

## Strategic Sawn Timber Marketing Planning for Timber Forest Co., Ltd.

by

Mr. Opas Apiwanopas

## A Final Report of the Three-Credit Course CE 6998 Project

Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Science in Computer and Engineering Management Assumption University

November 2004

## St. Gabriel's Library, Au

### Strategic Sawn Timber Marketing Planning for Timber Forest Co., Ltd.

by Mr. Opas Apiwanopas

A Final Report of the Three-Credit Course CE 6998 Project

Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Science in Computer and Engineering Management Assumption University

November 2004

Project Title	Strategic Sawn Timber Marketing Planning for Timber Forest Co., Ltd.
Name	Mr. Opas Apiwanopas
Project Advisor	Dr. Chamnong Jungthirapanich
Academic Year	November 2004

The Graduate School of Assumption University has approved this final report of the three-credit course, CE 6998 PROJECT, submitted in partial fulfillment of the requirements for the degree of Master of Science in Computer and Engineering Management.



(Assoc.Prof. Somchai Thayarnyong) CHE Representative

November 2004

#### ABSTRACT

This project presents the import information for sawn timber business of Timber Forest Co., Ltd. It also will provide detailed information of analysis of the marketing system, SWOT analysis and timber market in Thailand.

As the economy grows in rapid change, every company emphasized in increasing the revenue and market share. The company expands the market by offering various benefits for customers. The current market system is no longer supporting the business growth nowadays. There are many problems occurring including the demand and supply, defective quality products, substitute products, illegal sawn timber.

Using market analysis and design methodology for the purpose of replacing the old market develops the new market system. The proposed market can improve the efficiency and effectiveness of the company, related product lines, increasing the market efficiency in decision-making.

In case study, the project presents the marketing strategy and market plan implementation and evaluation for Timber Forest Co., Ltd. As the company has already been in the market with many competitors so the adaptation is supposed to provide customer satisfaction, good relationship with customers to create a win/win business environment.

i

#### ACKNOWLEDGEMENT

This project would not have been completed without the support of many people.

I wish to express my deepest appreciation to my advisor; Dr.Chamnong Jungthirapanich, for his consistent support, guidance, advice, encouragement, constructive criticism; especially for very reasonable explanation as well as patience throughout this research.

I also would like to express my special thanks to Mr.Chai Thiam Yin, Sanhupchoon Sawmill Sdn. Bhd. and Mr.Wong Siew Lok, Grand Atlantic Timber Sdn., Bhd. for their generous contributions to the study.

Finally, I wish to express my gratitude to my beloved parents and every body in my family who has always loved, supported, and encouraged me to successfully complete this project.

## TABLE OF CONTENTS

<u>Cha</u>	pter		Page
ABS	STRA	СТ	
AC	KNOV	VLEDGEMENT	ii
LIST	<b>FOF</b>	FIGURES	vi
LIST	ΓOF	TABLES	viii
I.	INT	RODUCTIONS	1
	1.1	Overview	1
	1.2	Background of the Project	2
	1.3	Background of the Company	2
	1.4	Research Objective	3
	1.5	Scope of the Project	3
II.	LITI	ERATURE REVIEW	4
	2.1	The Market Concept and Market Orientation	7
	2.2	Market Orientation	8
	2.3	New Strategies for Changing Environments	11
	2.4	Market Fundamental	12
	2.5	SWOT Analysis	21
	2.6	Strategic Formulation	25
	2.7	Planning Marketing Program	27
	2.8	The Common Knowledge Base of Sawn Timber	33
III.	RES	SEARCH METHODOLOGY	37
	3.1	Industry's Major Challenge	37
	3.2	Background of the Company	42
	3.3	Summary of the Existing Product System	43

Cha	pter	Page
	3.4 Problem of Company	46
	3.5 Price Policy	48
	3.6 Distribution Policy	49
IV.	ANALYSIS OF THE MARKETING SYSTEM	50
	4.1 Executive Summary	50
	4.2 Current Marketing Situation	51
	4.3 The Market Trend of the Sawn Timber use in Property Business	56
	4.4 Competitive Situation	57
	4.5 Opportunity and Issue Analysis	59
	4.6 SWOT Analysis	60
	4.7 Strategic Formulation	62
	4.8 Marketing Strategy	64
V.	THE PROPOSED MARKETING PLAN	70
	5.1 Objectives of the Marketing Plan	70
	5.2 Marketing Strategic Planning	70
VI.	MARKETING PLAN IMPLEMENTATION AND EVALUATION	76
	6.1 Action Plan Program	76
	6.2 Marketing Plan Control	79
	6.3 Evaluation	80
	6.4 New Related Products	81
VII.	CONCLUSION AND RECOMMENDATION	83
	7.1 Conclusion	83
	7.2 Recommendation	84
APP	ENDIX A EXPORTATION OF SAWN TIMBER BY SARAWAK	86

## BIBLOGRAPHY

Page

100



## LIST OF FIGURES

Figure	-	Page
2.1	Mutually Beneficial Exchanges	8
2.2	A Model of Market Orientation	9
2.3	Product and Process Improvement	16
2.4	The Role of Marketing in Leading Strategic Management	19
2.5	Assessment of Corporate Capabilities	30
4.1	Exchange Rate US\$ VS THAI BAHT	52
4.2	Different Resident	53
4.3	Credit Loan from Bank	54
4.4	The Percentage of Major Raw Material Raising Price	55
4.5	The Percentage in Market Share in 2003	59
4.6	Position of Company in Market	65
5.1	Customers Image The Importers	73
5.2	Organization Chart	74
6.1	Government Revenue and Expense	80
A.1	Export of Sawn Timber by Sarawak by 1994	87
A.2	Export of Sawn Timber by Sarawak by 1995	88
A.3	Export of Sawn Timber by Sarawak by 1996	89
A.4	Export of Sawn Timber by Sarawak by 1997	90
A.5	Export of Sawn Timber by Sarawak by 1998	91
A.6	Export of Sawn Timber by Sarawak by 1999	92
A.7	Export of Sawn Timber by Sarawak by 2000	93
A.8	Export of Sawn Timber by Sarawak by 2001	94
A.9	Export of Sawn Timber by Sarawak by 2002	95

Figure	Page
A.10 Export of Sawn Timber by Sarawak by 2003	96
A.11 Export of Major Timber Products by Sarawak by 1994	97
A.12 Export of Major Timber Products by Sarawak by 1995	97
A.13 Export of Major Timber Products by Sarawak by 1996	97
A.14 Export of Major Timber Products by Sarawak by 1997	98
A.15 Export of Major Timber Products by Sarawak by 1998	98
A.16 Export of Major Timber Products by Sarawak by 1999	98
A.17 Export of Major Timber Products by Sarawak by 2000	99
A.18 Export of Major Timber Products by Sarawak by 2001	99
A.19 Export of Major Timber Products by Sarawak by 2002	99
A.20 Export of Major Timber Products by Sarawak by 2003	100

## LIST OF TABLES

Table		Page
2.1	Checklist for Performing Strength/Weakness Analysis	23
2.2	The 4Ps and 4Cs	28
4.1	Exchange Rate US\$ VS THAI BAHT	51
4.2	Credit Loan from Commercial Bank	54
4.3	The Percentage of Major Raw Material Raising Price	55
4.4	The Percentage in Market Share in 2003	59



#### I. INTRODUCTION

#### 1.1 Overview

Thailand is the world's largest importer of tropical Sawntimber, mostly from the Sarawak Malaysia. The level of importers has been increasing slightly over recent years. Sarawak shipped 268,764 M3 of Sawntimber to Thailand in 2002 and this had increased to 316,221 M3 in 2003 mainly as a result of the economic boom in Thailand. During the year 2000s timber industry competition has intensified as firms have sought to create competitive advantage in even more crowded markets and with increasingly demanding customers.

The market trends about Sawntimber to be discussed should be of great interest among the substitute products such as steel, plywood, fiber cement, etc. Think of Sawn Timber Business and you should think of construction. The users are land developer, labor camp, retail sawn timber shop, local people, etc.

A good market definition will also link several related parties, such as suppliers, customers, or competitors and make them understand what business can offer. For example a "Timber business" means picking up the sawn timber with less or without defective materials. The most important element for any type of business is to create an impression on the customers so they can refer the products or service to others. In order to manage ordering, procuring and storing raw material, as well as collecting relevant information including the origin of the products, production, and distribution system. All of these processes aim at creating customer satisfaction, increasing profit and lowering costs.

Ordering quality products at reasonable prices from reliable suppliers is an important step in running the timber business. Every detail of this process, such as choosing the right supplier, placing orders and getting goods delivered on time, if the set up is carefully done, it can help save time and transaction costs. Managing the storage is as crucial as placing new orders. The company must be quick in responding to customer's needs. Minimal storage is less cost for the business. Deciding on the type and quantity of products to be transported can help prevent redundancy. The company must have clear strategy of planning on the transportation route and delivery companies

#### **1.2 Background of the project**

Since the year 1997, there had been an economic crisis in Thailand. Consumer's purchasing power decreased; many people went out of business and retired from their jobs. Many investors lacked the money to expand their business and many land developers went bankrupt because of lack of cash flow, having financial problems and more debts to be responsible for.

According to the government policy to stimulate the economy by setting the funds to help the local people. The construction will also get the benefit from this policy because the bank starts to give housing loans and personal loans to local people to buy the new house. It made more cash flow in the construction market. We have to make market plans in order to take advantages over competitors.

## 1.3 Background of the Company

Timber Forest Co., Ltd. was established in 1975, in Bangkok, Thailand. The company's business is to import the sawn timber from Sarawak, Malaysia wholesale into Thailand. From the beginning, the main raw material source is from Laos, Cambodia, and Malaysia. Then the company stopped in Laos and Cambodia due to the political instability.

The company is in the trading business, which focuses on the sawn timber for construction such as Selangan Batu, Kapur, Keruing, Mixed light hardwood, Alan Batu, etc. The product emphasize on the quality, effective use with more or less defective products. Because the sawn timber is the natural source, the supply is unstable and quality is hard to control and there are no brand names on the products except the brand image on the company name. So the company needs to build a brand differentiating from the other competitors in the market by the better service and adding value to the product which influences the customers in making a decision in buying the company products.

#### **1.4 Research Objectives**

When I start my project in Sawn timber in the Thai Market from Sarawak Malaysia, the important problem that I found is lack of information about Sawn Timber business and the movement of Sawn Timber trends in Thailand so I selected this topic to be my project. The objectives of this project are:

- (1) To provide the knowledge on Sawn Timber Quality.
- (2) To perform the SWOT analysis on the Timber Market in Thailand.
- (3) To formulate strategies and the marketing plan.

#### **1.5 Scope of the project**

This project emphasizes on the marketing planning for Sawn Timber products.

#### **II. LITERATURE REVIEW**

To understand marketing management, we must understand strategic management, we need to recognize the marketing concept, market orientation, the changing market environment, technology change, market change, impact of change, new strategies for changing environments

The successful organization of the future will be customer focused, not product or technology focused, supported by a market information competence that links the voice of the customer to al the firm's value-delivery processes. Successful marketing organizations will have the skills necessary to manage multiple strategic marketing processes. (Frederick E. Webster (1997))

In looking at how we will be doing business in the new era, there is some debate about whether marketing, as an approach to business and as a business function, has come of age, has reached maturity or is in decline. While a decade ago marketing was misunderstood by senior managers and typically thought to be just a new name for selling and advertising, today most senior managers could offer passably accurate "Market-Oriented" (Graham J. Hooley (1998)). Marketing has successfully "Migrated" from being a functional discipline to being a concept of how business should be run.

Doyle (1997) said that relatively few companies have succeeded in moving beyond the marketing trappings of advertising, short-term sales growth and flamboyant innovation to achieve the substance of a robust marketing strategy that produces longterm performance and strong shareholder value. Doyle distinguish between:

Radical Strategies: Companies may achieve spectacular growth in sales and profits, but because they do not build customer value through superior products and services, they do not create long-term shareholder value. Characteristics of such strategies are that they are acquisition-based or they are marketing department-based, or they are public relations-based.

Rational Strategies: Some achieve high short-term performance by creating new products which are significantly superior or cheaper than traditional competitors. Examples of such strategies are major innovations in technology, marketing methods or distribution channels. Their weakness is these strategies offer no defensible, sustainable competitive advantage. They do not build long-term customer relationships, and ultimately fail to produce long-term shareholder value.

Robust strategies: These companies achieve steady performance over the longterm by creating superior customer value and building long-term customer relationships. Characteristics of these strategies are: focus on superior customer value but recognizing that on its own can offer long-term advantage; making long-term investments in relationships with suppliers, distributors, employees and customers; processes of continuous learning, innovation and improvement; and developing effective supplychains and information technology to deliver superior operating performance.

The implication is that the real challenge facing companies as they move into the twenty-first century is to move past mere lip-service to "marketing" and to get the grips with what is required to achieve a sustainable, long-term competitive position in the marketplace, which will yield profit and shareholder value. Meeting this challenge may or may not involve a marketing department. It will certainly involve developing a marketing strategy that is based on a profound understanding of the marketplace to define a competitive position that is defensible, and that is supported by a continuous process of learning and improvement in customer value. It will certainly involve competing against new benchmarks of superior service and relationship building. It will

certainly involve the successful management of implementation of marketing strategy, and all that this implies for organization change. (Piercy 1997)

Indeed, our understanding of the fundamentals of marketing in increasingly enhanced by looking at marketing as "the process of going to market" (Piercy 1997), rather than a functional; or departmental activity in companies, and as process which is driven by value-creation for customers. Webster (1997), for example, proposes that marketing should be thought of as the design and management of all the business processes necessary to define, develop and deliver value to customers. Below is the list of marketing processes would include the following:

Value-defining processes: processes that enable the organization to understand the environment in which it operates better (such as market research, studies of customer needs and preferences, buying behavior, product use, and so on), to understand its own resources and capabilities more clearly, to determine its own position in the overall value chain, and to assess the value it creates through economic analysis of customer use systems.

Value-developing processes: processes that create value throughout the value chain, such as procurement strategy, new product and service department, design of distribution channels, vendor selection, strategic partnership with service providers, pricing strategy development and, ultimately, the development of the value position for customers.

Value-delivering processes: processes that enable the delivery of value to customers including service delivery, customer relationship management, management of distribution and logistics, communications processes, product and service enhancement, customer support services, and the deployment of the field sales force.

6

#### 2.1 The marketing concept and market orientation

The marketing concept holds that achieving organizational goals depends on determining the needs and wants of target markets and delivering the desired satisfactions more effectively and efficiently than competitors do. (Kotler 1996)

At its simplest, it is generally understood that the marketing concept holds that, in increasingly dynamic and competitive markets, the companies or organizations that are most likely to succeed are those that take notice of customer expectations, wants and needs and gear themselves to satisfying them better than their competitors. It recognizes that there is no reason why customers should buy one organization's offerings unless they are in some way better at serving their wants and needs than those offered by competing organizations.

Webster (1997) points out that of all the management functions, marketing has the most difficulty in defining its position in the organization, because it is simultaneously culture, strategy and tactics. Webster's argument is that marketing involves:

Organizational culture: Marketing may be expressed as the marketing concept, i.e. a set of values and beliefs that drives the organization through a fundamental commitment to serving customers' needs as the path to sustained profitability.

Strategy: As strategy marketing seeks to develop effective responses to changing market environments by defining market segments, and developing and positioning product offerings for those target markets.

Tactics: Marketing as tactics is concerned with the day-to-day activities of product management, pricing, distribution and marketing communications, such as advertising, personal selling, publicity and sales promotion.

7

The challenge of simultaneously building a customer orientation in an organization (culture), developing value propositions and competitive positioning (strategy) and developing detailed marketing action plans (tactics) is massive and complex. It is perhaps unsurprising that the organizational reality of marketing often falls short of these demands.

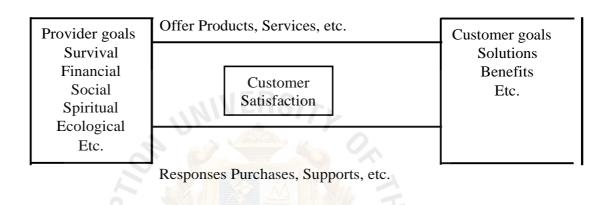


Figure 2.1. Mutually beneficial exchanges.

#### 2.2 Market Orientation

Market orientation entails

(1) One or more departments engaging in activities geared toward developing and

understanding of customers' current and future needs and the factors affecting them.

(2) Sharing of this understanding across departments

(3) The various departments engaging in activities designed to meet select

customer needs

(4) The market orientation refers to the organization-wide generation,

dissemination, and responsiveness to market intelligence (Graham J. Hooley 1998)

The components of market orientation as:

(1) Customer orientation: understanding customers well enough continuously to create superior value for them

(2) Competitor orientation: awareness of the short-term and long-term capabilities of competitors.

(3) Interfunctional co-ordination: using all company resources to create value for target customers.

(4) Organizational culture: linking employee and managerial behavior to customer satisfaction.

(5) Long-term profit focus: as the overriding business objective.

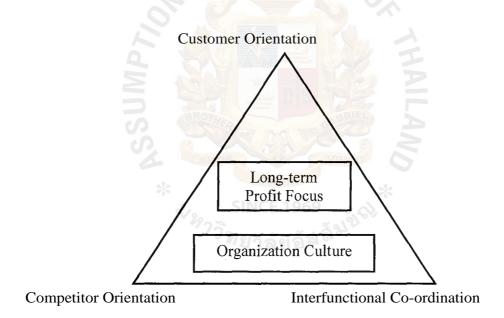


Figure 2.2. A model of Market Orientation.

However, what has also been suggested is that there may be substantial barriers to achieving market orientation (Harris 1998), and the reality may be that executives face the problem of creating and driving marketing strategy in situations where the company is simply mot market-oriented in any real way. This is probably the heart of the implementation problem in marketing.

An interesting attempt to "reinvent" the marketing concept for a new era of different organizational structures, complex relationships and globalization, which may be relevant to overcoming the barriers to market orientation, is made by Frederick Webster (1994). Webster presents "the new marketing concept as a set of guidelines for creating a customer-focused, market-driven organization" and develops fifteen ideas which weave the "fabric of the new marketing concept"

- (1) Create customer focus throughout the business.
- (2) Listen to the customer.
- (3) Define and nurture the organization's distinct competencies.
- (4) Define marketing as market intelligence.
- (5) Target customers precisely.
- (6) Manage for profitability, not sales volume.
- (7) Make customer value the guiding star.
- (8) Let the customer define loyalty.
- (9) Measure and manage customer expectations.
- (10) Build customer relationships and loyalty.
- (11) Define the business as a service business.
- (12) Commit to continuous improvement and innovation.
- (13) Manage culture along with strategy and structure.
- (14) Grow with partners and alliances.
- (15) Destroy marketing bureaucracy.

## Gabriers Library, Au

#### 2.3 New Strategies for changing environments

2959 •('=\_,

However, to suggest that firms need to develop new strategies as times change may not go far enough. The problem may not just be that we need to develop new strategies, but that we have to develop wholly new approaches to strategy. For example, at the 1997 Academy of marketing science conference, two leading marketing thinkers spoke of the trends in strategic development, which they believe, have to be confronted.

Jagdish Sheth challenged conventional marketing thinking along the following lines"

Global positioning: Sheth urges strategies to think about globalization and a focus on core competencies, instead of thinking about the domestic market and approach to delivering shareholder value.

The master brand: Sheth argues that the strength comes from a brand identity that links all parts of the business-this is the fundamental strength of Toyota and Honda compared to the dozens of brands operated by General Motors.

The integrated enterprise and end-user focus: the challenge of managing people, processes and infrastructure to deliver value to an end-user.

Best-in-class processes: customers do not, for example, compare an airline's service just to that of other airlines; the new standards for the airline to meet come from service excellence at companies like Federal Express and Marriott hotels-the challenge is to meet world-class standards from wherever they come.

Mass customization: the imperative is to achieve scale economics, but at the same time to produce a product or service tailored to the individual customer's requirements.

Breakthrough technology: new technology will underpin every aspect of the marketing process, even the product itself, in ways, which may seem outlandish.

#### **2.4 Marketing Fundamental**

Principle 1: The customer is the center of everything

A first principle of marketing, which emerges from our comments throughout, goes back to the marketing concept itself. This recognizes that the long-run objectives of the organization, be they financial or social, are the best served by achieving a high degree of customer focus. From that recognition flows the need for a close investigation of customer wants and needs, followed by a clear definition of how the company can best serve them. (Graham J. Hooley 1998)

It also follows that the only arbiters of how well the organization satisfies its customers are the customers themselves. The customers on the basic will judge the quantity of the goods or service offered to the market of how well their requirement are satisfied. A quality product or service, from the customers' perspective, is one that satisfies or is "fit for purpose" rather than one that provides unrequired luxury.

As Levitt (1986) demonstrates, adopting a market led approach poses some very basic questions. The most important include:

- (1) What business are we in?
- (2) What business could we in?
- (3) What business do we want to be in?
- (4) What must we do to get into or consolidate in that business?

Principle 2: Customers do not buy the products

The second basic marketing principle is that customers do not buy products. Customers are less interested in the technical features of a product or service than in what benefits they get from buying, using or consuming the product or service. One trend in marketing in the grocery business is category management. Retailers are attempting to define categories around customer needs, not manufactures' brands. For example, one common category is "Meal replacement" the challenge to manufactures is to prove the retailer with what their products and brands add to the value of the category. Putting category definition at its simplest.

The manufacture makes Potato crisps

The retailer merchandizes Salty snakes

The customer buys Lunch!

Looking at a market from the customer's perspective may suggest a very different view of market opportunities and the trend to our competitive position. It is critical that marketers view products and services as "Bundles of benefits" or a combination of attractions that all give something of value to the customer.

One mission for the marketing executive is to ensure that the organization should gear itself to solving customers' problems, rather than exclusively promote its own current solutions.

Principle 3:Marketing is too important to leave to the marketing department

It is increasingly the case that marketing is everyone's job in the organization. The actions of all can have an impact on the final customers and the satisfaction the customer devices.

King (1995) has pointed to a number of misconceptions as to what marketing is. One of the most insidious misconceptions he terms "marketing department marketing" where an organization employs marketing professionals who may be very good at analyzing marketing data and calculating market shares to three decimal points, but who have very little real impact on the products and services the organization offers to its customers. The marketing department is seen as the only department where "marketing is done" so that the other department can get on with their own agenda and pursue their own goals.

As organizations become flatter, reducing layers of bureaucracy, and continue to break down the spurious functional barriers between departments, so it becomes increasingly obvious that marketing is the job of everyone. It is equally obvious that marketing is so central to both survival and prosperity that it is far too important to leave only to marketing department.

However, it is clear that we must avoid simply stating that marketing is "everyone's job" and leaving it at that. If marketing is "everyone's job", it may become "no one's job" (Stephen Greyser 1997) points to the need for simultaneous upgrading of market orientation and downsizing of the formal marketing function, as two sides of the same issue:

While the marketing function belongs to the marketing department, becoming and being marketing-minded is everybody's job. What happens when everybody is doing that job? As companies have become more marketing-minded, there have been substantial reductions in the formal "marketing departments" which do marketing. In short, a corollary of the trend to better organizational thinking about marketing is the dispersion of the activity of marketing.

Principle 4: Markets are heterogeneous

It is becoming increasingly evident that most markets are not homogeneous, but is made up of different individual customers, sub-markets or segments. While some customers, for example, may buy a car for cheap transport from A to B, others may buy for comfortable travel, or safe travel, and still others may buy for status reasons or to satisfy and project their self-image. Products and services that attempt to satisfy a

14

segmented market through a standardized product almost invariably fall between two or more stools and become vulnerable to more clearly targeted competitors.

Principle 5: Market and customers are constantly changing

It is a truism to say that the only constant is change. Markets are dynamic and virtually all products have a limited life, which expires when a new or better way of satisfying the underlying want or need is found; in other words, until another solution or benefit provider comes along.

The fate of the slide rule, and before that logarithmic tables, at the hands of the pocket calculator is a classic example where the problem (the need for rapid and easy calculation) was better solved through a newer technology. The benefits offered by calculators far outstripped the slide rule in speed and ease of use.

This recognition that products are not omnipotent, that they follow a product life cycle (PLC) pattern of introduction, growth, maturity and decline, has led companies to look and plan more long term; to ensure that when the current breadwinners die there are new products in the company's portfolio to take their place. The development of products portfolio planning has been one of the most far-reaching contributions of marketing to strategic management in recent years.

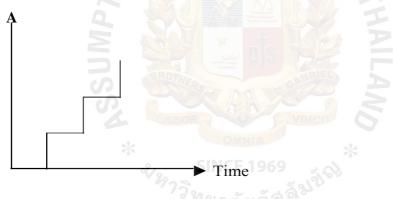
There are two main processes of improvement. The first is through innovation where a relatively large step is taken at one point in time. The advent of the pocket calculator was a significant innovation, which virtually wiped out the slide rule industry overnight. Other step changes in technology such as the advent of color television and the compact disc have served to change whole industries in a similarly short period of time.

The second approach to improvement is a more continuous process whereby smaller changes are made but on an insistent basis. This approach has been identified by a number of writers (Imai, 1986) as a major contributor to the success of Japanese businesses in world markets since the early 1950s. The Japanese call continuous improvement Kaizen and see it as an integral part of business life. Increasingly, organizations are attempting to marry the benefits of step change innovation with continuous improvement.

The impact of technological change has been felt most, perhaps, in the computer industry. It is sometimes hard to remember that computers were invented after the Second World War because they are now such a pervasive part of both business and home life. (Toffler 1981)

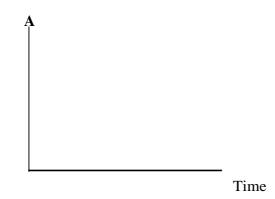
(A) Innovation

Improvement



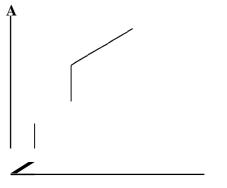
(B) Kaizen

Improvement



(C) Innovation and Kaizen

#### Improvement



Time

Figure 2.3. Product and process improvement.

The role of marketing in leading strategic management

In order for strategic management to cope with the changing marketing environment there is a need for it to become increasingly market-led.

(1) Identification of customer requirements

The first critical task of marketing is to identify the requirements of customers and to communicate them effectively throughout the organization. This involves conducting or commissioning relevant customer research to uncover first, who the customers are, and second, what will give them satisfaction.

Who the customers are is not always obvious. In some circumstances buyers may be different from users or consumers; specifiers and influencers may also be different. Where services are funded, for example, by central government is the suppliers may be forgiven for the view that government is their customer.

Customers may expect a degree of benefit from purchasing or using a product or service. They may actually want something more, but believe they have to settle for second best because of budget or other constraints. The organization that can give

## St. Gabriel's Library, Au

customers something closer to what they want than what they expect has an opportunity to go beyond customer satisfaction and create "Customer delight"

Customer expectations, wants and needs must all be understood and clearly communicated to those responsible for designing the product or service, those responsible for creating or producing it, and those responsible for delivering it.

(2) Deciding on the competitive positioning to be adopted

Recognizing that markets are heterogeneous and typically made up of various market segments each having different requirements from essentially similar offerings leads to the need to decide clearly which target market or markets the organization will seek to serve.

That decision is made on the basic of two mains sets of factors. First, how attractive the alternative potential targets are. Second, how well the company can hope to serve each potential target relative to the competition. In other words, the relative strengths or competencies it can bring into play in serving the market.

(3) Implementing the market strategy

The third key task of marketing is to marshal all the relevant organizational resources to plan and execute the delivery of customer satisfaction. This involves ensuring that all members of the organization are co-ordinate in their efforts to satisfy customers, and that no actual or potential gaps exist between offer design, production and delivery.

In the field of service marketing there has been a great deal of work aimed at identifying the factors that can create gaps in the process from design through to delivery of offer to customers (Parasuraman, Zeithaml and Berry (1985), for example, have studied each of the potential gaps and concluded that a central role of marketing is guide to design so as to minimize the gaps and hence help to ensure customer satisfaction through the delivery of high quality services.

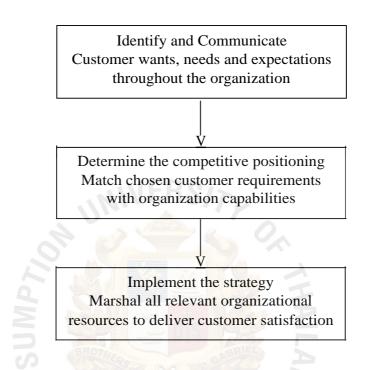


Figure 2.4. The role of marketing in leading strategic management.

To understand marketing management, we must understand strategic planning and to understand strategic planning. We need to recognize that most large companies consist of organization levels: Corporate level, Division level, Business level and Product level. Corporate headquarter is responsible for designing a corporate strategic plan to guide the whole enterprise into a profitable future; it makes decisions on how much resource support to allocate to each division, as well as which businesses to start or eliminate. Each division establishes a division plan covering the allocation of funds to each business unit within the division. Each business unit develops a business unit strategic plan to carry that business unit into a profitable future. Finally, each product level (product line, brand) within a business unit develops a marketing plan for achieving its objectives in its product market.

The marketing plan operates at two levels. The strategic marketing plan develops the broad marketing objectives and strategy based on an analysis of the current market situation and opportunities. The tactical marketing plan outline specific marketing tactics, including advertising, merchandising pricing, channels, service, and so on. (Philip Kotler, 1996)

The marketing plan is the central instrument for directing and coordinating the marketing effort. In today's organization the marketing department does not set the marketing plan by itself. Rather, teams, with inputs and signoffs from every important function, develop today's plans. These plans are then implemented at the appropriate levels of the organization. Results are monitored, and corrective actions are taken when necessary.

The starting point in formulating strategy is usually SWOT analysis. SWOT is an acronym that stands for strengths, weakness, opportunities and threats. SWOT analysis is careful evaluation of an organization's internal strengths and weakness as well as its environmental opportunities and threats. In SWOT analysis, the best strategies accomplish an organization's mission by:

- (a) Exploiting an organization's opportunities and strengths
- (b) Neutralizing its threats
- (c) Avoiding or correcting its weakness

#### SWOT analysis

#### (1) Evaluating an organization's strengths

Organization strengths are skill and capabilities that enable an organization to conceive of and implement its strategies. Sears, for the case study, already has a network of trained service personal in place across the country for repairing Sears's appliances. Jane Thompson, a Sears executive, recently conceived of a plan to consolidate repair and home-improvement services nationwide under the well-known Sears brand name and to promote it as a general repair operation for all appliances, not just those purchased from Sears. Thus, the firm is capitalizing on existing capabilities and the strength of its name to lunch a new operation. Different strategies call on different skills and capabilities. Another case study, Matsushita Electric has demonstrated strengths in manufacturing and selling consumer electronics under the brand name Panasonic. Matsushita's strength in electronics does not ensure success, however, if the firm expands into insurance, swimming pool manufacture, or retail. Different strategies such as these require different organizational strengths.

(2) Evaluating an organization's weakness

Organizational weakness is skills and capabilities that do not enable an organization to choose and implement strategies that support its mission. An organization has essentially two ways of addressing weakness. First, it may need to make investments to obtain the strengths required to implement strategies that support its mission. Second, the organization may need to modify its mission so that it can be accomplished with the skills and capabilities that the organization already possesses.

In practices, organizations have a difficult time focusing on weakness, in part because organization members are often reluctant to admit that they do not possess all the skills and capabilities needed. Evaluating weakness also calls into question the judgment of managers who choose the organization's mission in the first place and who failed to invest in the skills capabilities needed to accomplish it.

Organizations that fail either to recognize or overcome their weakness are likely to suffer from competitive disadvantage when it is not implementing valuable strategies that are being implemented by completing organizations. Organizations with a competitive disadvantage can expect to attain below-average levels of performance. (3) Evaluating an organization's opportunity and threats

Whereas evaluating strengths and weakness focuses attention on the internal working of an organization, evaluating opportunities and threats requires analyzing an organization's environment. Organizational opportunities are areas that may generate higher performance. Organization threats are areas that increase the difficulty of an organization's performing at a high level. Porter's five forces model of the competitive environment can be used to characterize the extent of opportunity and threat in organization's environment.

Recall that Porter's five forces are level of rivalry, power of supplies, power of customers, threat of substitutes, and threat of new entrants. In general, when the level of rivalry, the power of suppliers and customers, and the threat of substitutes and new entrants are all high, an industry has relatively few opportunities and numerous threats. Firms in these types of industries typically have the potential to achieve only normal economic performance. On the other hand, when the level of rivalry, the power of suppliers and customers, and the threat of substitutes are all low, then an industry has numerous opportunities and relative few threats. The potential for above normal performance exists for organizations within these industries.

# Table 2.1.Checklist for performing Strengths/Weakness analysis (See Hoon Ang, 1996).

#### Performance

- Marketing
- 1.Company reputation
- 2.Market share
- 3.Product quality
- 4.Service quality
- 5.Pricing effective
- 6.Distribution effectiveness
- 7. Promotion effective
- 8.Sales force effectiveness
- 9.Innovation effectiveness
- 10.Geographical coverage
- Finance
- 11.Cost/availability of capital
- 12.Cash flow
- 13.Financial stability
- Manufacturing
- 14.Facilities
- 15.Economic of scale
- 16.Capacity
- 17. Able dedicated workforce
- 18. Ability to produce on time
- 19.Technical manufacturing skill
- Organization
- 20. Visionary capable leadership
- 21.Dedicated employee

			1	
	1	5	3	
				1
	1			1
	1	1	1	1
	4		1	
	1			
1				
	1			
		1		
	1			
	1	1		5
	1			
		1		
		1		
	1			
	1	1		1
	I			
	1			
	1			
	1			1
	•			t
	1	1		1
	1	1		1
	1	1		1
	E Contraction of the second se	1		1
		1		
	1			
	1	l i		
				1
		1 · · · · · · · · · · · · · · · · · · ·		1
		1		
		1		
		•		1
				1
		l i		1
	· · · · · · · · · · · · · · · · · · ·			
11/1/1-10/1-10/10/10/10/10/10/10/10/10/10/10/10/10/1				
				1
		1		1
				1
		. T		
		P		1
				1
and a second sec				1
A REAL PROPERTY AND A REAL				
A DECEMBER OF A				
the second se				
				)
				1
The second secon				
and an and a second sec				
Allowed Table (1997)				
and the second se				

	2910	 	
ยาลัยอัต	1.61		
		 _	

				1
1	l			1
4		1	1	1
		1	ł	
			Ì	
			ľ	
1				

## Major S Minor W Neutral Minor S Major W

Table 2.1. Checklist for performing Str (Continued)	rengths/Weakness analysis (See Hoon Ang, 1996)
22.Entrepreneurial orientation	
23.Flexible/responsive	
S = Strength, W = Weakness	
Importance	
Marketing	
1.Company reputation	
2.Market share	
3.Product quality	Do
4.Service quality	ns <sub>17</sub>
5.Pricing effective	
6.Distribution effectiveness	
7.Promotion effective	<u> </u>
8.S ales force effectiveness	
9.Innovation effectiveness	
10.Geographical coverage	
Finance	
11.Cost/availability of capital	1969
12.Cash flow	ัยอัส <sup>ิส</sup>
13.Financial stability	
Manufacturing	
14.Facilities	
15.Economic of scale	
16.Capacity	
17.Able dedicated workforce	
18. Ability to produce on time	
19.Technical manufacturing skill	
Organization	
20. Visionary capable leadership	

1996).

#### Table 2.1. Checklist for performing Strengths/Weakness analysis (See Hoon Ang, 1996). (Continued)

- 21.Dedicated employee
- 22.Entrepreneurial orientation
- 23.Flexible/responsive

#### Strategic Formulation

Goals indicate what a business unit wants to achieve; strategy is a plan for how to get there. Every business must tailor strategy for achieving its goals. Although many types of strategies are available, Michael Porter has condensed them into three generic types that provide a good starting point for strategic thinking:

(1) Overall cost leadership

Here the business works hard to achieve the lowest production and distribution costs, so that it can price lower than its competitors and win a large market share. Firm pursuing this strategy must be good at engineering, purchasing, manufacturing, and physical distribution. They need less skill in marketing. Texas Instrument is a leading practitioner of this strategy. The problem with this strategy is that other firms usually emerge with still lower cost, and hurt the firm that rested its whole future on being low cost. The real key is for the firm to achieve the lowest costs among those competitors adopting a similar differentiation or focus strategy.

(2) Differentiation

Here the business concentrates on achieving superior performance in an important customer benefit area valued by a large part of the market. It can strive to be the service leader, the quality leader, the style leader, the technology leader, and so on, but it is not possible to be all of these things. The firm cultivates those strengths that will give it a competitive advantage in one or more benefits. Thus the firm seeking quality leadership

# I. Gabriel's Library. Au

must make or buy the best components, put them together expertly, inspect them carefully, and so on. This has been Canon's strategy in the copy machine field.

(3) Focus

Here the business focuses on one or more narrow market segments rather than going after a large market. The firm gets to know these segments. Armstrong Rubber has specialized in making superior tires for farm equipment vehicles and recreational vehicles and keeps looking for new niches to serve.

Companies are also discovering that they might need to be strategic partners or strategic alliance if they hope to be effective. Many strategic alliances take the form of marketing alliances. These fall into four major categories.

(A)Product and Service alliances:

One company licenses another to produce its product, or two companies jointly market their complementary products or a new product.

(B) Promotion alliances:

One company agrees to carry a promotion for another company's product or service.

(C) Logistics alliances:

One company offers logistical support services for another company's product.

(D) Pricing collaboration:

One or more companies join in special pricing collaboration. It is common hotel and rental car companies to offer mutual price discounts.

Companies need to give creative thought to finding partner who might complement their strengths and offset their weaknesses. When well managed, alliances allow companies to obtain a greater sales impact at less cost. **Planning Marketing Programs** 

To transform marketing strategy into marketing programs, marketing managers must make basic decisions on marketing expenditures, marketing mix, and marketing allocation. Marketing mix is one of the key concepts in modern marketing theory. It is the set of marketing tools. McCarthy popularized a four factors classification of these tools called the 4Ps: Product, Price, Place, and Promotion. The particular marketing variables under each P are:

- (A)Product: Product variety, Quality, Design, Feature, Brand name, Packaging, Sizes, Service, Warranties, Returns.
- (B) Price: List price, Discount, Allowances, Payment period, Credit terms.
- (C) Place: Channels, Coverage, Assortment, Location, Inventory, Transport.
- (D)Promotion: Sale promotion, Advertising, Sales force, Public relation, Direct marketing.

Not all marketing mix variables can be adjusted in the short run. Typically, the firm can change its prices, sales force size, and advertising expenditure in the short run. It can develop new products and modify its distribution channels only in the long run. Thus the firm typically makes fewer period-to-period marketing mix changes in the short run than the number of marketing mix variables might suggest.

Finally, marketer must decide on the allocation of the marketing budget to the various products, channel, promotion media and sales area. To make these allocations, marketing managers use sales-response function that show how sales would be affected by the amount of money put into each possible application.

The most basic marketing mix tool is Product-the firm's tangible offer to the market, which includes the product quality, design, feature, branding and packaging. As part of its product offering, an electrical product company provides various services such as leasing, delivery, repair and training. Such support service can provide a competitive advantage in the globally competitive market place.

A critical marketing mix tool is price; the amount of money that customers pay for the product. A company has to decide on wholesales and retail prices, discount, allowances, and credit term. Its price should be commensurate with the offer's perceived value. If it is not, buyers will return to competitor's products.

Place, another key marketing mix tool, includes the various activities the company undertakes to make the product accessible and available to target market. It must understand the various types of retailers, wholesalers, and physical distribution firms and how they make their decisions.

Promotion, the fourth marketing mix tool, includes all the activities the company undertakes to communicate and promote its products to the target market. The firm has to hire, train and motivate salespeople. It has to set up communication and promotion programs consisting of advertising, sales promotion, public relation and direct and online marketing.

Note that the 4Ps represent the sellers' view of the marketing tools available for influencing buyers. From the buyer's point of view, each marketing tool is designed to deliver a customer benefit. Robert Lauterborn suggested that the sellers' 4Ps correspond to the customers' 4Cs.

4Ps	4Cs	
Product	Customer needs and wants	
Price	Cost to customer	

Table	2.2.	The	4Ps	and	4Cs.
-------	------	-----	-----	-----	------

## Table 2.2. The 4Ps and 4Cs. (Continued)

4Ps	4Cs	
Place	Convenience	
Promotion	Communication	

Thus winning companies will be those who can meet customer needs economically and conveniently and with effective communication.

# Corporate Capabilities

It is worth underlining the importance of gaining a profound understanding of our company's capabilities, as well as some of the difficulties, which may be faced in achieving that understanding in reality. What we should see, not as a routine appraisal of resources, but as a process of "looking inside for competitive advantage", i.e. identifying those resources and capabilities which are value aerating, rare in the marketplace, and hard for competitors to imitate (Barney 1997)

**614** Gaoriel'5 1.Aora:y9 m-,<sup>0</sup>

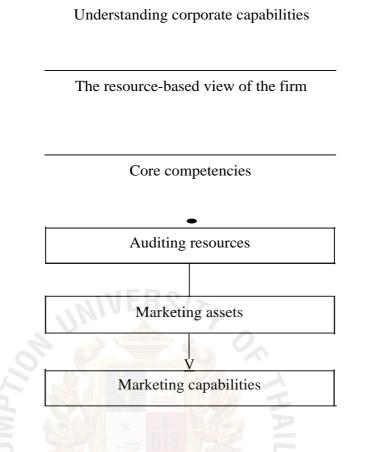


Figure 2.5. Assessment of corporate capabilities.

Interpreting corporate characteristics

Treacy and Wiersema (1995) point to three different "Value disciplines" each of which excels at meeting the distinctive needs of one customer type, and each of which requires different capabilities:

(1) Operational Excellence: providing middle of market products at the best price with the leas inconvenience, examples are no-frills mass-market retails, or McDonald's in fast food. This strategy requires an organization achieving excellence in the core processes of order fulfillment, supply chain management, logistics, service delivery and transaction processing. (2) Product Leadership: offering products that push the boundaries of product and service performance: Intel is a product leader in computer in computer chips, as is Nike in Athletic footwear. A prime example is HP's computer printer business, which has achieved market dominance through major technology advances, rapid product variations, price-cuts and a willingness to attack competitors. The core processes that underpin this strategy include market sensing, openness to new ideas, fast product development and lunch, technology integration and flexible manufacturing. Management and structure will probably be decentralized, team-oriented and loose-knit.

(3) Customer intimacy: deliver what specific customers want tin cultivated relationships. The core requirements are flexibility, "Have it your way" mindset, mastery of "mass customization" to meet the distinct needs of micro segments of the market, and the ability to sustain long-term customer relationship.

Organization asset

As resource endowments, organization assets may generally be tangible or intangible and include the following:

(1) Physical asset: such as land and facilities

(2) Financial assets: in the tangible form of cash in hand, and intangibles like credit worthiness or credit rating.

(3) Operations assets: the tangible plant and machinery to produce products and services, and the intangibles of systems and processes.

(4) Human assets: the people employed by the firm (tangible) and their qualities, traits and abilities.

(5) Marketing asset: primarily intangibles, such as relationships built with customers and distribution intermediaries, brand name and reputation, customer loyalty and current positioning in the market

31

(6) Legal assets: such as patents and copyrights, or the litigiousness of the firm.

(7) Systems: the tangibles of databases and management information systems, and the intangibles of decision support.

Company capabilities

First, capabilities can be seen as strategic, functional, operational (Graham J. Hooley 1998)

(1) Strategic capabilities: underpin the definition of direction for the firm. They include issues such as dominant logic or orientation guiding management, the ability of the organization senior managers to manage the implementation of strategy.

(2) Functional capabilities: lie in the execution of functional tasks. These include marketing capabilities, financial management capabilities and operations management capabilities.

(3) Operational capabilities: are concerned with undertaking individual line tasks, such as operating machinery, the application of information systems and completion of order processing.

Assessing marketing capabilities

Market sensing capability: the capacity for understanding what is happening in the external environment with respect to demand, customers, competitors and wider macro environmental change. Specific capabilities include the ability to undertake marketing research and competitor analysis and effectively to disseminate the resulting information throughout the organization as a basic for decision-making.

Market targeting and positioning capabilities: the ability to identify alternative opportunities and then select appropriate market targets, where the firm's resources and capabilities are aligned for the best effect. In aligning current resources and capabilities with changing market targeting involves the competencies of top management and several other functions.

Functional marketing capabilities

Customer relationship management: the ability to acquire, retain, expand and to delete customers. Key account management skills are becoming increasingly important, together with the increased focus in many markets on relationship building through customer service. Direct marketing also has a role to play here.

Customer access capabilities: the ability to employ existing channels or develop new distribution methods for servicing customer. Customer access includes competence for efficient management of traditional distribution channels, but also developing and managing franchising networks and new electronic channels. This is a broad capability drawing on several.

Product management capability: the ability to manage existing products, including the ability to influence others in the organization, where their activities impact on customer satisfaction.

New product development capability: the ability to innovate and develop the next generation of goods and services. Effective new product development requires both an outside-in capability and typically strong R&D skill.

Operational or task marketing capabilities

Implementation capabilities: the ability to implement marketing activities, such as promotions, personal selling, public relations, price deals, special offers to customers, packaging redesign, and so on. Increasingly companies are outsourcing many of these activities to enable them to buy in best practice and expertise from outside. The common knowledge base of Sawn Timber

As the company puts more control on the quality of any species of timber, the sawn timber should include all the major components of the Total Quality Control. This will encompass all activities that relate to preventing, detecting and correcting quality problems. The elements are as follows: (www.mtc.com)

(1) Policy, Planning and administration

(2) Control of purchased material

(3) Production Quality Control

(4) Employee selection

The emphasis will be on "Quality at Sources". It means that errors should be detected and corrected at the work place. This is in contrast to the widespread practice of inspection after a batch of product has been produced. In total quality control, workers and supervisors have the primary responsibilities for quality. With quality control at the sources, there is immediate feedback concerning defects, which will result in fewer rejects, less re-work and less material wastage.

By placing responsibilities for quality directly in the hands of the workers and supervisors, total quality control will implement a commitment to the prevention of defectives. The following are the critical ingredients in total quality control, and should implanted into a quality control program.

(1) Process Control — a statistical quality control concept of checking quality as the process continues and stopping the process if it goes out of control. Process control should be implemented at each workstation.

(2) Insistence on compliance with quality standards.

(3) Line stopping authority in the hands of the workers to implement the insistence on compliance. In capital-intensive processes, sensor devices detect poor quality and stop the process automatically.

(4) Self-correction of errors is the responsibility of each worker, who must rework bad items, usually after regular working hours.

(5) Expose problems and get them solved.

(6) 100% inspection, especially for finished goods.

Sawn Timber for construction in Thailand can only accomplish its satisfaction goals through managing work processes. High quality products are increasingly focusing on the product process. The re-engineering the work flows and building cross functional teams responsible for each process.

The duties of a quality control department under Total Quality Control concept are no longer to control quality, but to monitor the production processes to see the standard procedures are followed, to assist in eliminating the causes of defects, and to participate in the quality audit of supplier's plants in order to maintain standards.

Since the responsibility of quality rests with the production personal, it is then logical to train the workers in quality control techniques. By training the workers, the ones who must be familiar with day-to-day problems, the resistance to the introduction of quality techniques will be reduced. It is then natural for the workers to work in groups to solve quality problems, leading to the well-known Quality Control Circles.

Quality failures can result in serious inconvenience, economic waste, and loss of life. An essential requirement of any product is that it must meet the needs of the users. This concept of fitness for use is the best definition for quality. The user is the final judge in deciding whether or not a product meets the need or performance requirements. (www.malaysianhardwood.com)

35

It is a fundamental strategy that should involve the active participation and commitment of the departments.

The major functions are:

(1) Market research, which must identify the quality, needs of the user.

(2) Product development, which must create designs responsive to the identified quality needs.

(3) Production planning must devise processes capable of executing the product designs and regulate these processes to achieve the desired qualities.

(4) Purchasing must obtain adequate materials of the right quality.

(5) Inspection testing must prove the adequacy of the product for the proper application.

(6) Customer service must channel feedbacks from the users to assist in reducing quality failures, and report on opportunities for improvement.

Quality can be defined as zero defects in the products and services provided by a firm. It is about doing things wrong is what cost money. It therefore requires quality management, which can be described as a systematic way of guaranteeing that all activities within an organization can be executed as planned. It is an all-pervasive approach concerned with preventing problems from occurring by creating the attitude and controls that make prevention possible. It also focuses on the continuous improvement in productivity and efficiency in order to achieve long-term success.

#### **III. RESEARCH METHODOLOGY**

#### Company

The Timber Forest Co., Ltd. was established in 1980 for trade timber products. The company is one of the importers that import timber from Sarawak Malaysia for supply to local retailers.

Our Vision

To lead company in trade of the sawn timber industry for local users in manufacturing and trade of timber products.

Our Mission

To ensure the quality of sawn timber by improving its competitiveness, enhancing market access and creating trade opportunities.

Our Objective

To augment the supply of good raw materials for timber users and good services with reasonable prices.

#### 3.1 Industry's major challenges

Industry's major challenges, in further promoting the value-added processing industries, various challenges facing the timber industry have to be addressed. These included:

(1) Raw Material supply

Timber supply is a very critical factor for companies' expansion programs and may retard company intentions to invest in downstream processing facilities. Therefore companies successful in their expansion programs are those that have assured sources of supply and the ability to processing their logs into top-quality finished products inexpensively. The supply of lumber is also a function of lumber prices, wood cost, other manufacturing cost, other wood product revenues, and lumber milling capacity.

(2) Price

The shortage of logs has resulted in the increased cost of raw material, whether as logs to primary processing industries or as sawn timber and plywood to the secondary and tertiary processing industries. For example, the increase of the log prices of Dark Red Meranti, the popular species in Thailand for construction, door, window frames and moldings. The prices were compared to Rubber wood, the popular species used in furniture making. Comparing the price of Dark Red Meranti and Rubber wood between 1997-2002, both timbers have shown an increase in price of about 42%. However for the periods from 1997-1999 to the period 2000-2002 the price increase for Rubber wood is gradual as compared to Dark Red Meranti. The price increase of Dark Red Meranti is 56%, while for rubber wood is 18%. This makes Rubber wood a very popular timber not only for furniture but also for fiber and veneer.

To overcome the price increase, many sawmills have started to utilize lesserknown species and other plantation timber. However, the supplies of these alternative timbers are not regular and there appears to be need for marketing efforts to enhance the commercial value of this timber. Faced with a shortage in log supplies from the natural forest, and the resultant rise in log price, the export performance of the sawmilling and plywood sectors in Sarawak has been adversely affected. Between the period 1997-2002, export of Sawn timber, which was 3 million cubic meters, decreased by more than 55%, while export of plywood recorded 713,000 cubic meter decrease by 42%.

38

## (3) Anti-Tropical Timber Campaign

The anti-tropical campaign is one of the major challenges faced by the woodbased industries in ASIA. Campaigns against the use of tropical timber products are being waged by the environmental non-government organization (NGO's) in consumer countries centered on the issue of clearing the tropical rain forest (Tham, 2000). The attacks have been very aggressive to the extent of getting major consuming countries to apply trade and other sanctions on the tropical timber. These intense pressures may possibly force particular export sectors in Malaysia, most likely Sawn Timber, to look for other markets. It is anticipated that over the next ten to fifteen years imports of tropical timber by industrial countries will show a declining trend as these countries use other substitute timber products. However, this rate will taper off with time as substitution has its limits and sustainable levels of tropical timber consumption are realized.

#### (4) Sustainable Forest Management

According to the International Tropical Timber Organization (ITTO), less than 1 percent of tropical forests are managed in such a way that harvesting in sustainable (World Bank, 1994). However, many log-producing countries have realized the need to adopt policies to sustain the level of timber supply for the long run. Malaysia will out down the log production from 39 million cubic meters to 32 million cubic meter by the year 2006.

There are a lot of implications that must be addressed for a country to achieve sustainable forest management, particularly of raw material supply for down stream processing and increase of production costs. This issue is very related to timber certification systems, which can be a tool of measuring the sustainability of forest management. Currently, various national and regional certification plans are being developed, but as yet no international organization has been identified for the purpose of according them.

Major consuming countries have required timber certification, particularly for the products made from tropical timber. Without certification that these products are from sustainable managed forests, prohibitive actions or even financial penalties could be imposed on users of tropical timbers (MTC, 1997a). According to the Malaysian Timber Council, this requirement has created a competitive disadvantage for the tropical timber industry. Certification will entail addition cost to the tropical timber producer unless the end-users are willing to pay for the price increase that is needed for certification.

#### (5) Processing efficiency and productivity

In order to gain a competitive edge, the timber processing industry has to be efficient and highly productive. It is estimated that the recovery rates for sawn timber production are still in the region of 67%, while plywood production is 57% (Thai, 2000). In the view of the increasing cost of raw material, there is a need for improvement especially in terms of better recovery rates and reduced waste of raw material. Particularly in rubber wood processing, there is a need to improve the current level of recovery rates of sawn timber, which is between 30-36%. In the downstream processing sectors, such as furniture manufacturing, the efficiency can be further improved through the use of modern production management practices more suited for mass production.

# (6) Increased Labor Cost and Shortage of Skilled Workers

Many sectors of the timber industry are still labor intensive. Shortages of local workers and increasing labor cost require the timber industry to depend on foreign labor. In view of this, the industry is faced with a shortage of skilled, well-trained workers. This shortage is faced particularly in the furniture and moulding sectors, and at the supervisory and operator's level. The worker's salary has gone up with the purpose to retain workers to work in mouldings of furniture mills. As a result, production costs have also increased. In the furniture industry, for example, labor cost accounts for 20% of the production costs. Turning towards automation of production processes would provide a solution to the labor problem, but requires a high capital investment.

#### (7) Technology and Techniques

The use of automated equipment and machinery incorporating CNC, CAD, or CAM is becoming more widespread as access to technology is more readily available. From a recent survey carried out by the Malaysian Timber Industry Board the level of technology used currently in several sectors, particularly in the medium density fiberboard, chipboard and moulding, was found to be at par compared to developed countries. However, not all the technology in developed countries is suitable for use locally due to the different nature of logs (tropical hardwoods vs. Softwoods), thus some aspects of technology applications require local adaptation. To optimize the utilization of timber, it is anticipated that technology developments in small log processing, fingerjointing, lamination, and re-constituted panel manufacture will become increasingly important.

The increasing level of technology used in wood processing, importation of machinery helps to overcome the problem of shortage of skilled workers and rising wages. More Malaysian timber companies are now investing in new automated wood working machinery. In addition to reducing labor costs, this investment is necessary to achieve higher productivity as well as to meet the strict quality requirements of the

# oL Gairiefs 'vary, Al!

export market. Most of the woodworking and furniture manufacturing machinery is imported from Germany, Japan, Italy and Taiwan. Currently, import duties from Germany, Japan, Italy and Taiwan. Currently, import duties are levied on machinery and spare parts for the timber industry ranging from 5%-35%. The annual imports of this machinery are estimated in the region of 5000 million baht (Malaysian Woodworking Machinery Association, 1998)

#### 3.2 Background of the company

Timber Forest Co., Ltd. was established in 1975, Bangkok, Thailand. The company's business is to import Sawn timber from Sarawak Malaysia as the main raw material resources. From the beginning, the main raw material resources are from Laos, Cambodia and Malaysia. The company had stopped import raw material from Laos and Cambodia due to the unstable of government policy.

The company has very good relationship with the suppliers in Sarawak. They can supply the commercial raw material in standard and better grade quality with the market prices. Malaysia has a lot of the forest area (quota areas) to export logs, sawn timber and plywood, etc., which are suitable for the Thai market. It will be cheaper if the company imports the sawn timber directly from the saw millers, which the company has the price competition over our competitors that normally import indirectly from the brokers. The suppliers also support us with the correct information, forecast in quantity species timber information, the unstable in supply of raw material. The company is the expert in wholesale sawn timber business in the Northern, Northeast, Center, East and West part in Thailand.

The company tries to improve the quality, product and service every time in order to complete with our competitors in the market.

42

#### Summary of the existing product system

For the existing marketing system plan for the company, we must have good marketing strategy to achieve our company objective. It means that we have to develop and to supply the good quality of sawn timber products, the variety of species and sizes and how to create the effective marketing mix.

## (A) Product of the company

For the first time the company mainly sold the sawn timber for construction only. Now we want to increase the sales volume in each month. So we searched the new species from the Sarawak Timber Industry Development Corporation for new species that suitable for the manufacture industry to produce window frame, doorframe with the sizes that are suitable for them. It is a very good opportunity for us to increase company sales volume, so we tried to add the new species sawn timber in order to sell them in all fields in the market. For example, we sold Kapur species for the window frame producers in the size 1 5/8" x 3 3/8" that a lot of demand in this industry consumes. We generated the sales volume increase in each month. At the moment the demand in quantity is over quantity the company can supply.

The company representatives are in Sarawak Malaysia for check the product quality at the processing time, so this is the first step in checking quality. The company representatives will reject the products if the quality is unacceptable.

We know that the sawn timber business is not a consumable product. So we must increase the purchasing value of the sawn timber by not only the sawn timber product but also selling related products with the sawn timber, such as plywood for customer satisfaction. Sawn timber is a natural product so the good quality in sawn timber means the defective product should be less than 10% of total quantity. After the company loaded the sawn timber from vessel, we have the quality control department to recheck quality more than 80% of total in one shipment. In fact, the company cannot inspect all sawn timber bundles in every bundle as 1.Company already sold the products before the vessel arrives at wharf, the quality control department cannot open every bundle to inspect all of them. 2.As a result of local demand over supply in market, the company has to deliver the product as fast as possible for customer satisfaction. 3.Labor is not enough to inspect in case of too much quality.

#### (B) Price Policy

The company set the selling prices differently on the species and sizes of sawn timber. For example, we sold Keruing (Specie name) species size 1 1/8" x 2 3/8" to cover the loss in Keruing size 1 1/8" x 5 3/8". The price is set due to the length, size, cost, and the important factor is demand. Some species we sell the price higher than some competitors but at least as we provide the better quality so the number of defects is less. So when customers compare the cost, it is sure that they got the cheaper products. Then we have to explain that they get less defective product; that means the price is reasonable compared with the competitors. The A quality means the defects is less than 10% (Malaysian hardwood, 20/9/2004,2004). We show the customers that we sell high quality product with less or no defects although the company's cost is increasing. We never take advantage of the customers during the period of increasing cost (Oil, inflation, labor wages, economic is stepping down). We want to create our company loyalty to the customers.

(C) Distribution Channel

The customer areas are in the Northern, Northeast, West, East and Center part of Thailand. The company has 42 trucks to deliver the products; we can say that we can deliver the products within one day anywhere in case of normal demand and within three days in the peak demand periods.

As the company is a wholesaler company, normally there are no customers to visit our company.

We have two warehouses at Bangna and Pharpadang district, Bangkok. At Pharpadang district is wharf no.14 in Bangkok that keeps the species that are of high demand in the market. In Bangna district, it keeps the standard species market of sawn timber.

The company has 42 trucks, 42 drivers and about 70 labors to deliver the product to customers, so it can make sure that customers will get the product on time. The company also has 8 forklifts for loading the products that share 4 forklifts in Bangna and 4 forklifts in Pharpadang district.

# (D) Sales Promotion Program

Because the Sawn timber business field is not the same as the commercial products, we use the sales promotion to offer incentive for customers.

- (a) Internal promotion
- (1) Commission
- (2) Sales Incentive
- (b) External promotion
- (1) Discount 3% in cash and 4 months in credit term

(2) Premium, We provide the Chinese calendar, home appliances use in New Year festival.

#### 3.4 Problem of Company

Since the economy is the stepping up, we found that our sales volume is increasing and the last two years the company got some problems from the business. So we list the problems to make the solutions to generate more revenue.

**Internal Problems** 

(1) Demand and Supply

Normally, the company import products species that demand and demand did not match.

For example

Demand of Keruing size 1 1/8" x 2 3/8" is much when compare with Keruing size 1 1/8" x 5 3/8" (the cost is higher than 1 1/8" x 2 3/8"). The percentage in size 1 1/8" 2 3/8" is about 30-40% in one shipment compare with 1 1/8" 5 3/8" is about 40% in one shipment. The company can sell it all but more faster in size 1 1/8" x 2 3/8". The company has to take cost of interest, cost of stock and the space for keeping stock. Assume that the company sells Keruing size 1 1/8" x 2 3/8" before the vessel arrives in Bangkok but Keruing size 1 1/8" x 5 3/8", the company has to keep stock 4 months so the company has to take the cost of interest, space in warehouses, all hidden costs, risk in damaged sawn timber from any accidents, etc.

(2) Quality Control

Although the company representatives are in Sarawak Malaysia, in fact it is quite hard to inspect quality 100% due to the reason:

(1) Sawn timber is a natural product, not the same as the other products that are produced in standard quality. So the defective quality problem is the common problem in this business field.

(2) The quantity imported is in a big lot each month, so company representatives have not enough time to inspect 100% of them.

(3) The company does not import products from one supplier so it is impossible to inspect, as company requires.

(3) Brand Name

The customers have to trust on the company image that they will get the quality product and on time delivery. It is quite impossible to create the brand name. As mentioned before, sawn timber is the natural product, the defective quality is the common problems. So when the customers order the product, they do not have to check when the products arrive there.

(4) Service

Although the company has 10 sales people to take good care of all customers, but when the problems happened after the sales people just arrive Bangkok, the customers have to wait at least 2-3 weeks for the salesman to go there again (in the North and Northeast parts).

(5) Loading products.

To deliver product from Sarawak Malaysia to the customers, one bundle has to be loaded by forklift or sling at least 7 times. It can damage the product.

**External Problems** 

(1) Substitute products

The new substitute product is the alternative choice for the end user to select. The substitute product is such as fiber cement, wood fiberboard, etc. It has more longer use, cheaper price but the feeling cannot be compared with the natural product and it has dangerous smell to breathe.

#### (2) Competitors

When the supply is over demand in local customers, they are always dumping price at loss price. Because sawn timber cannot be kept too long when the market is down, customers have more purchasing power to bargain.

(3) Seasoning

In the low demand season (rainy season) the timber is easy to be defective from fungus (wet). The company has to sell at cost to rapidly deliver the products, otherwise the customers will reject products.

#### **3.5 Price policy**

After the economic crisis in 1997, customer behavior for the sawn timber product is more concerned on price. They will search for the cheapest price first without concerning more on the quality problem, and they will get the lower quality.

During this time many companies dump their prices for sales volume and they also want to increase their sales volume by offering sales discount promotion, which made their price lower than our standard selling price.

The company price policy is still the same as before and we set reasonable prices with standard and better quality. The company will not reduce the quality to manage the price down.

As mentioned before our setting price depends on species, sizes and length. So it can compare with the competitors for less number of defective items makes the cost down. For example, Kapur size 1 1/8" x 2 3/8" quantity 100F3, defective 8% @ 300B/F3 compare with the competitor Kapur 1 1.8" x 2 3/8" quantity 100F3, defective 15% @290B/F3. The defective product of company cost is 2,400B (30,000\*0.08) compared with the 4,350B (29,000\*0.85). It shows that the higher selling price should be concerned more on the defective products also.

# **3.6 Distribution Policy**

 In the peak sales volume season, the products must be delivered within 2-3 days after made a purchasing order.

(2) In the normal sales volume season, the product must be delivered within 1-2 days after made a purchasing order.

(3) In the low sales volume season, the product must be delivered within one day after made a purchasing order.

(4) What if the customer has no forklift, labors must go there to load the product into his/her warehouse without charge to customer and that normally the other competitors charge customers 1.5B/F3 or 750B/truck.

(5) In the case of over demand that the company cannot deliver product on time, the company will outsource truck to the customers.

As a result of increase in diesel price, the company has to take the cost of transportation without raising the product price.

# 61... Gabsias $Li^{\circ} \mathbf{y}_{0}$ Au

#### IV. ANALYSIS OF MARKETING SYSTEM

#### 4.1 Executive Summary

According to the good sign of the recovery of the economic situation, the government tried to motivate property business by setting the budget for housing loan that will have a good effect on the sawn timber business. According to the information about demand and supply of the dwelling place, it has been sold about 3855units in the year 2001. From this information, it shows that there are many customers for sawn timber business.

In the year 2005, the company plans to seek to generate more income in company sales volume over the preceding year. The target revenue is about 800,000,000 million bath on this year. So the new target on the next year is 840,000,000 million baht, 5% sales more over this year. This increase is seen as attainable through improved product species, quality, pricing, distribution cost and promotion.

From the above budget we will use marketing mix strategy in order to achieve our marketing objective. We plan to add more product line such as 1.We provide the new sources of raw material to cover all demand from Brazil, Papua New Guinea (PNG) by increasing buying volume per customer and find the new potential customers. 2.New product species variety to increase the company sale revenue as the one sawn timber specie is suitable for the particular job. For pricing policy, we will not increase the percentage of profits although we got the effect from currency fluctuation. We plan to rent one more warehouse to keep more stocks during the peak demand that give the customer more faster delivery on-time. The company set up more promotion budget in order that the company images becomes the first choice and support our sales promotion

program, because promotions will help the company to be more effective and reach our target group.

In the year 2005, we expect that our business will be better than this year because of overall economic situation recovery from the economic crisis. We find that there are still demand for dwelling places and it related to the sawn timber market. So we have to improve our marketing strategy in order to gain advantage over the competitors. This plan will help us to achieve our objectives.

# **4.2 Current Market Situation**

Market situation of sawn timber business is related with the property market. They have positive relationship; it means that if the property market is good, the sawn timber business will a lso be good.

During the year 1987-1990, it was the golden time of the property business. There were a lot of land developers and house investors who want to invest in this field by opening new projects, re-sales and keeping land for future development to seek exorbitant profit. When there was economic crisis in Thailand in 1996, Thai Bath currency was changed to the floating exchange system, which made our Thai bath currency weak at that time.

Table 4.1. Exchange rate US\$ VS THAI BAHT (The Nation).

2539	2540	2541	2542	2543	2544	2545	2546
25.31	31.31	41.3	37.78	40.11	44.43	42.96	41.48

#### Exchange Rate

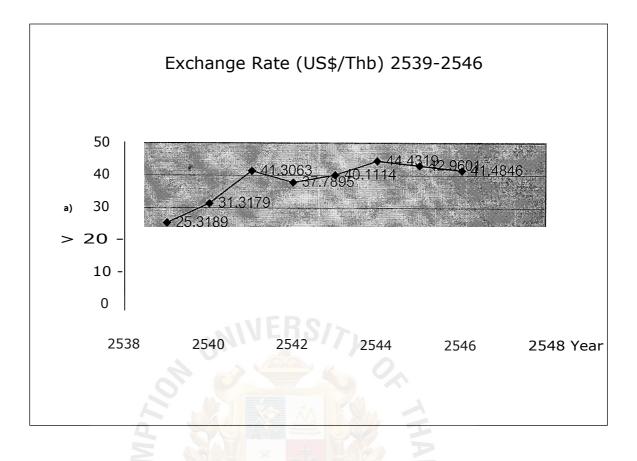


Figure 4.1. Exchange rate US\$ VS Thai Baht (The Nation).

Many financial institutions had the problem of non-performing loan (NPL), and this was the reason why many financial institutions were closed. Many banks did not give any credit or any loan to their customers. So many investors had financial cash flow problem and lacked funds in their business. Many housing projects were closed or had to stop construction although those houses were not finished yet. Purchasing power of the customers decreased because of unemployment. This was the over supply period of the property business. In the property market, the highest unit in the resident is condominium and office building, town houses, twin houses and single house respectively. At the moment, during the year 2001-2003, it is the peak demand in high class resident and middle class in the market. There are a lot of land developers to invest the big budget in condominium near the BTS or subway, single house in the major convenience areas. The price is stepping up to 15,000,000 million baht and up.

The percentage shows in different residents from 34,035 units.

Town House and Home off	ice 26.04%
Apartment	5.79%
Single House	73.37%
Twin House	0.24%

Twin House

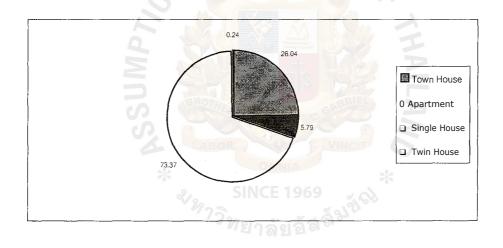


Figure 4.2. Different resident (Thai Condominium Association 2004).

The credit loans from the Commercial Banks are the major budget for the investors. The graph shows the credit loan from bank to the investors.

Time	Value	Time	Value	Time	Value
Mar 01	346630	Mar 02	246327	Mar 03	253225
Jun 01	308939	Jun 02	261700	Jun 03	251949
Sep 01	298111	Sep 02	255925	Sep 03	253196
Dec 01	244427	Dec 02	253225	Dec 03	256202

Table 4.2. Credit Loan form Commercial Bank (million bath).

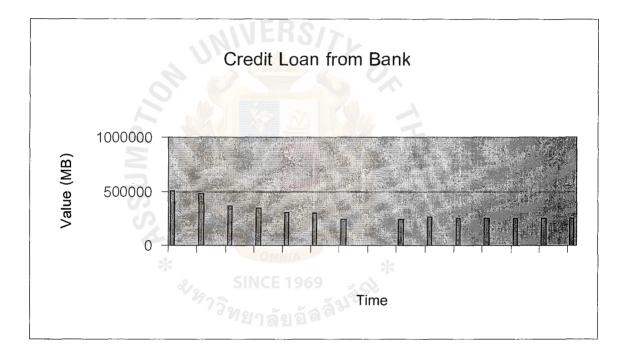


Figure 4.3. Credit loan from commercial bank.

As mentioned above that now cost of construction in land developing is stepping up so the table shows the increasing/decreasing percentage of main raw materials for investors.

	Q1	Q2	$Q^3$	Q4	Q1	Q2	Q3	Q4
Wood	1.7	1.2	1.9	1.2	2.5	4.3	4.7	4.8
Cement	-30.9	-3.3	-8.0	3.2	4.9	6.2	11.1	10.7
Concrete	1.1	1.1	0.6	-0.2	0	0	1.1	1
Steel	5.4	5	7.5	10	15.7	14.4	10	13.8
Tile	0.1	0.6	0.1	-0.1	-0.3	-0.8	-0.7	-0.4

Table 4.3. The percentage of major raw material price.

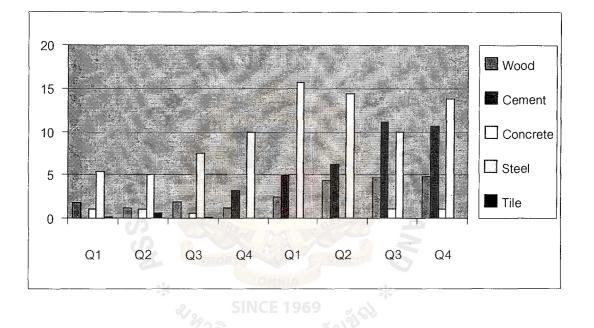


Figure 4.4. The percentage of major raw material raising price.

Since the end of 1998, the property business has seen a good trend. It was going up because the government wants to stimulate the economy by setting a budget policy for the property business. Many financial institutions have decreased the housing loan interest rate. This is a sign to show that there is more cash flow in the market. Many housing projects use sales promotion and advertising strategies such as the gift voucher or the car in order to make the cash flow. The customers believe that this is a good opportunity for them to get the good chance. It is also a very good effect for the sawn timber business.

## 4.3 The market trend of in the sawn timber use in property business

(1) The local users have more demand in sawn timber for the property business at least 5% as the supply in property is increasing.

(2) The construction will expand more in the center area and rural areas.

(3) The government provides budget for the lower income population for resident loan.

(4) Increasing the price of construction material because of high demand and increasing cost of production.

(5) The commercial banks provide more budgets for housing loan and fixing loan.

(6) The overall market is stepping up as the result of the high competition with the low interest rate from bank and the promotion from the land developers.

(7) The unemployment rate is decreasing with the consumer confident in the market trend.

(8) The people have more purchasing power and want to be the owner of the building.

(9) The promotion from the land developers means the customers gets the lower price.

(10) Good trend of the economic situation.

(11) Many entrepreneurs can haircut their debts. So they have more cash flow to invest in the projects.

#### **4.4 Competitive Situation**

There are about 60 companies of importers who import sawn timber but some import for their personal use such as the land developers directly import the sawn timber for their construction. The other importers are direct competitors in the sawn timber market.

Timber Forest Co., Ltd.'s major competitors are Sang, M.I.C., Thai timber trade, and Siam Forest who are located in the same area (Bangkok).

(1) Sang Co., Ltd.

Product: The quality is not acceptable. They have a lot of timber from Laos,

Cambodia, Go Lok and from South Africa.

Price: The selling price is cheapest compared with all importers.

Warehouse: There are three warehouses in Bangkok and one warehouse in the northern part of Thailand. They can deliver the product on time when the customers need the products.

Promotion: They have no advertising program to support their customers.

(2) M.I.C.

Product: The quality is not stable. The quality depends on the suppliers. They have good supplier from Indonesia that provides them with the lower price with standard quality but not too much quantity.

Price: The selling price is the market price at that moment. Customers have no confidence on the quality they provide. The price depends on the species and sizes.

Warehouse: They have only one warehouse in Bangkok, which keeps stock hang around together.

Promotion: They have no promotion program to support their customers.

# 3L Gabriecs Lijbrary, AAA

(3) Thai Timber Trade

Product: The quality is acceptable. The quality depends on the source areas that provide them, such as, the source from Sarawak Malaysia is not acceptable but the source from Indonesia is acceptable.

Price: Their selling price is highest in the market.

Warehouse: They have one big warehouse in Bangkok that can keep stock a lot. They use bar code to keep all information.

Promotion: They set up the promotion that when the customers buy the sawn timber product reach a point, the customer will get the gift voucher as cash for the next order.

(4) Siam Forest

Product: The quality is not acceptable.

Price: They always dump their price that made the market goes down.

Warehouse: They have one rented warehouse located in Bangkok.

Promotion: They have no promotion to support their company.

The imported sawn timber price is high. The FOB price exported to Thailand from Sarawak Malaysia worth 2,486,193,171 million baht. The new competitors situation of sawn timber is not much intense. The reliable sources of raw material are not easy to contact. Many new competitors stop doing the business due to lack of efficient, reliable suppliers, the quality timber, and weak financial cash flow. The Market share in 2003 is shown in the picture below.

Sang	M.I.C.	Siam Forest	Thai Timber Trade	Timber Forest	Other
12	7	6	8	11	56

Table 4.4. The percentage in market share in 2003.

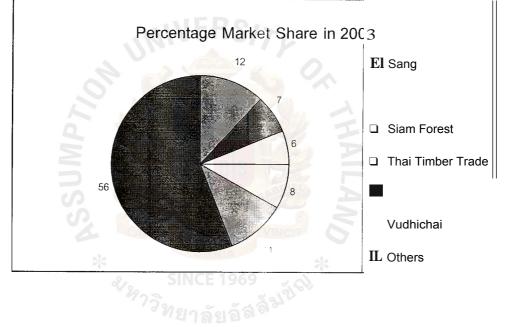


Figure 4.5. Percentage Market Share in 2003.

# 4.5 Opportunity and Issue Analysis

After summarizing the current marketing situation of the property business A hich is related to sawn timber business, it is a good I rend for both businesses because tl \_.re is marketing activities in property business in order to persuade consumers to buy 'iving place. From the Government Housing Bank, we find that the total supply of dw place is about 3,855 units with average 2,220,000B/unit.

#### 4.6 SWOT Analysis

Strength Analysis

(A) Quality, The Company will provide Select and Better Grade quality for customers, less number of defective items (l ungus, Accurate Dimension, Bleiing, Sapwood, etc.) It is not the same as the other competitors that provide the Standarj and Better grade quality.

(B) Service, The Company can provide fast delivery on time, as the cust.-ners require due to the company has 40 trucks to delivery product. The company l s 10 salesmen to sell the product and service to cover all areas.

(C) The company develops the software program for checking stock update dayto-day that the salesman can answer the customers at the first moment.

(D) The Company has a strong financial and cash flow.

(E) The Company can get raw materials at lower price with good quality Cue to direct contract with the sawmillers.

(F) We give customers ordering in species and sizes upon their request. •

(G) The company can give full or one stop service concept to customers. We plan to supply customers with nail, plywood, and steel.

(H) The Company has more variety of products and many sizes to serve cu' mer satisfaction.

Weakness Analysis

(A) Sawn timber is the natural product; we cannot inspect 100% on c ality control.

(B) The company is budgeting not more than 6% of its sales rever: for promotion and advertising, while some competitors are spending double that levt..

60

(C) The company warehouse is not close to the competitors. It means that when the vessel comes to Bangkok, the company has to reload the tugboat to deliver the product to the warehouse again. So the company has to take the cost of transport and the timber loaded second times; that means the timber can get damaged from loading and higher delivery cost.

(D) The company cannot retail to the end users for reason of conflict with the customers.

(E) Labor Intensive, normally the customers have not forklift, so the company have to take the cost of loading the product to their warehouse without charge to customers.

(F) The cost of sales people, we have ten sales people to take good care of customers, so the cost is higher than the competitors.

**Opportunity Analysis** 

(A) For the customers who are interested in the product, the company also can sell other product line. This should help the company revenue stepping up.

(B) Our suppliers trust the company so they always support the company products.

(C) The government supports the housing loan and provides the budget to every district (Tambon). So it is a good opportunity to expand market and more cash flow in the market.

(D) Due to the economic crisis, many entrepreneurs of sawn timber business had problems with financial cash flow; so many competitors have to close their business. It means our competitors also decreased.

61

Threats Analysis

(A) The customers are showing increased interest in the substitute product (Steel,Fiber cement, Wood fiberboard)

(B) Sales volume depends on the season (less volume in the rainy season).

(C) NGO, NGO (Non government organization) is focusing on global ecosystem conservation. An environment NGO spearheading international efforts to protect endangered species and fight bad environment practice.

(D) Illegal logging and sawn timber in Malaysia, Logging outside area, encroachment of forest reserves for agricultural activities and settlement and cover other forest offences that involve felling of unmarked trees, cutting tree below the cutting limit, unlicensed workers, contractors with no valid license and unregistered machine.

(E) Some of our competitors have good advertising policy, which make their company image have more awareness than our image.

(F) Many customers do not know the quality of raw material that our competitors sell which is low quality and sells at lower prices.

# 4.7 Strategic Formulation

(1) Cost Leadership

The company has the cost leadership in some species of timber such as MLH size 1 1/8" x 2 3/8"(Mixed Light Hardwood). The company product is cheaper than the competitors due to importing directly from the suppliers and it also depends on the species. MLH species is used for construction that does not require the good quality. It can be used to construct the labor camp, minor constructions that do not require good quality. The company can guarantee that we sell the lowest price from that source. The company sold MLH @ 200B/F3 compared with the competitors who normally sell at 220B/F3.

The cost of warehouse, the company has three warehouses about 80% are indoors compared with the competitors that keep the products outdoors about 70%. It means that the cost of defective product is less when compared with competitors.

The company has more market share over the competitors. It means that the company supplies the product in a big quantity so the economy of scale is cheaper. The customers high valued uniqueness and low in cost relative to competitors; that means the company is in market and financial advantage.

(2) Differentiation

This strategy; company strengths and skills are used to differentiate the company's offering from those of its competitors that the customers value better than competitors. For example, we can say that the Kempas species of our company is better than some competitors. This differentiation creates the reason to purchase. The customers know that Kempas species should have less sapwood (defective product). They can get the Kempas species less than 5% of sapwood compared with the competitors that has more than 15% in one order. As mentioned before one species of timber is suitable for the particular job. So Kempas species should have less sapwood for use in their job.

Objective

(A) Financial Objective

Generate the profit of 25,200,000 B in the year 2004 or 5% increase from the last year.

(B) Marketing Objective

63

(1) Year 2004 should have the market share about 9% and increase 5% in the year 2005.

(2) Expand customer's awareness of the company reputation by setting promotion budget 5-8 % of sale revenue.

(3) Expand the number of customers 10% in the next year.

(4) Add more raw material resource to increase sales revenue.

#### 4.8 Marketing Strategy

The Company product is the basic product to construct the building. It means that our company has to find the new potential customers all the time. It is quite difficult to know the sales volume each month. So the company should have a good marketing strategy to increase sales volume with the new potential customers.

In order to meet the needs of the company customers, we also try to provide additional products and services, which will make them feel they can get the related products within one place.

(A) Target Market

NCE 1969

We have segmented the whole market into 2 segmentations. There are:

(1) Construction customers

(2) Industry manufactures

In construction customers, the company selects the suitable timber species for construction. Such as MLH, Yellow Meranti, Mersawa, Damar Hitam that are suitable for construction. They require the lowest price and they do not require the good quality.

In the Industry customers, the company selects the Kapur, Keruing, Alan Batu, and Balau for them to use their jobs. These species are suitable for them to manufacture their products.

#### (B) Positioning

The company image has high quality with a reasonable price. These are good advantages to compete with the competitors as the customers got less or no defective products. Since the economic crisis in 1997, the sawn timber business was affected by this crisis. Many competitors decrease their selling price. Customer will select a cheaper price with high quality product and good service.

We have to create a good marketing strategy in order to achieve our objective and compete with our competitors. The company needs to show the product differentiation and service differentiation.

The company position in the market



Figure 4.6. Position of company in market.

#### **Product Differentiation**

We sell high quality of product as we want to differentiate product to less or no defective product.

Less or no defective. One truck can load at 1200 F3 in average quantity

Suppose we sell Keruing size 1 1/8" x 2 3/8" @ 320B/F3. Suppose the competitor sell Keruing size 1 1/8" x 2 3/8" @ 300B/F3

The customers get the defective item 5% from the company and 15% from the competitor. So it shows that we sell @ 336B/F3 with the competitor sell @ 352B/F3.

It shows that although the customers buy at a higher price but manufactured the cost is cheaper than competitors.

The dimension accuracy is also important.

Normally, the company provides the size of  $1 \frac{1}{8} \ge \frac{3}{8} \ge \frac{1}{4} \ge \frac{3}{8}$  that is preparing for the recut to the suitable consumer size. The company sent the suitable size for the customer that can already use them, in different with some of the competitors that the customers still have to manage to recut the sawn timber size to use them.

Service Differentiation

We offer our customers on time delivery. We can deliver the product within one day after ordering the product, which is faster than the competitors who can send only with in 4 days after our product.

We also offer the warranty of the product. If the customer is not satisfied with the product, they can claim as they saw the product defective or reject the products without any delivery charge or operation charge to customers.

All the above differentiation will make the company a high quality position in quality product, lower price, more variety product and reliable service with the good after sales service. This is the factor that will help us to compete with our competitors.

#### **3L. Gab e 5** *r* ry,

#### Product Line

The company has to increase sales volume by adding related product or providing more product lines.

There are many products that relate to the sawn timber business such as plywood, nail, steel, etc. All these items can be sold together with the sawn timber. It helps the company to increase the sales volume and improve the company image.

In the future, the company plans to add more product accessories such as wood product such as doorframe, and window frame to satisfy customer needs. We offer customers free design and use the concept of "Ready to Manufacture".

As we survey the market, some of the competitors sold sawn timber but they do not plan for customer to one stop shop.

So the company builds the advantage by offering the wood product "Ready to Manufacture" This will make more convenience for the customers who can get the cheaper price from the company.

#### Price

#### **SINCE 1969**

Pricing policy for sawn timber as we have a good relationship with manufactures in Sarawak Malaysia who can supply at lower prices with the higher quality. It means that we have the lower cost than our competitors although Thai Baht currency is weak. We will not increase the selling price as our competitors do. The company takes advantage to persuade customers to buy products in the normal season.

The company's price is a little bit lower than some competitors who target the industry manufactures. The company will emphasize on the quality product, which customers pay at a reasonable price.

As property business is stepping up after the economic crisis, customers will try to find high quality product at reasonable prices in the market.

The company will not change the standard of quality but we will use the sales promotion to support our sales policy because we do not want to discredit the product positioning which have high quality, reasonable price with good service. We try to avoid price war condition. When the competitors have no promotions, our standard selling price will be lower than those of our competitors who have the same target group. The selling price is based on cubic foot 3. But some competitors' selling price varies on the length of the sawn timber, which is higher than our calculation.

#### Warehouse

At the moment, the company has 2 warehouses to keep our stock. In 2004 we see the good sign of economic recovery. We plan to expand one more warehouse in the Pharpadang district. It can keep more volume during the peak demand (from September till May)

The first warehouse (half of area is indoors)

Bangna District, Cover area: 300,000 f3 (selling units measurement)

The Second warehouse

Pharpadang District, Cover area: 150,000 f3 (selling unit measurement)

The near future, Third warehouse

Pharpadang District, Cover area: 150,000 f3 (selling unit measurement)

As most of our warehouses will keep stock to cover all demand and supply in the peak season to Northern part, Northeast part, Center area, East and West part, we have no market in Southern of Thailand as we cannot compare the transportation cost when in transit from Peninsular land.

#### Service

Our company provides fast service. It means that the customers get the products on time within one day after make purchasing orders. We have 42 trucks to deliver the products and with the related products.

The problems from the timber quality, the company has 10 salesmen to take good care and response to customers if they reject defective products for more than 10%. Salesman will go there checking the defective products within 1 day in the center part and within 5 days in the other areas.

#### Promotion

Promotion is one factor to support one selling and create good company image to the market.

Internal promotion, salesman get 0.002% commission that is 2,000B in sale volume 1,000,000B. At the end of year they get more bonuses to the highest third ranks.

External promotion, discount 3% in cash and 3 months for credit. We give the premium at the end of year such as calendar, house accessories, etc.

Press tour for showing the quality timber. Its show the customers that our company provides only the good quality.

#### V. THE PROPOSED MARKETING PLAN

There is a good trend for the recovery of the Thai Economic in the year 2000. As a result, customers have more purchasing power, and so our marketing plan in the year 2004 is to increase sales volume and increase net profit. Therefore, we should create new marketing strategy to achieve the company's objective.

#### 5.1 Objectives of the marketing plan

To achieve the objectives we must set up the good marketing plans. Timber Forest Co., Ltd. whose business is in sawn timber for construction and manufacture industry has marketing objectives for the year 2005 as follows:

- (A) To increase sales revenue by 5% from the year 2004.
- (B) 14% of sawn timber market share in year 2005
- (C) New related product in 2005

Thailand has faced the economic crisis since 1997. As we want to get the advantages over our competitors, we should have good marketing plan in advance for our preparation to complete in the competitive market.

#### 5.2 Marketing Strategy Planning

Short-term plan

- (A) Top managers involved from the start of quality drive.
- (B) The company all focused on customer needs through data gathering and data analysis.
- (C) The company developed planning and implementation process necessary to achieve the customer satisfaction.

- (D) The company recognized and rewarded the employees for quality performance.
- (E) EDI technology, the company uses EDI technology to save the cost of orders, overhead cost, paper cost, etc.

#### Intermediate-plan

(A) The company trained employees to use statistical process control tools in cause-and-effect, graphing.

#### Long-term plan

(A) The company empowered the employees to personally take control and make decisions.

In order to overcoming our problems and our weakness in marketing strategy, this marketing plan is designed to improve our product line, price, place, and service. This marketing mix will make our company achieve our marketing objectives. The company has to increase the customer satisfaction to respond to our objectives.

#### (1) Product and Product Line

The company will find the new sources of raw material in other areas. The first choice is Papua New Guinea (PNG). PNG has a lot of raw materials that can provide to meet the need of customers. The strangeness is the cheaper prices of raw materials but the quality cannot compare with Malaysia Sawn Timber. The variety of new species that is suitable for a particular job such as for the construction and use for land developers to consume them. The freight charge and insurance cost is more from Sarawak Malaysia. Actually the cost of freight charge is about 11-12%/one shipment and 1% of total cost in insurance in one shipment. In PNG, it moves to 15-16% of freight charge and 2% of total insurance cost in one shipment. The source from PNG is possible in Thai market.

The second source of raw material is from Brazil. Brazil has a lot of sources also. The market is for the manufacture industry to produce doorframe, window frame, etc. The strangeness is the reliable quality, same level of price when compared with Malaysia. The species is not much variable but also is suitable for Thai market. The cost will increase in one shipment from the freight charge and insurance also.

(2) Price

The company imported sawn timber directly from the sawmillers. So, our product cost is cheaper than the other competitors. So the company set its selling price lower in the market compare with the same quality competitors. Furthermore, the company has more product line to sell so the operation cost will decrease as the high sales in volume.

As the company is strong in financial cash flow, we can expand the credit line to customers from 3 months to 4 months; it depends on the quantity they consume. Normally, the competitors have credit line 2-3 months so this is a major advantage that some competitors cannot reach our credit line. In fact the quantity in one order is about 1,200f3/ truck the difference is price is about 5-50B/f3. So the difference in selling price is about 6,000-60,000B/truck. To expand credit line is the important factor to compete with the competitors. We believe that the company is the first choice in customers' mind.

Now the company has 13 species of timber for the customers with 13 sizes in each species. The price is different in the group of customers. For the construction customers do not require the good quality but good price. So the company provides the one that is suitable for them with cheaper price. They cannot consume the quantity too much so the selling price is higher then the manufacturing industry. For the manufacturing industry, we provide them the select and better grade that is no or less defective products with reasonable prices. They consume a lot so that make lower cost. The price is cheaper.

#### (3) Distribution Channel

The company has a lot of customers that is about 600 customers covered in Northern, Northeast, West, East part of Thailand. The company cannot make a market in Southern as the transportation cost cannot compete with importers base in Southern Thailand. They import directly from the Peninsular so that no freight charge from vessel. The customers are the manufacturing industry, retailers for construction and land developers.

The customer will be divided into two groups. The construction customers are all around Thailand. They have only a few branches so the company has to find the new potential customers to win-win strategy. For the manufacturing industry, they consume a lot so that they made purchasing only one time for at least two months.

(4) Positioning

The company provides high quality products in the market. It is at lower price than the competitors when compared with the defect items. These are the advantages to compete with the competitors. The customer image of our company in the graph below:

Imag Thai Timber M.I.C. Timher Forest Siam Forest Sang Cn. Service

Figure 5.1. Customers image the importers.

(5) Human Resource Management

As the company needs to increase the revenue and market share. We are recognizing that they compete through the people they employ: the managers and operational staff who create the service and quality in the customer's terms. One way in which this can be achieved is through the relationship between marketing concept and human resource concept.

The radical change in the market environments faced by companies, accompanied by equally radical change in the role of marketing in organization, is placing increasing emphasis on the customer satisfaction with the implement effectively marketing strategies of service and quality.

The company organization Chart

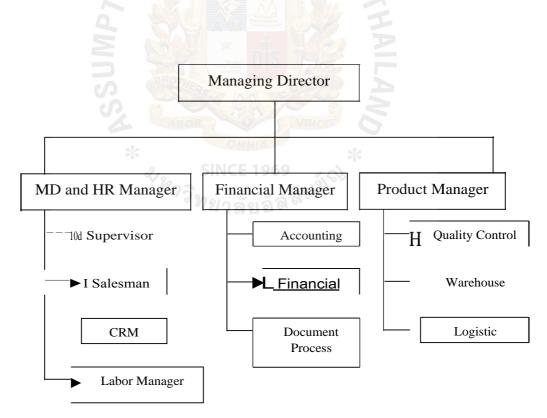


Figure 5.2. Organization Chart.

#### (6) Supporting in Selling

The company provides the car for all salesmen to keep in touch with all customers and find the new potential customers with the cost of oil, allowance cost, entertain cost, etc. As the company wants to have close relationships with customers. We support the CRM for all to increase more revenue although we know that the cost will increase but the company want customers to know that we are responsible all for problems, responsible the customers need. In the near future, the salesmen can check the on line stock to support the one time order. For example the salesman is in Chiang Mai, can check the stock that can be sold to the customer directly without any check with the warehouse manager again. And in the near future, the customers can pay the invoice by e-payment from www.timberforest.com that we will make a contract with Commercial Bank so it is very easy for checking the payment of customers. The operation cost of company also decreases.

Press tour will show the quality timber and the operation cost to make sure that the customers will get the good quality with the lower price. They will know that the timbers are in indoor warehouses, that do not have effect on the rainy or sunshine.

#### Service

Service is the important factor for marketing. We accept the price of sawn timber down due to the warrantee quality products. The customers can claim the defective product or reject the whole product without transport expense. They can claim the quality timber by deducting the price of invoice at that time. This is the main factor to compete with competitors.

## m.. Gabne library. Ali

#### VI. MARKETING PLAN IMPLEMENTATION AND EVALUATION

#### 6.1 Action plan programs

From the proposed marketing strategy, we have the actions as follows:

Product

(1) Quality Control (QC), as the sawn timber is the natural product that cannot be control from the trees it can make more control in the processing. The company representatives will stop the processing after they found that the defective products are coming out of the machines. The company aims to control the defective products by not more than 5% of grand total. In the defective products, the company will set up the different grades into A, B, C, D grades with the different prices. It means that the customers will know the coming product grades.

(2) New sources of sawn timber

The company aims to import the sawn timber from Papua New Guinea in the first quarter of the 2005 and from Brazil in the third quarter of 2005. Our company aims to cover all customers' need that consumes species to suitable the particular job.

(3) Related product

Our company can provide the related products to customers such as plywood, nail. The marketing department is assigned to continue study for the new interested market.

(4) Warehouse

In the first quarter of 2005, the company will rent one more warehouse to keep the stock the meet the local demand. After importing the PNG sawn timber, the company has the biggest space in indoor warehouses.

#### Service

(1) Payment

The company will contact with the commercial bank for e-payment via company website thru Internet. As the aim of company is to satisfy customer, the company will be the first company in this product.

(2) Coming product

The company sent customers the pictures of product via Internet. So the customer knows whether the quality of coming products is acceptable or unacceptable. They can reject the product the first time they saw the pictures or they can order more quantity of product in case if they are satisfied on quality.

(3) EDI process

The company plans to implement EDI technology that can save time and money and improve the quality of data. The EDI brings the department of company close together as they define their responsibility to each other and create win/win business. The benefits of EDI that the company can take advantage are:

(a) Direct benefit SINCE 196

- (1) Reduce errors brought about rekeying and misreading documents.
- (2) Eliminates the necessity to print business document.
- (3) Cut down administration overheads, postage and paper costs.
- (4) Speeds up and simplifies business process, such as receiving order.

(5) Shorter business cycle, such as elimination of document preparation, postal delays and paper processing.

(b) Indirect benefits

(1) Shorter business cycles can provide improvements in working capital utilization.

(2) Shorter procurement cycles can produce a reduction in sawn timber stock.

(3) EDI can be used to deliver important sawn timber and stock to prospective customers thus customer service.

(4) EDI ordering and invoicing payment systems can provide the opportunity to improve purchasing and payment terms.

#### Human Resource Management

(1) Recruitment

The company will search the new graduated student from sources that are suitable for the timber job. We plan to hire one more sales people to make the close relationship with customers. As the company knows that new employees cannot specify the species of timbers. So we will send he/she to the forestry department to study the way to inspect species.

(2) Training

The company will start his/her job from the warehouse employees at least one month to study the style and culture of company products. After that the new employees will be trained in marketing programs to meet the different style of customers. Channel of Distribution

As we target the customers into 2 groups, Construction customers and Manufacture Industry, the sales people will have to find new potential customers and keep in touch with the customer base.

(1) Construction customers; there are a lot of these customers so that the sale people have to contact all possible customers to be the new customers.

(2) Manufacture Industry, sales people will have to know the new style of doorframe, window frame, etc, so that the marketing department can plan to provide the best species to satisfied their demand.

78

The company will use the company trucks to deliver the products to the customers warehouse. In case that trucks are not enough for delivery, the company will hire trucks to deliver products by use the company drivers.

#### Promotion

#### Internal

The company will set up average revenue in each month. For example Mr. A can average volume 1,000,000B/mth on the year 2003 (Commission 0.002% = 2,000B). In case Salesman can sell 1,200,000B in that month, the company will give commission as 1,200,000/1,000,000 = 1.2 then 1.2\*2000 = 2,400B/1,000,000B. In case that salesman cannot reach the target point, for example, 800,000B in that month. So 800,000/1,000,000 = 0.8 then 0.8\*2000 = 1,600B. This is a great opportunity for the sales people to increase their revenue. Our company knows that they can reach this target.

The highest third ranks sales people, the company can provide anything that is reasonable for them without any charge to them. For example, the international air ticket, gift voucher, cash, etc.

#### External

The customers can get the voucher 10,000B per buying volume of 3,000,000B in the next order. In this business field, we know that the customers want the lower price more than the others.

#### **6.2 Marketing Plan Control**

The company will set the weekly report for our sales representatives to report all their activities and problems in order to find the solution in the meeting. Sales manager will monitor all aspect of areas and try the best to solve the problems. On the meeting day, which the company set every Friday, everyone has to send his/her report and present it. The subject for the meeting will cover the following areas:

(A) Sales representatives have to report their sales volumes of each week.

- (B) They have to report their activities of each week.
- (C) The problems in each area will be discussed, analyzed, evaluated.
- (D) The solution for their problems will be worked out.
- (E) The best solution will be evaluated and selected.
- (F) The authority for action to solve the problems will be assigned.
- (G) Monitor the feedback.
- (H)Marketing information such as consumer behavior, competitors, suppliers and the feedback in promotion activities.

#### **6.3 Evaluation**

Now the company is the first rank in quantity import from Sarawak Malaysia with the fourth rank from the whole sources.

Increase sales revenue by 5% in 2005 and 14% of market share.

(A) From the government revenue and expense.

August 2547	August 2546

Revenue 78,700	73,442	(Million Baht)	
Expense 97,742	74,329	(Million Baht)	

Figure 6.1. Government revenue and expense.

So this information shows the government spends more on expense to generate the population income. Unfortunately it is difficult to make an effect on the amount of sawn timber business. This benefit can be split into two categories:

(1) Direct benefit

(a) The end users have more money to spend which they (rural areas) will choose to repair their houses as the first choice.

(b) As manufacturing increases, the country relies more on import of raw material:

sawn timber and steel to construct the plant.

(2) Indirect benefit

(a) Because it is a total business approach it seems to be growing in GDP to the whole economy, so people have more confidence in spending money.

(B) Reduced cost by EDI technology and stock program update.

(a) It can reduce the cost of errors, rekeying, misreading documents, print business document.

(b) Reduce the operating cost for reducing the selling price.

(C) As land developers said the growing rate in land development will increase the property business.

(D) The construction in manufacture industry is growing in **BOI** areas and the new manufacturing industries begin to expand their industry.

So it shows that the high quality and the reasonable price will be the first choice for the customers.

#### 6.4 New related product

Normally, the customer retailers have a lot of related product such as ceramics, nail, steel, furniture, etc. They brought the products from the middleman to supply their

needs, so if the company sell the related products to the customers, our company believes that we have more power to negotiate with them.



#### VII. CONCLUSIONS AND RECOMENDATIONS

#### 7.1 Conclusion

When the crisis first struck in mid 1997 in Thailand, many businesses have suffered from this crisis. Sawn timber business is a in very bad situation as a result of the decline in the property business. During the crisis, the company has the problems with the cash flow and revenue.

This marketing plan is designed for sawn timber company to use in marketing activity in the year 2005. The property business will be better as a result of government policy to stimulate the property business by giving housing credit to the market. This is a good trend for the sawn timber market. Referring to the research of the Government Housing Bank, there is demand and supply in dwelling places in the market and many people can get housing loans and the buyers have more purchasing power with good effect for the sawn timber business.

In this occasion, our company uses SWOT Analysis to formulate the marketing strategy in order to increase our sales volume and company's profit. Our marketing plan uses marketing mix concept by adding more variety species of sawn timber, variety of related products, considering the pricing policy, expanding one more warehouse to keep more stocks to cover all demands, promotion programs in the period. This marketing strategy will be successful not only because of the good marketing mix but also because all the company's marketing activities will be monitored and controlled day to day. The sales person reports all market information (consumer behavior, competitors, suppliers, market situation). The management team will adjust marketing activities, order to compete with competitors in the market and find the solution to achieve the company's objectives. This project will give us the way to create a good marketing plan that will

rarv9 A!!

help the company set its objective, its strategies, its implementations and controls to achieve its objective in each period.

Dic

#### 7.2 Recommendation

Sawn timber is a natural product. We have to find new potential customers to feed the company as the higher cost. So we should be a one stop shop service that provides more products to be the first choice for every customer.

To survive in today's competitive world, marketing strategy is a must in the organization. You should consider the whole picture of the internal and external organization. Factors that implement should consider the implementation steps are described below:

Marketing Strategy: To analyze the market system, SWOT analysis and timber market, marketing strategy, marketing plan implementation and evaluation of the marketing concept and demonstrate its importance in providing a guideline approach to doing business in the face of increasingly competitive and less predictable marketing environments.

Technology: To consider the availability and efficiency of technology basis as well as skilled staff within organizations. In developing the system, the organizations have to have their people trained for using the systems to reduce their cost and save time.

Customer relationship management: The ability to acquire retain, expand and delete customers. Key account management skills are becoming increasingly important, together with the increased focus in many markets on relationship building through customer service. Understanding customers is central to developing a coherent positioning strategy. First, the information about customers can be useful in determining competitive position; and second, the marketing research methods available for collecting that information. The process typically undertaken to identify potential market segments and their needs. Finally, developments in organizing and presenting data were examined.

New product development capability: The ability to innovate and develop the next generation of goods and services. Effective new product development requires both outside and inside capability. It relies on multidisciplinary inputs from marketing, finance, operations and other functional disciplines.

The practice reality faced in building robust marketing strategies is that each company has its own unique strengths and weaknesses with respect to the competition and its own distinctive competence. While the overarching imperative is customer focus, a key factor for competing successfully in ever more competitive markets is to recognize these factors and utilize them to the full.

## APPENDIX A

# EXPORT OF SAWN TIMBER BY SARAWAK

Destination January-December 1994 % change					
	Volume (M3)	FOB Value	Volume	FOB	RM/M3
Thailand	334,187	268,046,727	+101.5	+114.8	802.086
Australia	8,869	10,205,957	+49.7	+80.6	1150.745
Bahrain	1,593	1,217,004	-51.9	-52.0	763.9699
Belgium	6,065	8,965,970	-48.0	-32.6	1478.313
Brunei	17,032	8,691,025	+36.7	+110.4	510.2762
China	110,234	81,916,957	+46.8	+99.9	743.1188
France	3,972	4,720,268	+15.9	+34.7	1188.386
Germany	10,918	19,787,932	-19.3	+29.8	1812.414
Hong Kong	27,056	21,511,590	-22.1	-13.8	795.0765
India	- N	NEKS/7	-100	-100	0
Italy	24,174	34,889,480	+7.2	+40.9	1443.265
Japan	66,423	83,485,251	+35.3	+65.8	1256.873
Kuwait	5,059	5,311,637	+98.5	+171.8	1049.938
Madagascar	610	574,228	-68.4	-70.3	941.3574
Mauritius	3,061	2,837,019	+24.0	+68.4	926.8275
Moracco	4,150	4,764,317	+100	+100	1148.028
Mozambique	S.	K PA X	-100	-100	0
Netherlands	15,793	26,211,051	-12.9	+21.7	1659.663
New Zealand	* 82	157,168	+100	+100	1916.683
Yemen	1,190	1,255,396	-86.3	-76.4	1054.955
Pakistan	_^	<sup>ท</sup> ยาลัยอัล <sup>ล</sup> ์	-100	-100	
Philipines	90,913	42,268,162	+105.8	+142.1	464.9298
Saudi Arabia	20,070	24,011,135	+33.2	+48.1	1196.369
Singapore	121,361	88,926,422	+28.3	+33.3	732.743
South Africa	11,181	10,336,433	+100	+100	924.4641
South Korea	69,187	63,157,469	-38.6	-38.7	912.8517
Spain	1,694	2,343,129	-52.7	-29.2	1383.193
Taiwan	308,210	236,131,689	-9.9	-12.1	766.139
UK	15,536	17,892,143	+8.6	+36.2	1151.657
USA	14,841	15,450,277	+51.7	+64.7	1041.054

Figure A.1. Export of Sawn Timber By Sarawak by 1994.

Destination January-December 1995 % char					
	Volume (M3)	FOB Value	Volume	FOB	RM/M3
Thailand	394,112	313,755,891	+17.9	+17.1	796.1084
Australia	10,324	10,668,471	+16.4	+4.5	1033.366
Bahrain	11,053	8,302,491	+593.8	+582.2	751.1527
Belgium Brunei	5,779	9,198,003	-4.7	+2.6	1591.625
China	120,691	90,858,820	+9.5	+10.9	752.8218
France	2,996	3,407,569	-24.6	-27.8	1137.373
Germany	10,534	20,563,095	-3.5	+3.9	1952.069
Hong Kong India	40,260	30,435,413	+48.8	+41.5	755.9715
Italy	5,153	8,432,857	-78.7	-75.8	1636.495
Japan	77,429	88,783,172	+16.6	+6.3	1146.64
Kuwait	8,115	8,912,356	+60.4	+67.8	1098.257
Madagascar	9		-100	-100	0
Mauritius	1,884	2,221,665	-38.5	-21.7	1179.228
Moracco	1,633	1,770,887	-60.7	-62.8	1084.438
Netherlands	14,524	21,727,993	-8	-17.1	1496.006
New Zealand		IR VIN	-100	-100	0
Yemen	13,318	10,298,324	+1019.2	+720.3	773.2636
Pakistan	×12773	SINCE 1909	- <sup>-</sup>	-	0
Philipines	140,262	62,123,822	+54.3	+47	442.9127
Saudi Arabia	33,929	29,101,235	+25.3	+21.2	857.7098
Singapore	138,219	94,078,474	+13.9	+5.8	680.6479
South Africa	39,135	32,985,779	+250	+219.1	842.8716
South Korea	120,494	110,616,890	. +74.2	+75.1	918.0282
Spain	62	103,944	-96.3	-95.6	1676.516
Taiwan	247,919	171,215,907	-19.6	-27.5	690.6123
UK	13,293	15,255,802	-14.4	-14.7	1147.657
USA	15,319	15,894,048	+3.2	+2.9	1037.538

Export of Sawn Timber By Sarawak

Figure A.2. Export of Sawn Timber By Sarawak by 1995.

Destination January-December 1996 % change					
	Volume (M3)	FOB Value	Volume	FOB	RM/M3
Thailand	405,541	307,495,613	+2.9	-2.0	758.2356
Australia	7,352	8,696,606	-28.8	-18.5	1182.89
Bahrain	5,707	4,033,075	-48.4	-51.4	706.6892
Belgium	3,056	3,780,744	-47.1	-58.9	1237.154
Brunei	21,692	9,055,320	+55.4	+45.7	417.4498
China	52,324	40,816,210	-56.6	-55.1	780.0667
France	3,750	4,093,019	+25.2	+20.1	1091.472
Germany	6,765	9,977,331	-35.8	-51.5	1474.846
Hong Kong	37,036	24,549,680	-8.0	-19.3	662.8599
India	-		-	-	0
Italy	2,226	3,122,919	-56.8	-63.0	1402.929
Japan	63,534	65,144,211	-17.9	-26.6	1025.344
Kuwait	5,692	5,934,730	-29.9	-33.4	1042.644
Madagascar	Z		P.	-	0
Mauritius	1,987	2,242,795	+5.5	+1.0	1128.734
Moracco	S S	ANT DO SE	<u> </u>	-	0
Netherlands	10,053	12,386,233	-30.8	-43.0	1232.093
New Zealand	* 64	113,897	+100	+100	1779.641
Yemen	36,793	25,216,515	+176.3	+144.9	685.3618
Pakistan	_/3	ทยาลัยอัลลิ้	-	-	0
Philipines	240,525	121,044,756	+71.5	+94.8	503.2523
Saudi Arabia	23,575	18,387,120	-30.5	-36.8	779.9415
Singapore	158,383	104,971,152	+14.6	+11.6	662.7678
South Africa	29,258	24,167,550	-25.2	-26.7	826.0151
South Korea	113,011	100,377,959	-6.2	-9.3	888.2141
Spain	841	1,212,295	+1256.5	+1066.3	1441.492
Taiwan	141,425	86,580,896	-43.0	-49.4	612.2036
UK	7,078	7,613,507	-46.8	-50.1	1075.658
USA	6,860	7,472,419	-55.2	-53.0	1089.274

Export of Sawn Timber By Sarawak

Figure A.3. Export of Sawn Timber By Sarawak by 1996.

Destination .	January-Decem	% change			
	Volume (M3)	FOB Value	Volume	FOB	RM/M3
Thailand	268,220	190,195,720	-33.9	-38.1	709.1034
Australia	7,853	10,256,558	+6.8	+17.9	1306.069
Bahrain	9,017	6,381,396	+58.0	+58.2	707.7072
Belgium	2,645	3,741,388	-13.4	-1.0	1414.513
Brunei	13,648	5,489,411	-37.1	-39.4	402.2136
China	49,370	41,288,026	-5.6	+1.2	836.2979
France	3,886	3,926,606	+3.6	-4.1	1010.449
Germany	5,192	8,641,516	-23.3	-13.4	1664.391
Hong Kong	49,254	36,296,115	+33.0	+47.8	736.9171
Italy	18,773	31,582,782	+743.4	+911.3	1682.351
Japan	79,766	90,302,040	+25.5	+38.6	1132.087
Kuwait	5,335	6,022,164	-6.3	+1.5	1128.803
Mauritius	1,497	1,703,659	-24.7	-24.0	1138.049
Netherlands	5,475	6,957,950	-45.5	-43.8	1270.858
New Zealand	60	93,422	-6.3	-18.0	1557.033
Yemen	28,251	17,546,755	-23.2	-30.4	621.1021
Philipines	157,926	79,258,788	-34.3	-34.5	501.873
Saudi Arabia	21,763	17,276,774	-7.7	-6.0	793.8599
Singapore	168,729	SIN 107,262,911	+6.5	+2.2	635.7112
South Africa	23,069	18,704,857	-21.2	-22.6	810.8222
South Korea	104,397	89,499,733	-7.6	-10.8	857.3018
Spain	160	264,492	-81.0	-78.2	1653.075
Taiwan	168,823	114,604,373	+19.4	+32.4	678.8434
UK	5,769	6,303,316	-18.5	-17.2	1092.618
USA	9,289	10,238,271	+35.4	+37.0	1102.193

Export of Sawn Timber By Sarawak

Figure A.4. Export of Sawn Timber By Sarawak by 1997.

## St. Gabriel's Library, Au

Destination January-December 1998 % change					
	Volume (M3)	FOB Value	Volume	FOB	RM/M3
Thailand	128,898	79,672,083	-51.9	-58.1	618.1018
Australia	8,060	12,389,290	+2.6	+20.8	1537.133
Bahrain	7,273	6,148,139	-19.3	-3.7	845.3374
Belgium	2,100	3,265,649	-20.6	-12.7	1555.071
Brunei	7,894	2,515,708	-42.2	-54.2	318.6861
China	93,081	77,329,727	-88.5	+87.3	830.7789
France	6,435	7,008,689	+65.6	+78.5	1089.151
Germany	5,694	13,689,168	+9.7	+58.4	2404.139
Hong Kong	41,263	49,270,427	-16.2	+35.7	1194.058
Italy	13,510	34,569,302	-30.0	+9.5	2558.794
Japan	41,290	51,633,854	-48.2	-42.8	1250.517
Kuwait	2,262	2,508,620	-57.6	-58.3	1109.027
Mauritius	2,317	2,324,580	+54.8	+36.4	1003.271
Netherlands	7,362	12,602,074	+34.5	+81.1	1711.773
New Zealand	17	43,230	-71.7	-53.7	2542.941
Yemen	63,206	36,689,313	+123.7	+109.1	580.472
Philipines	147,232	75,735,054	-6.8	-4.4	514.3926
Saudi Arabia	18,613	15,847,111	-14.5	-8.3	851.4002
Singapore	115,796	SIN 74,727,508	-31.4	-30.3	645.3376
South Africa	27,762	20,755,362	+20.3	+11.0	747.6177
South Korea	48,297	35,067,113	-53.7	-60.8	726.0723
Spain	90	251,197	-43.8	-5.0	2791.078
Taiwan	207,631	121,755,633	+23.0	+6.2	586.4039
UK	4,055	5,542,807	-29.7	-12.1	1366.907
USA	6,673	7,753,071	-28.2	-24.3	1161.857

Export of Sawn Timber By Sarawak

Figure A.S. Export of Sawn Timber By Sarawak by 1998.

Destination January-December 1999			% change		
	Volume (M3)	FOB Value	Volume	FOB	RM/M3
Thailand	152,691	109,532,902	+18.5	+37.5	717.3501
Australia	4,180	6,262,444	-48.1	-49.5	1498.192
Bahrain	5,411	4,650,061	-25.6	-24.4	859.3718
Belgium	2,703	4,523,887	+28.7	+38.5	1673.654
Brunei	2,933	1,446,185	-62.8	-42.5	493.0736
China	82,265	75,779,325	-11.6	-2.0	921.1612
France	6,407	7,975,530	-0.4	+13.8	1244.815
Germany	4,318	9,737,884	-24.2	-28.9	2255.184
Hong Kong	48,146	51,021,771	+16.7	+3.6	1059.73
Italy	4,087	9,915,082	-68.9	-71.3	2426.005
Japan	35,696	47,543,204	+13.5	-7.9	1331.892
Kuwait	4,954	6,347,088	+119.0	+153.0	1281.205
Mauritius	2,528	2,157,109	+9.1	-7.2	853.2868
Netherlands	5,954	9,995,752	-19.1	-20.7	1678.83
New Zealand			-100.0	-100.0	0
Yemen	34,592	20,946,584	-45.3	-42.9	605.5326
Philipines	183,089	103,259,124	+24.4	+36.3	563.9832
Saudi Arabia	17,036	15,609,254	-8.5	-1.5	916.2511
Singapore	67,091	47,565,076	-42.1	-36.3	708.9636
South Africa	15,423	11,494,913	-44.4	-44.6	745.3098
South Korea	63,664	50,089,954	+31.8	+42.8	786.7862
Spain	167	399,368	+85.6	+59.0	2391.425
Taiwan	161,446	102,805,449	-22.2	-15.6	636.7792
UK	3,084	4,654,274	-23.9	-16.0	1509.168
USA	7,027	7,445,012	+5.3	-4.0	1059.487

Figure A.6. Export of Sawn Timber By Sarawak by 1999.

Destination January-December 2000			% change	1	
	Volume (M3)	FOB Value	Volume	FOB	RM/M3
Thailand	200,411	143,756,322	+31.3	+31.2	717.3075
Australia	5,061	7,155,883	+21.1	+14.3	1413.927
Bahrain	6,702	6,176,937	+23.9	+32.8	921.6558
Belgium	1,574	2,631,929	-41.8	-41.8	1672.128
Brunei	1,521	519,261	-48.1	-64.1	341.3945
China	94,531	96,410,531	+14.9	+27.2	1019.883
France	6,637	8,219,776	+3.6	+3.1	1238.478
Germany	1,987	4,672,724	-54.0	-52.0	2351.648
Hong Kong	49,689	55,465,470	+3.2	+8.7	1116.252
Italy	3,507	8,145,304	-14.2	-17.8	2322.585
Japan	36,964	55,671,352	+3.6	+17.1	1506.097
Kuwait	3,577	4,955,528	-27.8	-21.9	1385.387
Mauritius	1,467	1,306,546	-42.0	-39.4	890.6244
Netherlands	6,557	10,853,058	+10.1	+8.6	1655.187
New Zealand	66	58,281	+100	+100	883.0455
Yemen	85,756	59,627,407	+147.9	+184.7	695.3147
Philipines	208,189	111,709,614	13.7	+8.2	536.5779
Saudi Arabia	33,955	27,655,108	99.3	+77.2	814.4635
Singapore	77,576	54,957,933	+15.6	+15.5	708.4399
South Africa	11,579	8,340,149	-24.9	-27.4	720.2823
South Korea	61,844	46,468,852	-2.9	-7.9	751.3882
Spain	_	_	-100	-100	0
Taiwan	177,469	125,118,475	+9.9	+21.7	705.0159
UK	1,689	2,025,219	-45.2	-56.5	1199.064
USA	8,351	12,582,533	+18.8	+69.0	1506.71

Figure A.7. Export of Sawn Timber By Sarawak by 2000.

Destination January-December 2001			% change		· · · · · · · · · · · · · · · · · · ·
	Volume (M3)	FOB Value	Volume	FOB	RM/M3
Thailand	234,146	162,507,047	+16.8	+13.0	694.0415
Australia	3,426	4,865,994	-32.3	-32.0	1420.313
Bahrain	9,064	7,653,063	-35.2	-23.9	844.3362
Belgium	1,216	2,702,272	-22.7	-35.3	2222.263
Brunei	2,895	740,295	+90.3	+42.6	255.715
China	89,479	82,679,531	-5.3	-14.2	924.0104
France	2,312	2,768,606	-65.2	+66.3	1197.494
Germany	2,548	5,278,871	+28.2	+13.0	2071.77
Hong Kong	37,782	46,906,383	-24.0	-15.4	1241.501
Italy	4,393	9,227,179	+25.3	+13.3	2100.428
Japan	36,126	48,254,159	-2.3	-13.3	1335.718
Kuwait	3,317	3,834,737	-7.3	-22.6	1156.086
Netherlands	5,257	7,702,803	-19.8	-29.0	1465.247
New Zealand	46	40,008	-30.3	-31.4	869.7391
Yemen	70,370	53,574,719	-17.9	-10.2	761.329
Philipines	173,738	80,545,666	-16.5	-27.9	463.6042
Saudi Arabia	23,724	17,506,284	-30.1	-36.7	737.9145
Singapore	64,836	45,412,882	-16.4	-17.4	700.427
South Africa	17,037	12,383,462	+47.1	+48.5	726.857
South Korea	64,456	46,057,489	+4.2	-0.2	714.557
Spain	163	365,197	+100.0	+100.0	2240.472
Taiwan	130,066	77,592,203	-26.7	-38.0	596.5602
UK	2,667	3,128,833	+57.9	+54.5	1173.166
USA	1,809	2,900,761	-78.3	-76.9	1603.516

Figure A.B. Export of Sawn Timber By Sarawak by 2001.

Destination January-December 2002			% change	1	,
	Volume (M3)	FOB Value	Volume	FOB	RM/M3
Thailand	268,764	189,029,973	+14.8	+16.3	703.3307
Australia	4,738	6,676,811	+38.3	+37.2	1409.205
Bahrain	4,593	3,629,488	-49.3	-52.6	790.2216
Belgium	757	1,372,865	-37.7	-19.4	1813.56
Brunei	852	215,251	-70.6	-70.9	252.642
China	85,326	83,030,508	-4.6	+0.4	973.0974
France	1,873	2,280,365	-19.0	-17.6	1217.493
Germany	1,367	3,538,968	-46.4	-33.0	2588.857
Hong Kong	23,915	34,229,148	-36.7	-27.0	1431.284
Italy	6,658	15,781,121	+51.6	+71.0	2370.249
Japan	31,422	41,284,150	-13.0	-14.4	1313.861
Kuwait	4,633	5,087,720	+39.7	+32.7	1098.148
Mauritius	4,150	4,313,427	+39.0	+40.8	1039.38
Netherlands	4,806	5,677,409	-8.6	-26.3	1181.317
New Zealand	243	206,065	+428.3	+415.1	848.0041
Yemen	56,128	41,064,461	-20.2	-23.4	731.6217
Philipines	147,599	74,807,646	-15.0	-7.1	506.8303
Saudi Arabia	21,363	17,358,471	-10.0	-0.8	812.5484
Singapore	48,127	33,206,195	-25.8	-26.9	689.9702
South Africa	21,423	SIN 15,490,635	+25.7	+25.1	723.0843
South Korea	56,656	41,164,615	-12.1	-10.6	726.5711
Spain	_		-100.0	-100.0	0
Taiwan	139,894	94,226,721	+7.6	+21.4	673.558
UK	2,632	3,012,116	-1.3	-3.7	1144.421
USA	1,521	2,289,462	-15.9	-21.1	1505.235

Figure A.9. Export of Sawn Timber By Sarawak by 2002.

Destination January-December 2003			% change		
	Volume (M3)	FOB Value	Volume	FOB	RM/M3
Thailand	316,221	236,780,302	+17.6	+25.2	748.7811
Australia	5,370	7,655,175	+41.6	+42.0	1425.545
Bahrain	9,349	8,242,503	+103.5	+127	881.6454
Belgium	884	1,650,259	+16.8	+20	1866.809
Brunei	388	96,751	-55.3	-61	249.3582
China	84,167	71,161,422	+21.1	+2.2	845.4789
France	1,195	1,382,801	-49.2	-64.5	1157.156
Germany	1,663	4,140,465	+129.4	+181.3	2489.756
Hong Kong	16,858	16,618,171	+80.5	+70	985.7736
Italy	5,502	13,495,324	+10.1	+13.6	2452.803
Japan	20,809	27,301,056	-55.9	-42.1	1311.983
Kuwait	4,546	4,722,899	+271.7	+310.2	1038.913
Mauritius	6,606	7,459,820	+179.1	+293	1129.249
Netherlands	4,457	7,067,925	-88.4	-76	1585.803
New Zealand	158	121,243	-98.3	-98.7	767.3608
Yemen	67,249	51,266,808	+293.8	+281	762.3431
Philipines	106,037	55,509,701	+38.4	-1	523.4937
Saudi Arabia	19,646	16,741,921	+61.4	+50.2	852.1796
Singapore	46,629	36,752,899	+122.2	+149.7	788.1983
South Africa	21,169	SIN 17,408,515	+166.0	+186.8	822.3589
South Korea	52,064	37,486,130	+99.0	+95.1	720.001
Spain	16	20,000	+100.0	+100.7	1250
Taiwan	149,605	108,204,562	+140.6	+130.4	723.2684
UK	2,369	3,374,894	+284.0	+243.7	1424.607
USA	778	1,027,199	-97.2	-94.4	1320.307

Figure A.10. Export of Sawn Timber By Sarawak by 2003.

	Export of Major Timber Products By Sarawak			
	January-Decem	ber 1994	% change	
Product	Volume M3	FOB Value	Volume	FOB
Logs	8,417,201	2,543,445,118	-7.5	-10.9
Sawntimber	1,336,222	1,118,749,919	+20.9	+29.1
Plywood	1,254,706	1,366,046,425	+42.4	+36.6
Moulding	n.a.	21,305,118	n.a.	-16.0
Veneer	391,070	422,118,339	+26.7	+33.3

# Export of Major Timber Products By Sarawak

Figure A.11. Export of Sawn Timber By Sarawak by 1994.

	Export of Major	Timber Products E	By Sarawak	
	January-December	er 1995	% change	
Product	Volume M3 F0	OB Value (RM)	Volume	FOB
Logs	7,744,930	2,262,206,949	-8.0	-11.1
Sawntimber	1,520,622	1,201,208,239	+13.8	+7.4
Plywood	1,613,024	1,601,394,392	+28.6	+17.2
Moulding	n.a.	14,155,192	n.a.	+37.8
Veneer	394,232	360,063,022	0.8	-14.7
			S S	

Figure A.12. Export of Sawn Timber By Sarawak by 1995.

Export of Major Timber Products By Sarawak January-December 1996 % change

			/o enange	
Product	Volume M3	FOB Value (RM)	Volume	FOB
Logs	6,889,228	2,261,343,154	-11.0	-0.04
Sawntimber	1,404,680	1,014,178,680	-7.6	-15.6
Plywood	1,935,842	2,036,803,855	+20.0	+27.2
Moulding	n.a.	16,976,867	n.a.	+19.9
Veneer	458,652	407,595,409	+16.3	+13.2

Figure A.13. Export of Sawn Timber By Sarawak by 1996.

	Export of Major Timber Products By Sarawak			
	January-Decem	ber 1997	% change	
Product	Volume M3	FOB Value (RM	Volume	FOB
Logs	6,237,281	2,274,612,241	-9.5	+0.6
Sawntimber	1,248,606	930,307,516	-11.1	-8.3
Plywood	1,914,176	2,069,609,686	-1.1	+1.6
Moulding	n.a.	22,908,146	n.a.	+34.9
Veneer	576,371	503,042,163	+25.7	+23.4

Figure A.14. Export of Sawn Timber By Sarawak by 1997.

	Export of Major T	imber Products B	y Sarawak	
	January-December	r 1998	% change	
Product	Volume M3 FC	B Value (RM)	Volume	FOB
Logs	5,006,017	1,714,727,229	-19.7	-24.6
Sawntimber	1,073,090	799,754,408	-14.1	-14.1
Plywood	2,104,325	1,949,270,112	+9.9	-5.8
Moulding	n.a.	34,547,837	n.a.	+50.8
Veneer	537,814	404,598,697	-6.2	-19.4

Figure A.15. Export of Sawn Timber By Sarawak by 1998.

ทยาลัยอัล<sup>ิส</sup>

Export of Major Timber Products By Sarawak January-December 1999 % change

	• and any 2 • • • • • •		/	
Product	Volume M3	FOB Value (RM)	Volume	FOB
Logs	5,939,711	2,327,882,092	+18.7	+35.8
Sawntimber	963,057	747,508,247	+10.3	-6.5
Plywood	2,116,820	2,521,253,254	+0.6	+29.3
Moulding	n.a.	45,510,278	n.a.	+31.7
Veneer	546,057	462,121,349	+1.5	+14.2

Figure A.16. Export of Sawn Timber By Sarawak by 1999.

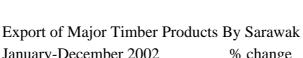
	Export of Majo	r Timber Products I	By Sarawak	
	January-Decem	ber 2000	% change	
Product	Volume M3	FOB Value RM	Volume	FOB
Logs	6,105,793	2,326,144,024	+2.8	-0.1
Sawntimber	1,143,545	896,941,397	+18.7	+20.0
Plywood	2,136,686	2,366,956,885	+0.9	-6.1
Moulding	n.a.	40,577,123	n.a.	-10.8
Veneer	562,392	437,948,309	+3.0	-5.2

Figure A.17. Export of Sawn Timber By Sarawak by 2000.

	Export of Major '	Timber Products B	y Sarawak	
	January-December	er 2001	% change	
Product	Volume M3 F	OB Value RM	Volume	FOB
Logs	4,764,422	1,492,504,359	-22.0	-36.
Sawntimber	1,037,442	764,976,422	3	-14.
Plywood	2 240 613	2 157 756 778	+1 9	-8

Logs	4,764,422	1,492,504,359	-22.0	-36.8
Sawntimber	1,037,442	764,976,422	3	-14.7
Plywood	2,240,613	2,157,756,778	+4.9	-8.8
Moulding	n.a.	41,485,831	0.0	+2.2
Veneer	512,513	336,106,670	-8.9	-23.3

Figure A.18. Export of Sawn Timber By Sarawak by 2001.



	January-Decem	001 2002	70 change	
Product	Volume M3	FOB Value (RM)	Volume	FOB
Logs	4,517,007	1,641,017,661	-5.2	+10.0
Sawntimber	986,946	757,589,513	-4.9	-1.0
Plywood	2,370,970	2,444,601,571	+5.8	+13.3
Moulding	n.a.	38,915,407	n.a.	-6.2
Veneer	456,624	280,782,663	-10.9	-16.5

Figure A.19. Export of Sawn Timber By Sarawak by 2002.

Export of Major Timber Products By Sarawak					
	January-December 2003 % change				
Product	Volume M3	FOB Value (RM)	Volume	FOB	
Logs	4,741,497	1,689,457,010	+5.0	+3.0	
Sawntimber	999,006	784,383,149	+1.2	+3.5	
Plywood	2,594,001	2,699,504,514	+9.4	+10.4	
Moulding	n.a.	45,785,044	n.a.	+17.7	
Veneer	320,674	212,230,346	-29.8	-24.4	

Figure A.20. Export of Sawn Timber By Sarawak by 2003.



#### **BIBLIOGRAPHY**

#### **English References**

- 1. Kotler, P. Marketing Management: Analysis, Planning, Implementation and Control. (9<sup>th</sup> ed.). Upper Sadder River, NJ: Prentice Hall, 1997.
- 2. Kolter, P. Kotler on Marketing: How to Create, Win and Dominate Markets. London, UK: Omnia Books, 1999.
- 3. Kotler, P. Marketing Management (Millennium ed.). Upper Sadder River, NJ: Prentice Hall, 2000.
- 4. Sarawak Timber Industry Development Corporation Kuching 1999.
- 5. Burnett, J. & Moriarty, S. Introduction to Marketing Communications. Upper Sadder River, NJ: Prentice Hall, 1998.
- 6. Aaker, D.A. Managing Brand Equity. New York, NY: Free Press, 1991.
- 7. Solomon, M. Consumer Behavior (4<sup>th</sup> ed.). Upper Saddler River, NJ: Prentice Hall, 1999.
- 8. Knapp, D.E. The Brand Mindset. New York, NY: McGraw Hill, 1998.

#### **Thai References**

- 1. กิ่งรัก อิงคะวัต. บริหาร "แบรนค์" อย่างไรให้ยั่งยืน. นิตยาสารโปรคักทิวิตี้ เวิลด์, กรกฎาคม-สิงหาคม 2546.
- 2. เสรี วงษ์มณฑา. ครบเครื่องเรื่องการสื่อสารการตลาด. กรุงเทพ.2540
- 3. SMEs Today. ปีที่ 2 เล่มที่24 เดือน กันยายน 2547.
- 4. SMEs Today. ปีที่ 2 เล่มที่25 เดือน สิงหาคม 2547.
- 5. ธนาการอาการสงเกราะห์ และ Agency for Real Estate Affairs. เอกสารประกอบการสัมมนา ทิศ ทางที่อยู่อาศัย พ.ศ.2545.
- 6. อาคารและที่ดิน. January 2547

7. ธนาคารอาการสงเคราะห์ วารสารราย 3เดือน ปีที่6 ฉบับที่22 เดือนกรกฎาคม-กันยายน 2544.

#### Web Site References

- 1.www.malaysiahardwood.com
- 2.www.mtc.com.my
- 3.www.ghb.co.th
- 4.www.sarawakonline.com



# St. Gabriel's Library, Au

