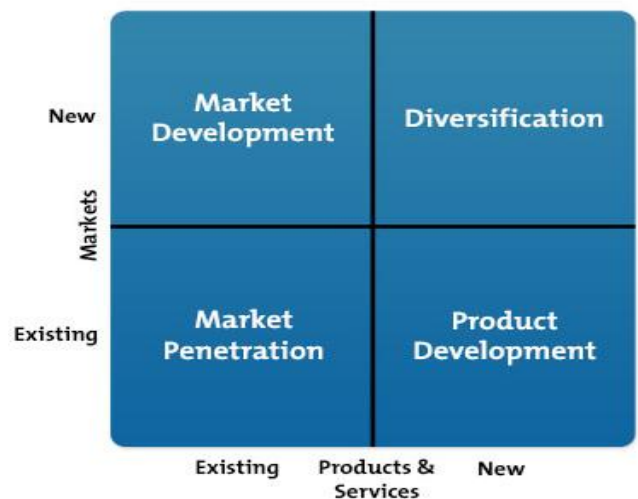


Fig. 2. The Ansoff matrix.

In conducting its business, the company is experiencing in the internal and external constraints. The internal problems that arise such as limited working capital, short-term project basis, as well as the limited facilities. While the external problems such as lack of government regulation, rapidly changing technology, and weakly in upstream industry. The phenomenon was very interesting to be analyzed and tried looking for its solution by preparing a formulation of competitive strategies using the Ansoff matrix is illustrated in Fig. 1. and [1]. The other strategy applied in a competition is through first mover approach.

But, the first step is PT. LEN Industri must need to ensure success through product and market penetration in the ever-evolving. Finally, the concerning is, how the competitive strategies of PT. LEN Industri starts moving from the product development and then the entrance to the market development.

A. PT. LEN Industri Profile

PT. LEN Industri is a manufacturing company engage in Engineering, Procurement and Construction (EPC). As the one of the State-Owned Enterprises (BUMN+), where 100 percent shareholding owned by the State, PT. LEN Industri is always associated in doing business with the government through the state budget. There are 6 lines of business that were developed, such as broadcasting, ICT, railway signaling system, aviation, renewable energy and defense electronics.

For further information about this company, might be viewed on the website: www.len.co.id and for sales achievement during the last 5 years can be referred to Fig. 2. The number of employees by about 600 people, deployed in three subsidiaries, namely PT. Eltrans (trading), PT. SEI (EPC in renewable energy) and PT. LRS (EPC in railway signaling system).

II. LITERATURE REVIEW

The phenomenon explanation in the background, falls into two groups of literature reviews. One deals with the strategy of product and market competition, a second with the winning strategies: first mover.

A. The Strategy of Product and Market Competition

Knowing the clients' needs is the key to success in product development projects [2]. Market development is based on the function of the product development and the balance in various types of needs, the market raising with improved technology, and implement the plan. A significant change in market development and technological development is a step change in new product development [3]. To overcome the technique required rapid in innovation (improvisation). It takes the strength of a brand [4]. Weak competition by domestic firms is an excellent opportunity for multinational companies to enter it. The poor infrastructure condition and distribution hitch (the supply chain) will weaken the competition as well. 3 types of the competing possibilities, namely: to survive, thrive, or go bankrupt [5]. The winning strategy is analysis of the data, analyzing the history of its development, the analysis of comparison, do indication of priorities, targets, or a combination thereof. Do effective competitive strategies that rely on innovation capabilities of product development, the direction of the company needs, and the capability to operate the company's investment in the competition [6].

In this research, the competitive strategy concept used by PT. LEN Industri is, to combine the results of the above throughout the literature review, such as analyzing the internal and external conditions, to analyze all the possible risks, and pay attention to the development of macroeconomic conditions in Indonesia. Therefore, PT.

LEN Industri plans to support product development through the establishment of infrastructure and business systems in the production of renewable energy, do repositioning and transformation in order to obtain a performance improvement and growth in new market development (AEC, APEC or even WTO).

The internal condition consists of two dimensions, namely strengths and weaknesses. And for the external conditions consists of two dimensions, e.g. opportunities and threats in Table I.

Here is an operational arrangement of variables, as follows:

TABLE I: THE ANALYSIS OF 6 VARIABLES VALIDITY

Variable	Dimension	Item
Internal	Strength	Implementation of infrastructure development
		Regulatory support
		Source of investment funds
		Synergy between SOEs
	Weakness	The production facilities
		The financial condition
		HR certification
External	Opportunities	Business attractive rate
	Threat	Optimal level of regulation implementation
	Condition	Level of Government dominance
		The rate of technological change
		Upstream industry conditions
Risk	Condition	Current position
		Level of doubt
Macroeconomics	GDP	The value
	Investment	The value
Performance	Revenue	The value
Growth	Position	The value

B. The Winning Strategies for First Mover

Having the capability concept in asymmetry information,

then the company can become a pioneer in the development of existing information [7]. The advantages of this concept are technology leadership, pre-emptions asset, and can make a buyer do the switching cost. Technology affect the value, how do the investment, having market evolution that could affect the market structure, and how the new product can be accepted by regulators [8]. The switching cost is an important tool of a first mover advantage [9]. The framework analysis to assess the effects of financing to investment strategic [10]. Create network size, switching cost, reinvestment in R & D, consumer information asymmetric, spatial preemption, and the manufacturing to determine the preemption capacity [11]. Seeking competitive advantage and response to environmental change [12]. The asymmetric advantage view based on having the resources, capabilities, core capabilities, organization design and configuration capability [13].

TABLE II: THE WINNING STRATEGIES FOR FIRST MOVER

	Asymmetric information	Technology leadership	Switch cost	Regulation
Carow	X	X	X	
Papadelis and Flamos	X	X	X	X
Gomes and Ma ías			X	
Vicente- Lorente			X	X
Shankar	X	X	X	X
Vassolo		X	X	
Miller	X	X		

We conclude that, to perform first mover (see Table II) of a company, need attention in asymmetric information, technology leadership, switches cost and regulation.

III. THE ANALYSIS OF INTERNAL AND EXTERNAL

To achieve success in competitive advantage, needed internal and external environmental analysis.

A. The Analysis of the Company's Internal Conditions

PT. LEN Industri's strength is supported by implementation and participation in infrastructure development, regulations support to the business climate, and source of investment funds, etc. While for the weakness is limitation in working capital, cash flows is tight, and HR certification limited, etc.

B. The Analysis of the Company's External Conditions

The company's opportunity: renewable energy business is an attractive industry (mid-level) with a fairly high business strength. Otherwise, the threat to the company is not optimal implementation of Government regulation, technology changes fast, and weak upstream industry, etc.

IV. COMPETITION STRATEGIES

Usually, corporate leaders are always thinking of how they can improve corporate profits. They tried hard to think of looking for new ideas whatever they can apply in running the business, including the development of new products, opening new markets and business networks, and introduces a reliable marketing strategy. They are also trying to develop new skills, make new policy, and even attempted to engage directly in the new industry. Therefore, a corporate leader should be able to create and choose the best idea to win the business competition. One of the chosen competitive strategy is through the Ansoff matrix analysis in Fig. 2. The Ansoff matrix can describe the current condition of the company and willing to carry around PT. LEN in winning business competition.

The Ansoff matrix was first published in the Harvard Business Review in 1957. As a result, many generations of corporate leaders and market participants get a brilliant idea and simple to acquire the company's growth. This matrix is usually also known as the Product / Market Expansion Grid. This matrix describes the 4 positions (quadrants), how companies can grow, and helping leaders to anticipate the risks that will be encountered.

Viewed from the business perspective, the lowest risk is at the existing products and existing markets. It was reported that the company's position is in the market penetration. However, we can also try via another position with different risks. The main thing to remember is that new markets can be radical, dynamic, and totally different from what we think before. On the other hand, the new products also may have failed in its commercialization. By entering new markets with new products, means we are now in the highest risk position. Thus, diversification position is a position where we have to anticipate the worst possible. On the other hand, if we can win it, then we can be the best company in the industry that was involved. The company will has a benefit and growth supported by new market with a new product. Actually, the fourth positions also elaborated on the investment management concept, the low risk is a low return and the high risk is a high return.

Using that matrix, there are two guidance that need to be considered, as follows:

1) Interpretation of the position in accordance with what we have.

For example, for an accountant is very easy to move from one position to another position. But for a seller, if done these things will have an impact on the loss of customer contact that may make the company better.

2) Do not hesitate to take risks.

If we are dealing with the correct procedure as do the proper research, make contingency plans, build skills

approach, and others, then it will generate big profits despite with the greater risk.

This matrix discussion falls into two groups, one deals with the position analysis and second with the risk analysis.

A. The Position Analysis

The four positions of the Ansoff matrix are: market penetration, product development, market development, and diversification.

1) Market penetration

This position describe that we can sell the same product to the same buyer. The strategies adopted to encourage buyers into buying our product or using it are advertising with the aim to invite more people to buy our products in existing markets; introduce a loyalty scheme; offer price with special promotions; increase sales force activities; or even buy a competitor. That can be done on the already mature market for sales increase purpose.

2) Product development

For this position, we can sell the new products to previous buyers. The following strategies would be proposed, namely: increase the products number by producing different products or new models packing; make coordination between product and service; for the service industry, do not linger long in the market, or improve customer service with good quality and new products.

3) Market development

This position is, for selling the product to potential buyers. Strategies adopted are: target to different market locations, in the domestic market or international market; using the salesperson as an online network or direct sales if we sell directly in the trade; sales target with attention to the characteristics of the buyer, e.g. age group, gender, or demographic existing buyers.

4) Diversification

Compared to the three previous strategies, diversification is the most risky strategy. To enter this position, requires skill and experience in order to achieve sufficient economies of scale, due to we are trying to sell different products or services to different customers. The advantage of this position is, at the time of sluggish business, then we can build a vibrant business to sell new products in new markets.

B. The Risk Analysis

When we have already analyzed the current company position, then the next step is how to handle the risk. If we perform the movement from one position to another, then we must ensure few things, such as: perform an analysis of the transfer had to be careful; build the capability needed to achieve success in the quadrant that would be addressed; by using many sources, can cope with the possible lack of time to think how to sell new products, and learn how to create new markets; from the beginning we have to keep thinking, anything that can make business lacked and if we could not resolve it then we should be reversed.

V. THE ANSOFF MATRIX ANALYSIS AT PT. LEN INDUSTRI

PT. LEN Industri competition strategy in renewable

energy (high technology) business, will be analyzed by using the Ansoff matrix in Fig. 2, which implements the movement started from the product development then enter to market development. After analyzing the condition of the company e.g. internal and external, PT. LEN is more likely to move starts from product development. In this case, the company has done product innovation, manufacturing innovation, and management innovation. The innovations were used to plan the development in renewable energy business. The company's products innovation are grid tied inverter, KWh, and led. The innovations are handled by doing: modernization of facilities/process technology; production management in flexible/lean manufacturing, just in time, and focus on supply chain; and standardized quality.

The innovation in management has already done across organizational lines, namely: revitalization in management system such as board manual, parent-child charter, culture, and roadmap; organization and human resources, directory, competencies, and job description; performance in management such as BSC, human resource management, and talent management; information level in ERP system; and financial management in derivative funding and IFRS.

Indonesia's macroeconomic conditions in Fig. 3 such as GDP growth, support to the investment climate growth, and also directly impact to PT. LEN Industri's strengthen in the product development position.

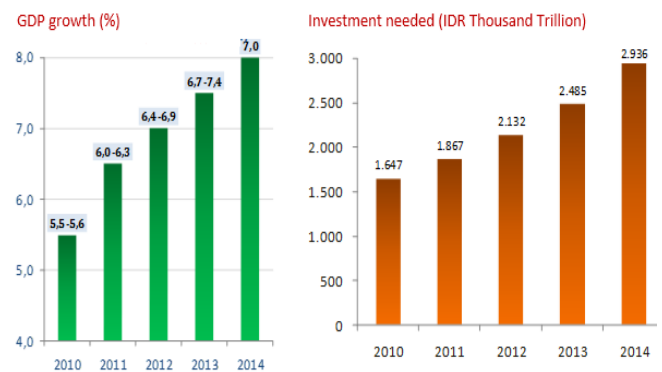


Fig. 3. Indonesia's macroeconomic conditions in 2010-2014.

The performance growth of the PT. LEN Industri in Fig. 4, has been also showed positive movement and will strengthen in the product development position.

PT. LEN Industri is planning to develop renewable energy business by supported the strengthen factors in the product development position, namely: construction of a solar cell plant; increased production capacity gradually solar modules; development of grid connected design products (solar charger controller & bidirectional inverter) independently; and construction of plant led lights.

From the initial movement as the product development position, then PT. LEN Industri will be trying to enter the market development position. In this case, the company has been and will be repositioned and transformation, such as: spin off business; import substitution; integration in upstream; agency; and manufacturing content improvement.

The liquid financial condition supported in Fig. 5, is required to be able to compete in the entered newly markets (the new markets with existing products).



Fig. 4. The performance growth of the PT. LEN Industri in the year 2006-2011.

By improving the weaknesses and constraints of PT. LEN Industri, expected in 2016, will be focused on efforts to strengthen in the positioning as a renewable energy company and increase its sales target composition on the open market in order to obtain high growth performance with optimal NPM, target range at 7% in Fig. 6.

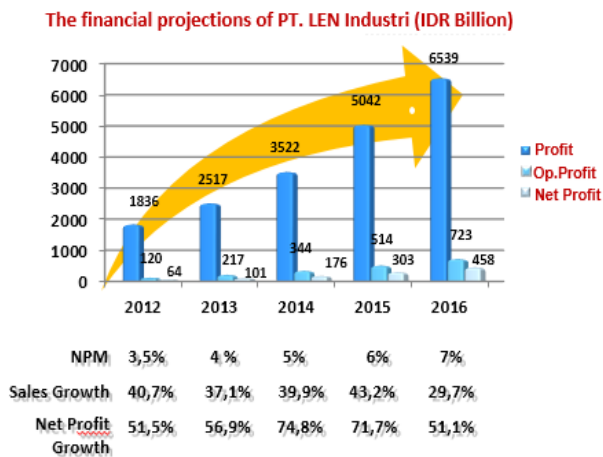


Fig. 5. The financial projections of PT. LEN Industri in 2012-2016.

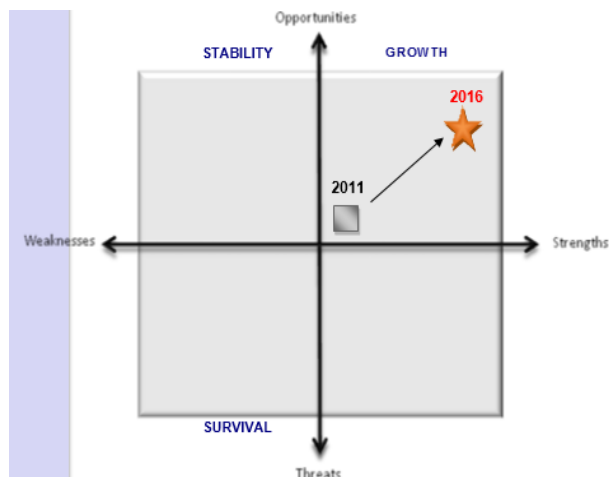


Fig. 6. The strengthen planning of PT. LEN Industri's positioning in the year 2011-2016.

VI. CONCLUSION

We will expect to Indonesia macroeconomic conditions such as: the stability in inflation (e.g. oil prices are not too high), the stability in the exchange rate (e.g. USD/IDR), low interest rate loans (supported by Bank Indonesia), and GDP

growth which underpins the investment climate (especially from direct foreign investment), so that all of them can accelerate progress in the field of renewable energy business climate.

Supported by the Indonesia macroeconomic conditions, and performance in the internal and external company, then PT. LEN Industri is more likely to move, starts from the product development position. Meanwhile, the company has already done the innovation in product manufacturing and management. The innovations were used to plan the renewable energy business development, to produce: grid tied inverter, KWh, and led. The innovations are handled by doing: modernization of facilities/process technology; production management in flexible/lean manufacturing, just in time, and focus on supply chain; and standardized quality.

The winning strategy through the first mover, put PT. LEN Industri's positioning will be the first winner in the open market competition, e.g. AEC. PT. LEN Industri must need the attention in asymmetric information, technology leadership, switching cost and regulation.

Need to the presence of good faith from the department of taxation to reduce the tax that related to renewable energy business (environmental protection / reduction of pollution levels especially of carbon)

Finally, to be one of the winners in the open markets competition, e.g. EAC, APEC, or even WTO, PT. LEN Industri must has the international certify management, plans to go public, and do the best supply chain management system that is backed by a reliable sources of the internal and external company.

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