The Impact of Market Orientation and its Strategic Antecedents on Business Performance: Replication, Corroboration, and Extension of Recent Structural Equation Results

Gregory K. Brown

A dissertation submitted in partial fulfillment of
the requirements for the degree of

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Abstract

This study investigates the market orientation construct and its measurement through a survey administered to 790 automotive parts manufacturers in Thailand. 203 useable responses were received representing a response rate of 25.7 percent. This research is significant in that it adds a non-US context to the body of knowledge, and specifically to the previous work of Grewal and Tansuhaj (2001) by considering firms in a single industry: automotive parts manufacturers.

Contributions of this study include: 1) replicates the market orientation business performance relationship established by Narver and Slater (1990), and Jaworski and Kohli (1993) in the context of the automotive parts industry in Thailand using Market Orientation scales developed by both Deshpandé and Farley (1996) and Pelham and Wilson (1996); 2) investigates the extent that common method variance inflates observed relationships between market orientation and business performance; 3) analyzes the role played by strategic antecedents to market orientation including: imitative capability, strategic flexibility, product quality, future orientation, interdepartmental conflict, and top management emphasis; 4) supplies contemporary evidence of the link between market orientation and both objective and subjective performance; 5) confirms the existence of a reciprocal relationship between market orientation and performance; 6) develops a failure prediction model based on Altman (1968) using industry specific financial data to identify which companies surveyed are likely to survive and which are likely to fail in order to ascertain whether differences in market orientation exist between the two groups.

Structural equation modeling results showed a significant positive relationship between market orientation and business performance when measured subjectively; the Pelham and Wilson (1996) scale is more strongly associated with business performance than the Deshpandé and Farley (1996) scale. Results were not as strong when business performance was measured objectively. We further found that common method variance inflates observed relationships between market orientation and subjective business performance; however common method variance does not explain the relationship. We found a large reciprocal relationship exists between market orientation and business performance. However, the effect of market orientation on subjective business performance -while strong- is much weaker than that of subjective performance on market orientation. Results also showed a significant relationship between antecedents (strategic flexibility, product quality, future orientation, interdepartmental conflict, and top management emphasis) and market orientation. Absolute sizes of these relationships ranged from 0.2 to 0.6, standardized parameter values. Finally, logistic regression results showed a positive but not significant difference in the market orientation of companies predicted to survive and those predicted to fail.

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I appreciate the assistance of Kasikornbank (formerly Thai Farmers Bank) who in the early stages of this research, provided raw financial data, sourced from the Business Online database, used to develop the failure prediction model.

To all respondent companies who kindly participated in this research, without whose contribution, a quantitative study such as this would not have been possible.

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Gregory K. Brown
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Chapter I

Introduction

This Chapter provides an overview of the dissertation and its organization. It begins with a discussion of origins of the dissertation, and its academic and managerial importance. It continues with a description of the research context and research objectives. The Chapter concludes with an outline of the organization of the dissertation.

1.1 Origins of the Dissertation

Prior to embarking on this research the author spent several years as an executive engaged in business development throughout Southeast Asia and also assisting post-graduate marketing students develop business plans for International *Moot Corp* competitions. Both roles involved interacting with entrepreneurs, executives, and consultants from a broad range of backgrounds and interests. It was evident that some individuals placed a greater emphasis on the importance of marketing than others, fully embracing the marketing concept whilst others were skeptical. This observation sparked an interest in investigating links between marketing and financial performance. It became apparent that firstly, academic research of this nature in Thailand was limited and secondly, international research in this area was somewhat restricted in terms of performance measures used. Coming from a finance background, I was intrigued by the possibility of developing and applying alternative performance measurement criteria to investigate the link between marketing and business performance. Specifically, I set out to develop a financial model that could

be applied on surveyed companies, in much the same way that banks use a credit model to evaluate loan applicants, in order to compare failing companies to surviving companies in terms of the importance of marketing in their performance. Such an approach represented a departure from previous market orientation research. Thus, it was necessary initially to replicate and corroborate previous studies by measuring performance in the same fashion in order to provide a platform upon which this research could be built.

Whilst the above reflects the origin of this dissertation, emphasis on other aspects of the market orientation and performance relationship increased as further gaps in the literature were identified and as new relevant research such as Grewal and Tansuhaj (2001) was published.

1.2 Importance of this Research

The Marketing Science Institute found in a recent survey of its member firms[1] that pressure on executives to demonstrate effectiveness of marketing activities has never been greater. As a result, linking marketing to financial performance and to firm value has been declared the highest priority topic for academic study for 2002-2004 (Marketing Science Institute 2002). Thus, research of the type pursued in this dissertation is justified on the basis of its value to managers.

[1] As of July 2002, there are 67 MSI member firms comprised of Fortune 500 companies such as Coca-Cola, Colgate-Palmolive, Procter & Gamble, Eastman Kodak, Ford Motor Company, and General Motors, etc.

Several scholars (Jaworski and Kohli 1993; Dawes 1999, 2000; Harris 2001) have called for future studies to explore complexities of the relationship between market orientation and alternative dimensions of business performance. Jaworski and Kohli (1993) for example, suggest that performance on one dimension may run counter to performance on other dimensions. Dawes (2000) believes that further research will enable researchers to better understand drivers of company performance and help managers to set priorities in terms of strategic focus.

This study firstly replicates previous research by surveying executives in terms of the market orientation and performance of their firm. In the next phase we begin to incorporate alternative performance dimensions into our study as called for by previous researchers. Objective measures of performance are obtained from financial statements for each firm that responded to our survey. In the final phase of our study we seek to measure business performance in the strongest terms: failure versus survival. Business failure has a dramatic effect on employees, shareholders, creditors, suppliers, and customers. Obtaining a sufficient sample of former executives from failed companies who were willing to be interviewed was considered to be an impossible task. Our eventual design was born from our desire to investigate differences in market orientation of successful versus failed companies. We attempt to improvise and retain the spirit of the original research problem by shifting focus to companies predicted to survive versus those predicted to fail. Thus, this study attempts to bridge the business failure prediction research with that of market orientation to probe how important the marketing concept is to firm survival.

1.3 The Research Context

This study examines the market orientation concept as it relates to the automotive parts industry in Thailand. In recent years, the automotive parts industry in Thailand has gone through what many observers feel are major changes in a political, legal, and economic sense. The Asian economic crisis, takeovers by Japanese firms, and global consolidation of the automobile industry due to over-capacity are issues with which the automotive parts industry in Thailand has had to contend. In this environment, the performance objective for some automotive parts manufacturers is profit or growth whilst for others it is simply survival. The importance of market orientation to business performance has been documented in the strategic management and marketing literatures and ascertaining its applicability to the automotive parts industry in Thailand should provide important pointers to manufacturers as they strive to improve business performance.

1.4 Research Objectives

This study has several specific objectives each designed to contribute to the emerging body of empirical literature on the relationship between market orientation and business performance.

The first objective is to replicate the market orientation performance relationship established by Narver and Slater (1990), and Jaworski and Kohli (1993) in a context specific setting of the automotive parts manufacturing industry, thus controlling for industry effects (Beard and Dess 1979, 1981; Dess, Ireland, and Hitt, 1990).

The second objective is to extend the existing literature regarding the antecedents to market orientation by adding four new variables from the strategic management literature. These variables are imitative capability, strategic flexibility, product quality, and future orientation.

The third objective is to examine the relationship between market orientation and objective measures of business performance. To date, the relationship between market orientation and performance has been claimed largely on the basis of subjective measures of business performance.

The fourth objective is to examine whether a reciprocal structural relationship exists between market orientation and performance. Conventionally, performance is represented as the dependent variable in market orientation research; however, Uncles (2000) considers the possibility that performance raises (or lowers) the level of market orientation, which in turn leads to higher (or lower) performance.

The fifth objective is to measure whether firms predicted to be in danger of failing have a different market orientation from those firms predicted to survive. Several eminent scholars have suggested a market orientation is necessary for competitive survival, however this relationship has previously never been empirically demonstrated. Altman (1993, p. 204) states that "prediction results are more closely representative of the type of firm and of the business environment if a model is developed utilizing a homogenous group of bankrupt companies and data as near to the present as possible". Thus our prediction model will be developed using recent

financial data extracted from statutory accounts that all companies in Thailand are required to submit to government on an annual basis. Specifically, we examine the financial position of a sample of failed and non-failed ("survivor") companies in order to develop a prediction model capable of differentiating which companies to be surveyed in the second phase of the research are likely to fail and which are likely to survive.

1.5 Dissertation Structure

The remainder of this dissertation is structured as follows: Chapter II provides an overview of the automotive industry, the role played by automotive parts manufacturers, and the characteristics of the firms participating in this study. Chapter III summarizes the main streams of literature, including market orientation, performance and business failure prediction, which are central to the research topic. Chapter IV discusses the conceptualization framework and model, which arise from the literature surveyed in Chapter III. This Chapter also focuses on developing seven research questions and 41 hypotheses drawn from the model. Chapter V describes the research methodology employed in this study, which includes research design, questionnaire development, measures used, data preparation procedures, data collection procedures, and the proposed statistical analysis. Chapter VI reports on empirical results and principal findings in relation to the seven research questions proposed. Finally, Chapter VII identifies the contributions made by this study to the market orientation and business failure prediction literatures. This Chapter also offers several important recommendations for managers in the Thai automotive parts

industry, addresses limitations of the study, and proposes some future research directions.

Chapter II

The Automotive Parts Manufacturing Industry in Thailand

The objectives of this Chapter are threefold. Firstly, we shall provide an overview of the automotive parts manufacturing industry. Secondly, we will describe characteristics of the manufacturers participating in this research. Thirdly, we will provide a general background to Thailand, the country in which this study takes place.

2.1 Automotive Parts Manufacturing in Thailand

The automotive industry in Thailand was established in the early 1960s. Several Japanese, European and American firms such as Ford, Mercedes Benz, Fiat, Mitsubishi, Nissan, Toyota, and Isuzu were attracted by government incentives and established joint ventures to assemble passenger cars and commercial vehicles. In the early days, the few local parts manufacturers produced components such as batteries, tires, and leaf springs. Supporting industries such as metalworking were rather basic. Manufacturers, with the exception of the joint ventures mentioned above, merely copied original parts and components for the replacement parts market without appropriate standards of production and quality control. Rapid industry growth during the early days can be attributed to high levels of tariff protection, development of national roads and highways, and growth of the Thai economy.

In an effort to encourage investment and the manufacture of local automotive parts, the Thai government in 1972 implemented a policy that required locally assembled vehicles to have a minimum local content of between two and five percent. Most

Japanese assembly firms responded by setting up affiliated companies in order to protect themselves from being forced to use poor quality local parts and unreliable delivery deadlines. For example, Isuzu Motors Co. (Thailand) Ltd. established Isuzu Engine Manufacturing (Thailand) Co. Ltd. to manufacture pickup truck engines. Following imposition of these local content regulations, the supporting industry grew dramatically.

Throughout the 1970s demand for automobiles in Thailand was sluggish largely due to a slowdown in the agricultural sector, which in turn affected the purchasing power of a large segment of the population. Thus, despite attractive marketing campaigns such as free interest charges or longer leasing period at lower interest rates, automotive sales remained flat. The recovery of the Thai economy in the early 1980s provided an opportunity to launch new vehicle models as a way of stimulating demand. However, the government imposed limits on the number of different models produced as a way to slow increasing costs of production and to enable domestic parts manufacturers to attain economies of scale. To further boost the development of the industry, the government in 1983 raised the local content requirement to 54 percent. This policy gave rise to new investments in automotive parts manufacturing and helped facilitate the transfer of modern technology to the domestic industry.

In the mid-1980s, automotive sales in Thailand stagnated following an economic slowdown caused mainly by a dramatic fall in world agricultural prices. To cushion the impact on the local industry, the government implemented several tax measures, which led to major increases in the price of imported automobiles. In addition, the

Japanese yen appreciated significantly which pushed up the cost of major imported parts. Consequently, the number of Japanese automotive parts suppliers that moved to Thailand to reduce their production costs increased dramatically.

The 1990s saw strong industry growth, which can be explained by five factors. First, the Thai government reduced tariff rates on imported completely built-up vehicles with engine capacity less than 2300cc, which led to lower domestic automotive prices. Second, liberalization of taxi registration boosted the demand for passenger vehicles. Third, the government imposed environmental regulations requiring all new vehicles be fitted with a catalytic converter. This compelled manufacturers to engage in heavy sales promotions including interest-free financing schemes and low down payments in order to dispose of stocks before the deadline. Fourth, automobile manufacturers introduced low-priced vehicles because of tight competition in the market. Fifth, as a result of increased demand, the Thai government allowed assembly plants to expand their capacity. In sum, national economic prosperity, government policy and firm level maneuvering led to dramatic industry growth.

The 1990s saw the Thai automotive market opening up after more than 30 years of protection. The pressure to liberalize came from the General Agreement on Trade and Tariff (GATT) that demanded a reduction in tariff rates on both completely built-up vehicles and completely knocked down kits. Moreover, liberalization of the industry forced local parts makers to improve efficiency, technology and product quality ahead of the World Trade Organization's mandate to remove the 54 percent local content requirement which came into effect in 2000.

The automotive parts industry in Thailand was severely affected by the 1997 economic crisis. According to the Thailand Board of Investment, a government body responsible for promoting and approving foreign direct investment, more than 300 companies, mostly wholly Thai-owned, were taken over by foreign companies (BOI 2002). These acquisitions further accelerated the process of upgrading technological capability and competitiveness. The economic downturn also encouraged automobile manufacturers in Thailand to push for greater export value. As a result, the export value of automobiles, engines and components in 2001 increased to more than 107 billion baht, with year-on-year growth of 29 percent over 2000.

In sum, over the last four decades, focus in the automotive industry in Thailand has shifted from one of import-substitution to export-orientation. Unlike its ASEAN neighbors Malaysia and Indonesia, Thailand resisted the urge to build a national car and has become a key production and assembly center for Japanese, European, and American producers. The industry has evolved from an assembling of imported parts to producing vehicles having an average of 70 percent local parts and is moving toward a goal of 100 percent local content (Wiriyapong 2002). Toyota, for example, aims to source 100 percent components within Thailand by 2006 (BOI 2002).

The automotive industry is Thailand's third largest industry, employing an estimated total workforce of about 200,000 employees. The country's fifteen assembling operations have a combined capacity exceeding one million vehicles per year.

The population of automotive parts manufacturers operating in Thailand is at least 1,186 and could be as large as 1,700. The exact number is subject to conjecture due to government departments providing conflicting information. The Thai Board of Investment state that there are 386 Original Equipment Manufacturers (OEMs), the majority of which are Japanese or Japanese-affiliated companies and that there are at least 800 other suppliers, mostly Thai-owned, small-to-medium size enterprises (BOI 2002). Whereas the Ministry of Industry (2002) suggests there are approximately 1,700 automotive parts suppliers in Thailand, 700 of which are OEM suppliers and 1,000 are other types of suppliers such as Replacement Equipment Manufacturers (REMs). REMs produce automotive parts for replacing defective or worn-out equipment, catering to parts outlets, auto service centers, and garages. OEMs produce parts and components directly for the automobile assembly plants.

The total automotive parts market in Thailand is valued at five billion U.S. dollars annually (BOI 2002). Of this, the OEM market accounts for sales of approximately four billion and the REM market for one billion. Automotive parts manufactured in Thailand include:

- Engines - Diesels, Motorcycles
- Engine Components - Starters, Alternators, Pumps, Filters, Hoses, Gears, Flywheels
- Body Parts – Chasses, Bumpers, Fenders, Hoods, Door Panels
- Brake Systems – Master Cylinders, Drums, Discs, Pads, Linings
- Steering Systems – Steering Wheels, Gears, Columns, Pumps, Linkages
- Suspensions – Shocks, Coils, Ball Joints

- Transmissions – Gears, Casings, Rear Axles, Drive Shafts, Propeller Shafts
- Electrical/Electronics – Alternators, Starters, Speedometers, Lamps, Motors, Flasher Relays
- Interiors/Exteriors – Seats, Mats, Weather Strips, Console Boxes
- Others – Windshields, Seat Belts, Radiators, Wheels, Compressors

2.2 Manufacturers Participating in this Research

We now focus on the 203 manufacturers who participated in this research. Specifically, we describe characteristics of these companies and their top managers, as gathered in the last section in this study's data collection form. Where appropriate, we summarize observations about relationships between pertinent characteristics but make no attempt to offer a formal statistical analysis. The objective is to provide factual data about the manufacturers who participated in this research, not to present or test specific hypotheses.

2.2.1 Characteristics of Surveyed Companies

In terms of company age, our sample is broadly represented with both old and newly established companies as can be seen from Table 2.1. A small number of companies sampled were incorporated at the same time as the automotive parts industry marked its beginnings back in the early 1960s.

Table 2.1 Profile of Surveyed Companies and their Top Managers (n=203)

Companies		Top Managers	
Age		**Age**	
<10 years	66	20-29	3
10-20	58	30-39	24
21-30	38	40-49	77
>30	29	50-59	72
No response	12	60-69	21
Total	203	> 70	2
		No response	4
Employees		Total	203
< 50	35		
50-100	42	**Education Completed**	
100-250	57	Postgraduate degree	72
250-500	36	University Degree	84
500-1,000	15	Vocational or Secondary School	31
>1,000	18	Primary School	15
Total	203	No response	1
		Total	203
Foreign Shareholders		**Language(s) Spoken**	
Yes	87	Thai	163
No	109	English	123
No response	7	Japanese	58
Total	203	Teochiu	54
		Mandarin	15
		Other	9

The number of employees in companies surveyed varies enormously as one would expect from a sectoral study requiring a representative sample from a cross-section of the entire industry. The official definition of small and medium-sized enterprises (SMEs) varies throughout Asia from country to country and is based either on the number of employees or the amount of invested capital or turnover. In 1998, the Thai Ministry of Industry reviewed the definition of SMEs in collaboration with other government ministries, banks, agencies and departments, private sector and technical experts to arrive at a classification of enterprises based only on the value of fixed assets (Allal 1999). Small enterprises are defined as those having fixed assets less than 10 million baht and a medium enterprise as one having between 10 and 50 million baht (Sevilla and Soonthornthada 2000). On that basis, 76 percent of our

sample is classified as either small or medium sized enterprises. (As an aside, the European Union (EU) defines medium-sized enterprises as having fewer than 250 employees and small enterprises less than 50. Thus, on the basis of the EU definition, Table 2.1 reveals 66 percent of our sample could be regarded to be small or medium sized enterprises).

In terms of level of foreign ownership, as can be seen from Table 2.1 a large proportion (42.9 percent) of our sample consist of companies with offshore investment. This foreign ownership ranges from 1 percent equity to 100 percent, with a mean of 59.9 percent and standard deviation of 32.3 percent.

In terms of financial position, we were able to obtain audited financial statements for 186 of the 203 companies surveyed. Note that the following represent original raw data and where appropriate outliers were excluded during the analysis phase of the research. Revenues range from zero to 15.5 billion baht. Mean revenue is 472.1 million baht compared to median of 90.8 million. Earnings range from a 1.3 billion baht profit to a six billion baht loss. Mean profit is 31.3 million loss whilst median profit is 129.9 million baht. Total assets range from 740,000 to six billion baht. Mean total assets are 454.9 million compared to median assets of 129.9 million.

Table 2.2 Audited Financial Position of Surveyed Companies (Thai Baht '000)

	Minimum	Maximum	Mean	Median
Sales Revenues	0	15,546,390	472,110	90,790
Net Profit after tax	-6,018,350	1,265,270	-31,320	720
Total Assets	740	6,034,970	454,930	129,920

2.2.2 Management Characteristics

Most top managers (73.4 percent) are between 40 and 60 years of age as seen in Table 2.1. The median age is within the 40-50 years category. Note the term 'top manager' refers to the individual in charge of the company. The top manager may be referred to variously as "CEO", "General Manager", "Managing Director" or "President".

Most top managers in our sample are males (94.1 percent). Most are Thai (76.4 percent), followed by Japanese nationals (18.2 percent). Other top managers (5.4 percent) are foreign nationals from Germany, India, Sri Lanka, France, China, Taiwan and England. In terms of education, most top managers have completed a University degree (76.9 percent) of which nearly half possessed a higher degree as shown in Table 2.1.

In terms of language ability, 74.4 percent of top managers are able to speak two languages whilst 25.6 percent speak three languages or more. As can be seen from Table 2.1, Thai and English are the most common languages spoken followed by Japanese and Teochiu (a Chinese dialect).

2.3 Brief Economic Background to Thailand

Thailand is located in Southeast Asia, sharing borders with Myanmar, Cambodia, Laos, and Malaysia. The country covers an area about 514,000 square kilometers (about the size of France).

The population of Thailand in 2002 is estimated at 60.6 million. Ethnic groups are Thai 75 percent, Chinese 14 percent, and other 11 percent. "Thai" is the national and official language, although ethnic and regional dialects also are spoken whilst English is spoken to a limited extent.

Thailand has its roots as an agriculture society, although several industries have emerged and played a role in its development towards full industrialization. Major industries apart from the automotive sector include: tourism, textiles and garments, agricultural processing, beverages, tobacco, cement, light manufacturing (such as jewelry), electric appliances and components, computers and parts, integrated circuits, furniture, plastics. Natural resources also have played a role in Thailand's development. Thailand is the world's second-largest tungsten producer and third-largest tin producer. Other natural resources include: rubber, tantalum, timber, natural gas, lead, fish, gypsum, lignite, fluorite, and arable land.

In 1977, agriculture represented 24.8 percent of GDP and industry (mining, manufacturing, construction) was 26.1 percent and services 49.1 percent. Two decades later, agriculture represented a much smaller 10.4 percent of GDP whilst industry and services grew to 37.6 percent and 52 percent respectively (East Asia Analytical Unit 2000).

Table 2.3 Key Economic Indicators

Economic Data	1998	1999	2000	2001
GDP per person (USD at PPP)	5,821	6,091	6,457	6,650
GDP (% real change pa)	-10.5	4.4	4.6	1.8
Consumer prices (% change pa)	8.1	0.3	1.6	1.7
Labor costs per hour (USD)	1.1	1.2	1.1	1.0
Recorded unemployment (%)	4.3	4.2	3.6	3.3

Source: http://www.economist.com/countries

Between 1985 and 1995, the economy in Thailand was the fastest growing in the world, averaging almost 9 percent annually. In 1997 this sustained growth was a major factor in Thailand's financial sector becoming the subject of increased speculative pressure by the international financial community. In July of that year the Bank of Thailand floated the national currency (the Thai baht) that had previously been pegged at 25 to the U.S. dollar. In the months that followed currencies collapsed across the region in Indonesia, Philippines, Malaysia and Korea, triggering a great many business failures. The baht reached its lowest point of 56 to the dollar in January 1998 and the economy contracted by 10.5 percent that same year. Thailand entered a recovery stage in 1999, expanding 4.4 percent and grew about the same amount in 2000, largely due to strong exports, which increased about 20 percent in 2000. However an ailing financial sector, the slow pace of corporate debt restructuring, and a softening of global demand slowed growth significantly to 1.8 percent in 2001. Real GDP growth of 5.2 percent was strong in 2002 but the prevailing opinion in 2003 is that whilst the economic crisis is effectively over, the economy continues to struggle.

2.4 Chapter Summary

This Chapter presented a historical overview of the automotive parts manufacturing industry, described companies and senior managers participating in this survey, and summarized the general economic characteristics of Thailand. The next Chapter reviews literature relevant to pursuing our research objectives listed in Section 1.4.

Chapter III

Literature Review

Chapter III reviews literature that is the foundation for this dissertation. The literature is drawn from a variety of disciplines, with emphasis on literature in marketing and finance. The Chapter is divided into four sections, each section relating to a particular construct or group of constructs relevant to this dissertation. The first section discusses literature related to market orientation. The second summarizes literature related to several strategic constructs, which are considered antecedents to market orientation. The third presents literature related to company performance and a last section presents literature related to business failure prediction.

3.1 Review of the Market Orientation Literature

The market orientation literature is immense. Brady and Johnson (2002) in a ANZMAC conference paper believe that the literature base could be as large as 170 articles. Our own search for relevant research on market orientation uncovered over 100 published articles appearing in a diverse set of journals, while an Internet search using Google for the terms "market orientation" and "journal" delivered 6,560 hits. Thus, by any measure, we conclude that the market orientation literature is far too large to permit a summary here of all pertinent research. Rather, what this section attempts to do is to provide some contrasting definitions of market orientation, a summary of seminal and recent (conducted in Thailand) research on market orientation, and some conclusions about what we now know and do not know about market orientation.

3.1.1 Definitions of Market Orientation

Our examination of more than 100 market orientation studies reveals numerous definitions and interpretations of market orientation. For example, Narver and Slater (1990, p. 21) define market orientation as:

> The organization culture that most effectively and efficiently creates the necessary behaviors for the creation of superior value for buyers and, thus, superior performance for the business.

Narver and Slater go on to describe market orientation as comprising three behaviors: customer orientation, competitor orientation, and inter-functional coordination.

Kohli and Jaworski (1990, p. 6) define the concept differently:

> Market orientation is the organization-wide *generation* of market intelligence pertaining to current and future customer needs, *dissemination* of the intelligence across departments, and organization-wide *responsiveness* to it.

Thus, Kohli and Jaworski see market orientation as customer research-based information that is quickly communicated and acted upon across a variety of organizational functions.

Deshpandé and Farley (1996, p. 14) define market orientation more abstractly as:

> The set of cross-functional processes and activities directed at creating and satisfying customers through continuous needs-assessment.

The set of processes and activities can be most easily seen by reference to Deshpandé and Farley's measurement items. Items include monitoring the level of commitment and orientation to serving customer needs; polling end users to assess product quality; routinely measuring customer service; disseminating customer satisfaction data

throughout the firm. As will be seen in Chapter V, we note that all measurement items deal with customers and that only two refer to competition peripherally. Thus, Deshpandé and Farley de-emphasize the competitor orientation component (e.g., collection of intelligence on competitors), which was given equal weighting by Narver and Slater.

Interpretations of market orientation include: "integrated marketing effort", "customer orientation", "market-led", "market focused" and finally "implementing the marketing concept". This last term is a foundation of marketing, which emphasizes coordinating all of a firm's activities to be oriented to the needs of the customer. However, being market oriented is not the same as being marketing oriented. A "marketing orientation" according to Shapiro (1988) is interpreted by many firms to mean getting the marketing department more involved or having the marketing function as the primary focus of the organization. In contrast, market orientation is a much broader concept, involving all functional areas in the organization, not just marketing.

Consistent with the several conceptual definitions and interpretations of market orientation, there is no universally agreed upon operational definition (Uncles, 2000). However, most market orientation studies conducted over the past decade have been based either on the Kohli and Jaworski (1990) or Narver and Slater (1990) measures, or on derivatives of both (Deshpandé and Farley 1996; Pelham and Wilson 1996).

3.1.2 Market Orientation Studies

In a seminal article, Narver and Slater (1990) operationalize market orientation as consisting of three behavioral components:

1. Customer orientation. A sufficient understanding of target buyers, so that continuous superior value can be created for them;
2. Competitor orientation. Understanding short-term strengths and weaknesses and long-term capabilities of both current and potential competitors and
3. Inter-functional coordination. The coordinated utilization of company wide resources for creating superior value for target customers.

In the Narver and Slater study, 113 strategic business units (SBU) of a major corporation's forest product division (commodity and non-commodity businesses) were chosen for the sample. In terms of results, correlations between the market orientation scale and perceived profitability (ROA) are mixed. Specifically, Narver and Slater report a significant and positive regression relationship ($r = .50$, $p < .05$) between market orientation and profitability for specialty SBUs with differentiated products (products perceived to be significantly different in features and benefits), but a significant and negative regression relationship ($r = -7.6$, $p < .05$) for commodity SBUs with undifferentiated products. Despite these results, Narver and Slater conclude that the relationship between market orientation and profitability appears to be positive and moderate. Narver and Slater view market orientation as a continuum, meaning firms that are more market oriented can expect correspondingly better performance than firms who are less market oriented. The study's limited external validity due to the sampling procedure (i.e., all SBUs are from one division of a

company) was a matter of concern. However, results were sufficiently encouraging and significant to call for further research with a larger cross-sectional sample.

Kohli and Jaworski (1990) published another seminal article, using data obtained from 62 field interviews with marketing and non-marketing managers employed in industrial, consumer, and service industries in four U.S. cities. Organizations ranged in size from four employees to tens of thousands, competing in a variety of industrial, consumer, and service industries. Ten business academics at two large U.S. universities also were interviewed. Based on these interviews and a review of the literature, Kohli and Jaworski proposed a formal definition of market orientation as cited earlier. The primary contribution of this work was the development of a conceptual framework comprising four sets of factors: 1) antecedent conditions that promote or discourage a market orientation; 2) the market orientation construct itself; 3) consequences of a market orientation; and 4) moderator variables that either strengthen or weaken the relationship between market orientation and consequences.

In 1993, the two researchers build upon their previous qualitative foundation with an empirical survey of marketing and non-marketing managers (Jaworski and Kohli 1993). The survey collected data from two samples consisting of 222 business units taken from a Dunn and Bradstreet directory and 230 members of the American Marketing Association respectively. The article establishes constructs to identify what is market orientation and examines its effect on employees' morale and on business performance. The article also addresses environmental effects as possible moderators of the market orientation and business performance relationship. Jaworski

and Kohli estimate the market orientation and business performance relationship with a standardized regression coefficient of .23 ($p < .01$) for the sample of business units and a standardized regression coefficient of .36 ($p < .001$) for the sample of American Marketing Association members. Results indicate that market orientation positively affects business performance and that environmental factors have little effect on the robustness of market orientation's relationship to performance. Jaworski and Kohli note that these findings are for subjective judgments of the firm's performance, made by respondents themselves. When Jaworski and Kohli use a more objective measure, market share, market orientation is less strongly related to performance and not significant.

Deshpandé, Farley, and Webster (1993) studied 50 publicly listed Japanese firms and their key customers to measure strength of the relationship between customer orientation and business performance. Their nine-item customer orientation scale was developed on the basis of extensive qualitative interviews and a review of relevant literature, including the efforts of Kohli and Jaworski (1990) and Narver and Slater (1990). Deshpandé, Farley, and Webster found business performance of suppliers to be correlated positively with customers' evaluation of the suppliers' customer orientation (.52, $p < .031$). However, the suppliers' assessment of their own customer orientation did not correlate with their customers' evaluations (.00, $p > .988$).

Deshpandé and Farley (1996) compared their customer orientation scale with the Narver and Slater (1990), and Kohli, Jaworski, and Kumar (1993) market orientation scales to determine to what extent the three scales are similar or complementary.

Deshpandé and Farley reported that the three scales are similar to one another in terms of various validity measures and correlations with performance measures. However, their primary contribution is synthesis of a 10-item measure of market orientation, more parsimonious than the 15-item Narver and Slater scale and the 20-item Kohli, Jaworski, and Kumar measure. Grewal (2001) expressed his belief that the Deshpandé and Farley scale is most appropriate for further examination in Thailand, because it exhibits better psychometric properties and is more parsimonious.

Pelham and Wilson (1996) conducted a longitudinal study of 68 small firms engaged in wholesaling, manufacturing, business services, or construction in the U.S. A primary contribution of this study is the development of market orientation scale suited to small companies (Appiah-Adu and Ranchhod 1997). The scale, based on Narver and Slater's 15-item measure of market orientation consists of nine items and measures "the degree to which an organization exhibits a corporate culture that effectively and efficiently creates value for buyers." Pelham and Wilson (1996) found that firm strategy, firm structure, and the competitive environment had a smaller impact on the performance measures tested in the study than did market orientation. Specifically, the authors report a standardized regression coefficient between market orientation and profitability of .29, significant at $p < .05$. The influence of market orientation on new product success is also significant with a standardized regression coefficient of .24, significant at $p < .05$. The influence of market orientation on a performance measure that combines sales growth, employment growth, and market share is reported to be not significant. Overall, Pelham and Wilson (1996) confirm that market orientation positively influences firm

performance in *small* firms, just as Narver and Slater (1990) and Jaworski and Kohli (1993) showed in their respective studies using *large* firms. The Pelham and Wilson measure of market orientation is particularly useful for our one-industry study, on the grounds that approximately 66 percent of our final sample consists of SMEs.

Grewal and Tansuhaj (2001) examine market orientation after economic turmoil in Thailand, expecting market orientation "to have a negative influence on firm performance after crisis." Grewal and Tansuhaj believe that the qualities making market orientation influential during normal economic conditions lock the firm's strategic planning in place and prevent managers from making changes to react to a crisis. This thought is based on three aspects of market orientation. First, being market oriented means listening and following customers closely. However, Grewal and Tansuhaj warn that following customers too closely may result in becoming locked into applying standard solutions to unique challenges as experienced during a crisis. Such inertia propels firms along in the same direction, making it difficult to shift to strategies that might mitigate or negate effects of the crisis. Second, Grewal and Tansuhaj believe that market orientation is a learning process that enhances a firm's performance during normal times but that such knowledge is not useful in chaotic conditions experienced during a crisis. Third, the human tendency to weigh losses more heavily than gains creates barriers to changing established methods of solving problems.

Results of Grewal and Tansuhaj partially confirm this hypothesis. Their direct relationship between market orientation and performance is negative for firms that

were emerging from the economic crisis in Thailand, one year after the country's currency was devalued. However, this dissertation examines the state of suppliers in the Thailand automobile industry in 2002. By this time, the situation in Thailand had stabilized and passed beyond a condition that could be described as being in crisis, as examined by Grewal and Tansuhaj. Consequently, we expect to see a positive relationship between market orientation and firm performance.

Beyond the negative association between market orientation and performance, another contribution of Grewal and Tansuhaj is application of the market orientation and business performance constructs in an Asian setting. The use of a single Asian market provides three insights into business practices in a non-western context. First, Thailand is culturally different from the U.S. and therefore results provide a useful contrast of managers' attitudes (Hofstede 1980; McGill 1995; Powpaka 1998). Second, to a great extent, businesses in Thailand are managed or controlled by Chinese immigrants or descendents, a condition consistent across other Asian (especially southeast Asian) countries. Third, Thailand is a regional headquarters for many multinational companies, as well as for a large number of regional firms doing business throughout Indochina (see Powpaka 1998, for a discussion on all three factors).

3.1.3 Summary of Market Orientation Literature

In sum, after reviewing the market orientation literature, we believe that most researchers would agree on the following six points.

1. **Antecedents and consequences of market orientation.** Most studies have used research designs that focus on the causes and effects of market orientation. Causes include organizational factors such as structure, climate, interdepartmental conflict and coordination, top management emphasis on market orientation, and motivational reward (Kelley 1992; Ruekert 1992; Jaworski and Kohli 1993). Effects include business performance and employee attitudes (Deshpandé, Farley, and Webster 1993; Jaworski and Kohli 1993; Narver and Slater 1990; Siguaw, Brown, and Widing 1994). Environmental moderators of the relationship between market orientation and its consequences (Narver and Slater 1990; Slater and Narver 1994) also have been the focus of research.

2. **Market orientation as an antecedent to performance.** Two seminal articles established a causal link between market orientation and business performance. Both Kohli and Jaworski (1990) and Narver and Slater (1990) believe that the theoretical basis for linkage is the concept of sustainable competitive advantage (Day and Wensley 1983, 1988; Aaker 1988), the ability of a market-oriented firm to create long-term superior value for its customers. Market orientation provides firms with a united focus to satisfy customers and outperform competitors. Almost all subsequent research studies position market orientation as an antecedent to business performance. However, Uncles (2000) raises the possibility of a reciprocal relationship between the two constructs:

> Conventionally, performance is represented as the dependent variable, but it is reasonable to suppose that performance itself provides a climate for market orientation either to flourish or be undermined. Success breeds success. Performance, be it in terms of profitability or customer service, can be liberating, it may allow senior management to be more open and receptive, to allow risk-taking, and to encourage a free exchange of information and ideas (Uncles 2000, p. iv).

3. **Positive relationship between market orientation and performance.** Since the pioneering efforts of Kohli and Jaworski (1990) and Narver and Slater (1990) most studies have reported a positive relationship between market orientation and performance (e.g., Ruekert 1992; Jaworski and Kohli 1993; Deng and Dart 1994; Slater and Narver 1994; Greenley 1995; Fritz 1996; Pelham and Wilson 1996; Pitt, Caruana, and Berthon 1996; Selnes, Jaworski, and Kohli 1996). Refer Tables 3.1 and 3.3 later in this Chapter for brief descriptions of each of these studies. A few studies report non-significant relationships and a very small number of studies report negative relationships.

4. **Subjective measures of market orientation and performance.** The vast majority of market orientation and performance studies use subjective or opinion measures of performance. Objective or observable performance measures are rarely used and when they are, results are mixed. Jaworski and Kohli (1996) point out that reliance on subjective measures is a limitation of research conducted to date. This issue is discussed in greater detail in Section 3.3, review of the performance literature.

Voss and Voss (2000) point out that common method bias stemming from subjective measures of both market orientation and performance is a possible limitation when examining most market orientation performance results. Collecting self-report data for subjective dependent and independent variables from the same source at a single point in time may exaggerate an expected positive or negative association, just because of the presence of common method variance. This is a limitation potentially present in most survey research to date and is addressed specifically in Chapters IV and VI.

5. **Industry samples.** Most studies (e.g. Narver and Slater 1990; Ruekert 1992; Deng and Dart 1994; Greenley 1995; Fritz 1996; Pelham and Wilson 1996; Selnes, Jaworski, and Kohli 1996) sample companies from a broad cross-section of industries. Relatively few studies focus on a single industry, which limits generalization of results outside the scope of the industry considered. That is, expected and observed relationships between market orientation and performance may differ in within-industry and between-industry settings. In our research, we isolate within-industry variation by adopting a single industry approach.

6. **Broad agreement as to what market orientation is conceptually.** Given over a decade of market orientation research, marketing academics seem to have reached agreement on a conceptual definition of market orientation. Noble, Sinha, and Kumar (2002) illustrate this agreement by describing market orientation as having three "tenets": customer-oriented thinking,

market analysis and understanding, and embedding of the marketing concept throughout an organization. Common agreement on the market orientation concept should improve the construct validity of market orientation measures. In turn, better measures should reduce error variance and make it easier to compare findings across market orientation studies.

3.1.4 Future Research

The 1996 Marketing Science Institute conference on market orientation identified two significant themes warranting further study: the need to consider market orientation at multiple levels, including as a corporate culture and as a strategic orientation, and the need to understand both antecedents and performance consequences of being market oriented (Deshpandé 1999, p. 2). Furthermore, because of its significance to management, continued research into the measurement of market orientation was assigned top priority by the Marketing Science Institute (Deshpandé and Farley 1998). This dissertation focuses on antecedents and consequences of market orientation as well as its measurement.

A recent survey by the Marketing Science Institute of its member firms found that pressure on executives to demonstrate effectiveness of marketing activities has never been greater. As a result, measuring marketing productivity in terms of linking marketing to financial performance and to firm value has been declared the highest priority topic for academic study for 2002-2004 (Marketing Science Institute 2002).

3.2 Strategic Antecedents of Market Orientation

Market orientation research has focused largely on the *consequences* of being market-oriented. In comparison, research on *antecedents* or factors that influence market orientation has been relatively limited (Harris and Piercy 1998; Morgan and Strong 1998; Harris 2000; Pulendran, Speed, and Widing 2000)

Several scholars (Narver and Slater 1990; Jaworski and Kohli 1993; Harris and Piercy 1998) suggest that identification of antecedents, be they management behaviors or organizational capabilities, is vital so that organizations seeking to become more market-oriented may do so. For example, Jaworski and Kohli (1993, p. 65), in their directions for further research state, "it is desirable to assess the role of additional factors in influencing the market orientation of an organization." Pulendran (2000, p. 120) suggests,

> Without a proper diagnosis of these specific forces, managers cannot choose the best methods with which to enhance their current position. The identification of these factors is of critical importance to top management seeking to initiate organizational change processes directed at building market orientation.

However, few studies have responded to these calls for further research -- Morgan and Strong (1998, p. 1052) note "the relative dearth of research investigating such antecedents."

Building on previous conceptual work (Kohli and Jaworski, 1990), Jaworski and Kohli (1993) developed and tested empirically several possible antecedents to market orientation. They found that a top management emphasis on market orientation, reward systems, interdepartmental connectedness, and interdepartmental conflict each

affect market orientation. In contrast, mixed results were obtained for both risk aversion and centralization. Finally, measures of departmentalization and formalization were shown to affect market orientation not at all.

The present study seeks to further our understanding of the antecedents of market orientation firstly by replicating two of the above constructs: top management emphasis on market orientation and interdepartmental conflict. Our replication of antecedents was limited to this number due to space limitations within the questionnaire. Secondly, the present study investigates the role played by four strategically important constructs, namely imitative capability, strategic flexibility, product quality, and future orientation. None of these four constructs has previously been used as an antecedent to market orientation. All six constructs are discussed below.

3.2.1 Top Management Emphasis on Market Orientation

Top management emphasis on market orientation is defined as the extent to which top management reinforce the importance of market orientation. This construct has been described by several researchers as playing an important role in fostering market orientation throughout the organization (Jaworski and Kohli 1993; Pulendran, Speed, and Widing 2000). Likewise, the importance of leadership in shaping the values, culture and style of an organization also has been discussed (Hambrick and Mason 1984; Senge 1990; Nonaka 1991). Felton (1959) suggests the most important ingredient of a market orientation is an appropriate state of mind, and that it is attainable only if "the board of directors, chief executive, and top-echelon executives

appreciate the need to develop this marketing state of mind." Similarly, Levitt (1969) states that the presence of "the right signals from the chief operating officer to the entire corporation regarding its continuing commitment to the marketing concept" facilitates implementation of the marketing concept.

According to Uncles (2000), market orientation is inherently a "managerial concept, with close attention paid to business processes and activities." The commitment of top managers is therefore an essential prerequisite. This view is supported by Webster (1988, p. 37) who indicates that a market orientation originates with top management because "customer-oriented values and beliefs are uniquely the responsibility of top management". Webster (1988) goes on to suggest, "CEOs must give clear signals and establish clear values and beliefs about serving the customer." In other words, top management must not only commit to a market orientation, they also must clearly and enthusiastically communicate their commitment to individuals throughout the organization.

Jaworski and Kohli (1993) look at the empirical relationship between market orientation and the amount of importance that top managers place on being market oriented. The authors report a standardized regression coefficient of .24 ($p < .001$) for both samples, confirming that a positive and significant relationship exists between top management emphasis and market orientation. Jaworski and Kohli conclude that individuals within the organization be encouraged to generate, disseminate and respond to market intelligence. This outcome requires continual reinforcement from top management to employees stressing the need to be sensitive and responsive to

market developments as well as emphasizing the need to track changing markets and share market intelligence with others in the organization.

Selnes, Jaworski, and Kohli (1996) replicate the Jaworski and Kohli study in Scandinavia, using a survey of 237 SBUs in Scandinavia and 222 U.S. based SBUs. The authors report a standardized regression coefficient of 0.21 ($p < .05$) for the Scandinavia sample suggesting a positive and significant relationship exists between top management emphasis and market orientation. The standardized regression coefficient for the U.S. sample is also positive and significant 0.24 ($p < .001$).

Further empirical evidence is provided in two recently published studies. Pulendran, Speed, and Widing (2000) replicate the Jaworski and Kohli study in Australia using a sample of 157 companies from diverse industry settings. The authors report that top management emphasis is significantly related to overall market orientation (standardized regression coefficient = 0.20, $p < 0.02$). Shoham and Rose (2001) replicate the Jaworski and Kohli study in Israel using a sample of 101 firms across four industries including food, plastic, construction inputs, and agricultural inputs. They also establish that top management emphasis is significantly and positively related to market orientation (standardized regression coefficient = .48, $p < .001$).

To summarize, top management emphasis is considered to be an essential prerequisite to establishing a market orientation. However, as an antecedent, this construct has only been tested with the market orientation scale developed by Kohli, Jaworski, and

Kumar (1993). Whether a similar result is achieved using alternative measures of market orientation has not yet been established.

3.2.2 Interdepartmental Conflict

Interdepartmental conflict is defined as tension among departments arising from the incompatibility of actual or desired responses and goals (Raven and Kruglanski 1970; Gaski 1984). Conflict can often be traced to misaligned departmental goals and objectives, and/or inconsistent strategic directives from top management (Carroad and Carroad 1982). Conflict takes on many forms within organizations. It can manifest itself as a confrontation such as strikes and firings. However, it is more routinely associated with interactions of individuals such as attitudes of distrust between departments as they go about their daily activities (Kolb and Putnam 1992).

Interdepartmental conflict has been found to be important for overall organizational success (Smith 1966; Pondy 1967; Thomas 1976, 1992; Katz and Kahn 1978; Evans and Dion 1991; Frazier and Rody 1991). Whilst a small level of conflict may be productive in order to obtain a wide perspective from other functions within an organization, larger amounts of conflict may have a significantly negative affect on performance.

Several authors indicate that interdepartmental conflict may be detrimental to the implementation of the marketing concept (Felton 1959; Levitt 1969; Lusch, Udell, and Laczniak 1976). One reason cited is the desire of individual departments to improve their relative status within the organization. Another reason is that

interdepartmental conflict has the potential to contribute to breakdowns in communication and unproductive rivalry. Both behaviors make it difficult for the organization to embed customer-oriented thinking throughout the various organizational units.

Interdepartmental conflict was explored as a possible antecedent to market orientation by Kohli and Jaworski (1990) and empirically tested by Jaworski and Kohli (1993). Interdepartmental conflict was assessed in terms of routine interactions between departments such as interpersonal communication, compatibility of goals and objectives, and protecting of one's turf. The survey generated two samples consisting of 222 business units extracted from a Dunn and Bradstreet directory and 230 members of the American Marketing Association respectively. The first sample reports a standardized regression coefficient of -.17 ($p < .05$) suggesting a negative relationship between interdepartmental conflict and market orientation. The standardized regression coefficient for the second sample is somewhat larger -.28 ($p < .001$) but consistent with the result of the first sample. The two results support the notion that individuals in organizations where conflict exists are less likely to work with other departments to satisfy customer needs and expectations. Jaworski and Kohli (1993) conclude that interdepartmental conflict significantly reduces the level of market orientation and overall business performance.

Other studies as described in our review of top management emphasis literature review also have replicated the Jaworski and Kohli study of interdepartmental conflict as an antecedent. In their study of U.S and Scandinavian firms, Selnes, Jaworski and

Kohli (1996) find a negative and significant relationship between interdepartmental conflict and market orientation for both of their samples. In Scandinavia, the standardized regression coefficient is -0.32, $p < .01$ and in the U.S. sample the regression coefficient is -.23, $p < .001$. In an Australian study, Pulendran, Speed, and Widing (2000) report that interdepartmental conflict significantly inhibits market orientation, standardized regression coefficient is –0.36, $p < 0.001$. However, Shoham and Rose (2001) in a study of Israeli firms report that the influence of interdepartmental conflict on market orientation is not significant.

To summarize, high levels of interdepartmental conflict can create barriers between departments, affecting the flow of communication and the exchange of information, which inhibits the development of a market orientation. However, like top management emphasis, this variable has been tested only with the market orientation scale developed by Kohli, Jaworski, and Kumar (1993).

3.2.3 Imitative Capability

> An underlying assumption (in the market orientation literature) is that market-driven organizations will develop knowledge, skills, resources, and ultimately **capabilities**, that are rare, heterogeneous, and difficult to imitate.
>
> (Uncles 2000, p. iv, emphasis added)

Organizational competencies or capabilities have been central in corporate strategy discussions. Capabilities in these discussions are defined as complex and intangible bundles of individual skills, input factors, assets, and accumulated knowledge exercised through organizational processes or routines (Amit and Schoemaker 1993;

Day 1994). Examples of capabilities include engineering and technical skills, the ability to manage supplier relationships, and the ability not only to imitate products, but also processes, procedures, and strategies. Schnaars (1994) cites numerous examples of imitation strategies in which later entrants are more successful in achieving competitive advantage by overtaking and ultimately consuming the original innovator. On balance, Schnaars contends that imitation is an effective marketing strategy that may be successfully used to either enter or compete in marketplaces to ultimately gain market leadership.

In an important early article, Levitt (1966) argues that the success of most companies relies more on imitation than on innovation. Research and development geared at innovation can be exceedingly costly, time-consuming, and frustrating and thereby restrict the potential for innovation within a firm. He suggests therefore that even innovative companies must actively engage in "reverse R & D" in order to create their own imitative equivalents of innovative products and processes created by others. In other words, competition may compel firms to look to imitation as a basic survival or growth strategy.

When research and development efforts focus on adapting a product or idea that already exists in another industry or organization, the imitator often places a premium on speed. That is, rapid competitive imitation reduces the competitive advantage of innovators as well as the margins available to all competitors. Levitt contends it is not only vital to catch up with the successful innovator but, more importantly, to do so faster than other would-be imitators who also are working against the clock. Levitt

concludes that being a fast follower is a more dependable strategy than being a first mover.

Only two studies have examined the link between imitative capability and market orientation. Olavarrieta Soto (1997) developed a measure of "imitation capability" based on the use of knowledge for imitation purposes, the willingness and readiness to imitate, and past imitative behaviors. He conducted his study in Chile, using a sample of 116 public companies engaged in either manufacturing or service industries. Olavarrieta Soto reports imitation capability is positively associated with a market orientation (standardized structural path coefficient =.74; $p < 0.001$). In terms of the direct effect of imitation capability on overall firm performance, a positive relationship was found to be significant at the 0.1 level (standardized structural path coefficient = 0.22; $p < 0.057$). Olavarrieta Soto concludes that market oriented firms are more likely to systematically gather, disseminate and interpret information from their markets (i.e., from competitors, customers, and technologies). Moreover, more market-oriented firms tend to develop better imitative skills, to copy the innovations of competitors and offset their lead-time and temporary competitive advantages.

Using a case study approach, Harris (2002) conducted 260 field interviews in 12 separate U.K. service organizations in which a market oriented change effort had occurred (or ended) within the previous six months. His sample ranged from a small regional firm to a very large market leader and included a hotel chain, restaurant groups, retail firms, industrial services firms, and a number of financial service providers. Harris's research objective was to ascertain the extent to which firms differ

in their focus on imitation during market orientation development -- the rationale being that firms identify and mimic key success factors of competitors perceived to be highly market oriented. Harris finds conflicting attitudes within organizations towards the practice of imitating competitors as a strategy. Senior management, strategists and most middle managers perceive imitation to be effective at minimizing relative advantages. However, customer-contact employees and front-line managers tend to view the approach as "old-fashioned, overly conservative and potentially ineffective in the long-term".

Harris (2002) identifies two companies with a "strategic history of defensiveness" and above average sector performance that use imitative capabilities to enhance market orientation in two ways. Firstly, the two firms establish and maintain sophisticated scanning systems to generate timely and incisive information regarding current, future, and potential competitor strategies and tactics. Secondly, the two firms stress that improving market focus occasionally requires the imitation of strategies and tactics that are at odds with traditions of their organizations but are nevertheless essential to negating or reducing the competitive advantage of rivals. Based on these observations, it is reasonable to suggest that where a firm adopts a defensive/follower strategy (Slater and Narver 1993, 1996) and where innovative market leaders dominate the sector, an imitative capability enhances market orientation development.

Harris (2002) concludes that an imitative capability as a means of improving market orientation is consistent with Jaworski and Kohli's (1993) emphasis on responsiveness to market data and also with Narver and Slater's (1990) emphasis on

coordination in organizational response. This is also consistent with Schewe (1996), who indicates that firms that are closer to the customer and that know their markets, competitors and channel members, are more likely to possess a superior imitative capability.

3.2.4 Strategic Flexibility

Harrigan (1985) defines strategic flexibility as "the ability of firms to reposition themselves in a market, change their game plans or dismantle their current strategies…" Other similar definitions of strategic flexibility also appear in the literature.

> The ability of the organization to adapt to substantial, uncertain, and fast-occurring environmental changes that have a meaningful impact on the organization's performance. (Aaker and Mascarenhas 1984)
>
> The ability to precipitate intentional changes, to continuously respond to unanticipated changes, and to adjust to the unexpected consequences of predictable changes. (Bahrami 1992)
>
> The ability of an organization to respond to changes in the environment in a timely and appropriate manner with due regard to the competitive forces in the marketplace. (Das and Elango 1995)
>
> A firm's ability to respond to various demands from dynamic competitive environments. (Sanchez 1995)
>
> The capability of the firm to proact or respond quickly to changing competitive conditions and thereby develop and/or maintain competitive advantage. (Hitt, Keats, and DeMarie 1998)

Thus whilst there is no universally agreed upon definition of strategic flexibility, it is clear that the concept differs from traditional strategic planning which typically involves considering a set of options that fall within narrow limits and yields

predictably defined results. The options likely consist of extrapolations based on what management believes are key dynamics driving the business at the time the strategy is developed. Further evidence of a distinction between traditional strategy formulation and the concept of strategic flexibility is provided by Hayes and Pisano (1994).

> In a stable environment, competitive strategy is about staking out a position, and manufacturing strategy focuses on getting better at the things necessary to defend that position. In a turbulent environment, however, the goal of strategy becomes strategic flexibility. Being world-class is not enough; a company also has to have the capability to switch gears... relatively quickly and with minimal resources.

Many industries are increasingly characterized by instability and volatility. As the environment changes and uncertainty increases, firms must have the capability to change their strategic options. Firms in dynamic, uncertain environments must maintain strategic flexibility (Mascarenhas 1982; Harrigan 1985; Hitt, Keats, and DeMarie 1998). The Thai automotive industry is a good example of such an industry, as illustrated by the following statements:

> The industry must face the realities of a more competitive market since the lifting of the local content regulation will benefit increasingly discerning consumers. …There's going to be a lot of strain. (Leu 1999)

> In Thailand, the competition in all sectors of the (automotive) industry will escalate as more global manufacturers enter the market, despite the drastic market decline caused by the economic crisis in past years. (Charukultharvatch 2001)

Application of strategic flexibility within an organization can take many forms. Examples include rapidly responding to competitor moves; shifting resources such as management and other personnel to different parts of the organization to gain experience in various aspects of the firm's business; or meeting changing customer

requirements by adopting new systems or technologies. Overall strategic flexibility increases the firm's ability to meet sudden, unexpected challenges in an uncertain, changing environment, whether competitive, economic, or regulatory.

In a U.K. study using a qualitative research approach, Whipp, Rosenfeld and Pettigrew (1989) investigate nine firms selected from four mature sectors: merchant banking, automotive manufacturing, life assurance and book publishing. They find that the relatively more successful companies in terms of regenerating themselves and sustaining growth had evidence of a strategic flexibility. The authors conclude that the basis for future strategic flexibility relies on the combined deployment of capital, human resources, structure and technology. They believe that survival and future growth strategies will require greater emphasis on flexibility.

Evans (1991) describes four maneuvers including offensive or defensive, and proactive or reactive. Each maneuver provide the means to achieve strategic flexibility depending upon whether the aim of the firm is to create and seize an initiative or to guard against predatory moves by competitors or to correct past mistakes arising through changes in the environment. Reactive maneuvers can be further divided into offensive or exploitive measures that seek to reap opportunities and leverage advantages brought about by a crisis; and defensive corrective maneuvers that focus on mitigating damage and learning from mistakes.

By necessity, the measurement of any strategic flexibility construct will require a number of different characteristics, and there is no construct that has been agreed

upon in the literature. Grewal and Tansuhaj (2001) measure strategic flexibility by determining whether firms share investments across business units, seek out opportunities arising from variability within their operating environment, are flexible in managing various environmental risks, and versatile in allocating human resources. Grewal and Tansuhaj (2001) hypothesize the greater a firm's strategic flexibility, the higher will be the level of firm performance after crisis. Their findings indicate that unlike market orientation, strategic flexibility is useful when firms need to steer their way out of a crisis (standardized regression coefficient = .60, $p < .01$) and becomes even more important as competitive intensity increases.

We conclude that a strategically flexible organization counters many uncertainties in a dynamic environment by planning for a wider range of possible futures and by rapidly developing an optimal strategy for each unexpected outcome. We agree with Chakraborty (1996) that organizations need "to adopt contingency rather than programmed corporate strategies."

3.2.5 Product Quality

Product quality has been defined as "perceived superiority or excellence in a product as compared with competing alternatives from the perspective of the marketplace" (Garvin 1988; Zeithaml 1988; Sethi, 2000). Superiority or excellence can be achieved along eight dimensions: performance, features, reliability, conformance, durability, serviceability, aesthetics, and perceived quality (Garvin 1987). *Performance* is the primary operating characteristics a product. *Features* are the "bells and whistles" that enhance basic functioning. *Reliability* refers to the probability of a product

malfunctioning within a specified time period. *Conformance* is the degree to which a product's design and operating characteristics meet established standards. *Durability* is a measure of product life. *Serviceability* refers to the speed, courtesy, competence, and ease of repair of a product. *Aesthetics* is a product's look, feel, taste, sound or smell. Finally, *perceived quality* is the image or reputation of a product. Together, the eight dimensions mean that product quality is a strategic choice facing a firm as it decides which dimensions to emphasize and which to downplay.

Sethi (2000) takes a slightly different view of product quality, emphasizing superiority of a product relative to competing products on five dimensions: a*esthetics* is the degree to which a product is attractive in appearance; *performance* refers to how well a product performs its intended function; *life* is the duration for which a product remains usable; *workmanship* refers to how well manufactured a product appears to be; and *safety* underlines the fact that an unsafe product is not a quality product.

Academic research on product quality has tended either to aggregate Garvin's dimensions together or to measure overall perceived quality, both procedures using subjective measures. For example Menon, Jaworski and Kohli (1997) measure overall quality of the firm's products with respect to customer perceptions and competitive comparisons. A number of studies have provided valuable empirical support for a positive quality and profitability relationship. For example, in a study analyzing data obtained from 623 manufacturing businesses, Phillips, Chang and Buzzell (1983) find that higher product quality is positively associated with business performance as measured by market share. Murray and O'Gorman (1994), in a study

of 131 SMEs, find that relative to competitors, high-growth companies were more likely to sell higher or much higher quality products than low-growth companies. Moreover, results from the Strategic Planning Institute's PIMS (Profit Impact of Market Strategy) database, find that higher relative quality is a strong driver of return on investment.

Morgan and Piercy (1998) believe that quality is an antecedent of performance based on depth interviews of marketing and quality managers in 20 SBUs in the U.K. It should be noted that Morgan and Piercy take a broad view by examining quality and not product quality specifically. In their survey research of 567 SBUs, Morgan and Piercy (1998) report positive zero order correlations between senior management quality leadership and market performance (.21, $p < .001$) as well as between quality planning alignment and market performance (.15, $p < .01$), thus providing further empirical evidence of a link between quality and performance. Morgan and Piercy fail to find significant correlations between their quality measures and three measures of financial performance (however, the three correlations were positive).

The importance of product quality in delivering superior value to the customer has become widely recognized among marketing practitioners in recent decades, especially in the U.S. automotive industry. In that industry, U.S. marketing executives watched their market share erode as better-quality Japanese products provided customers with superior value for money. Marketing executives recognize that product quality is critical as suppliers strive to implement a zero defect philosophy within their organization. Ford purchasing managers, for example,

systematically rate suppliers on the basis of quality, and low performers are eliminated. A leading quality management consultant firm in Thailand predicts a substantial increase in the number of clients from the automotive parts industry because manufacturers need to upgrade their product standards in order to do business with an assembler such as General Motors, who are on the verge of relocating a major production plant to Thailand. In the preceding twelve months their number of clients with ongoing quality management programs had increased from 25 to 70 *(Business Day* 1998).

Guinness Brewing recently concluded that consumer perceptions of quality are a major barrier to brand growth worldwide. Market research identified issues considered unique to Guinness in the beer market, such as the perception that Guinness beer is "better in some pubs than in others, or only really good in Ireland". The brewer plans to conduct global technical and marketing initiatives based on product quality by firstly, hiring a technical specialist to ensure consistent standards for the product in all its 150 markets and secondly, communicating to consumers globally the brand's obsession with quality (Mason 2002).

In sum, marketing academics and marketing practitioners believe that product quality influences business performance.

3.2.6 Future Orientation

A future-market focus or "future orientation" is defined by Chandy and Tellis (1998) as the "extent to which a firm emphasizes future customers and competitors relative to current customers and competitors". Future orientation reflects how alert decision makers are to new technologies and to changes among competitors and customers. A future-oriented firm is interested in future profit, future customer segments, and future actions of competitors. A future-oriented firm is more interested in customers who will be the most attractive customers in a year or more from now, compared to less forward thinking companies who are more focused on serving present customers' needs and wants. This latter category is indicative of Fortune 500 top managers, who according to Hamel and Prahalad (1994) are extremely present oriented and devote less than three percent of their time to building a future perspective for their organizations. West and Meyer (1997) indicate that CEOs of public companies may be compelled to make decisions that compromise longer run opportunities in order to produce financial returns in line with market expectations. In this respect, a marketing executive with a nominal commitment to the future is more likely to fund additional brand development of existing product lines than to invest in new product research and development with uncertain future returns.

Our search for empirical studies investigating future orientation and its influence on performance produced scant results. Whilst it is apparent that future oriented firms pay close attention to markets, particularly to future customers and competitors, whether or not this leads to significant higher performance relative to that of less forward thinking firms has not been established. However, in a study of new product

innovation within the computer hardware, photonics, and telecommunication industries, Chandy and Tellis (1998) found a direct and significant relationship (standardized regression coefficient = .34, $p < .01$) between future market focus and a firm's willingness to cannibalize existing products. "Willingness to cannibalize" is defined as "the extent to which a firm is prepared to reduce the actual or potential value of its investments". The authors conclude that firms focused on the present are less likely to cannibalize existing investments than future-oriented firms, which are not as committed to investments made in products, employees or channels unable to generate future profit.

Kitchell (1995) investigates the relationship between future orientation and innovation adoption in machinery and metal work industries in the U.S. She reports a positive relationship between the presence of a future-oriented corporate culture and the adoption of innovative computer-based manufacturing technologies. The author finds that future-oriented firms are, in general, more innovative. Whilst this dissertation does not examine the relationship between innovation and market orientation (as did Atuahene-Gima 1996 and Lukas and Ferrell 2000), it does use the future orientation scale developed by Kitchell (1995) to investigate the relationship with market orientation.

Given the results of Chandy and Tellis (1998), and Kitchell (1995), the *direction* of the relationship between future orientation and innovation is equivocal. Chandy and Tellis state that innovative firms pay close attention to markets particularly to future customers and competitors, whereas Kitchell concludes future oriented firms are more

innovative. Indeed future orientation may be a bi-directional construct particularly in a market-oriented context.

Other literature suggests that a market orientation has a *long-term focus* both in relation to profits (e.g., Felton 1959) and in implementing each of the three behavioral components of market orientation (e.g., Houston 1986; Kohli and Jaworski 1990).

Narver and Slater (1990) contend that for firms to maximize long run profits, they must constantly discover and provide additional value for its customers and to achieve this objective, it needs to be customer oriented. A long-term focus is therefore implicit in a market orientation. They also suggest (p. 22) "for long term survival in the presence of competition, a business cannot avoid a long-run perspective." Note that Narver and Slater refer to this construct as "long-term focus", "long-term orientation" and long-term horizon interchangeably throughout the article. We refer to it as an "orientation" to maintain consistency.

Unfortunately the attempt to operationalize this construct is unsuccessful. Narver and Slater report a Cronbach alpha of .48 for the measure of long-term orientation, which is substantially below the 0.70 threshold Nunnally (1978) recommends for exploratory research. Indeed their second sample was an even lower .41. Because of the low reliability scores, the authors are unable to form any conclusions about the empirical relationship between long-term orientation and market orientation. Narver and Slater suggest that future studies might address this issue by retesting this

construct to empirically determine its relationship with market orientation. We are unaware of any attempts to do so.

3.2.7 Summary of the Strategic Antecedent Literature

Five points can be made in relation to the antecedents reviewed. First, we note that they all are strategic in nature. That is, they are long-term, competitive, and aimed at improving business performance. Second, all constructs represent ways of thinking and behaving. Third, all are prescriptive. Fourth, all are universal, in the sense that they are relevant to large or small, profit or non-profit, and local or multinational organizations. Finally, all constructs are shown as antecedents to both market orientation and performance.

3.3 Review of the Business Performance Literature

Venkatraman and Ramanujam (1986) believe that defining (and measuring) performance is critical because "performance improvement is at the heart of strategic management". Venkatraman and Ramanujam take the view that business performance is a subset of the overall concept of organizational effectiveness. Business performance can in turn be further classified into financial performance (e.g., return on sales, profitability) and operational performance (e.g., product quality, market share).

Hofer (1983) states "….it seems clear that different fields of study will and should use different measures of organization performance because of the differences in their research questions". Walker and Ruekert (1987) suggest that business performance is

a multi-dimensional construct, as acknowledged in several empirical market orientation studies (e.g., Kohli, Jaworski and Kumar 1993). Walker and Ruekert contend that there are three primary dimensions of performance: 1) efficiency, which refers to an input-output ratio such as profitability as measured by ROA; 2) effectiveness, a measure of a firm's success relative to that of its competitors' e.g., relative sales growth; and 3) adaptability, a firm's success in responding over time to a changing environment, e.g., percentage of sales represented by new products. Walker and Ruekert (1987) believe that good performance on one dimension may result in sacrificing performance on others.

Capon, Farley, and Hoenig (1990) conducted a meta-analysis of results from 320 published studies investigating determinants of financial performance. Specifically, the studies conducted between 1921 and 1987 explore the effect of environmental, strategic, and organizational factors on financial performance. Some factors such as growth (in either sales or assets), has been measured in 88 studies and found to be positively associated with higher financial performance 86 percent of the time. However, Capon, Farley, and Hoenig (1990) conclude that most performance research appears driven by easy access to data rather than by efforts to examine alternative explanations. This is partly caused by lack of data that makes such analysis infeasible. Objective measures of performance are difficult to obtain due to the reluctance of private firms to divulge confidential financial information.

Performance in an organization can be measured in two main ways: subjective and objective. Subjective measures are based on opinion or estimates provided by

respondents who usually are asked to assess company performance (Covin, Prescott and Slevin 1990). Objective measures are based on independently observable facts either by asking respondents to report absolute values or by accessing secondary sources (Chakravarthy 1986; Cronin 1988; Golden 1992). Both measures can be sourced internally or externally to the organization. In terms of market orientation research, Uncles (2000) notes, "virtually all studies rely on self-assessed business performance, rather than more formal assessments (e.g. little use is made of formal financial, operational and customer-related performance measures)."

A diverse set of subjective performance measures has been employed in market orientation research. Narver and Slater (1990) use perceived return on assets in their study while Jaworski and Kohli (1993) employ two performance measures: perceived overall performance of the business and overall performance relative to competitors. Examples of other subjective measures include: sales growth (e.g., Ruekert 1992), new product success (e.g., Greenley 1995), relative product quality (e.g., Pelham and Wilson 1996), and return on investment (e.g., Harris 2001). Many of these measures are taken relative to an organization's main competitor, because market orientation is considered to result in competitive advantage (Hunt and Morgan 1995). Because competitors are used as the basis of comparison, each specific performance measure is phrased in such a way that enables surveyed organizations to respond on the basis of a scale such as "very poor" to "very good". In other words the measure is based on perception or opinion as opposed to an absolute number.

Table 3.1 lists a number of market orientation studies that used only subjective measures of business performance but is by no means exhaustive. This selection includes seminal studies, as well as studies using a modified measure of market orientation, studies previously conducted in Thailand, and finally a few studies representative of the large number of other studies that only use subjective measures of performance. Entries in Table 3.1 indicate the study's publication data, country setting, sample, performance measure used, and major finding with respect to the market orientation and business performance relationship.

Table 3.1 Market Orientation Studies Using Subjective Performance Measures Only

Author(s)	Year	Country	Sample	Subjective Performance Measure(s) Used	Market Orientation - Performance Relationship
Narver and Slater	1990	USA	Multi-informant survey of 113 SBU's in a single corporation: 36 SBUs with commodity products and 77 with non-commodity	ROA relative to competitors	Positive and significant for SBU's selling non-commodity products; Negative and significant for commodity products
Kohli, Jaworski and Kumar	1993	USA	Multi-informant sample of 102 firms with a total of 229 SBUs	Multiple items performance measure	Positive and significant for non-marketing informants; Positive but not significant for marketing informants
Slater and Narver	1994	USA	Multi-informant survey of 107 SBU's within a diversified manufacturing corporation	ROA, sales growth, and new product success	Positive and significant
Deng and Dart	1994	Canada	Cross-sectional survey of 248 firms that vary by size, industry type and geographic location	Company performance measure derived from a series of 11 items	Positive (and likely significant but not reported)
Deshpandé Farley and Webster	1993	Japan	Multi-informant interviews (customers and executives from public companies) in 50 quadrads	Profitability, market share, growth rate, and size compared to largest competitor	Positive and significant for customer reports; Not significant for executive self-reports
Greenley	1995	UK	Cross-sectional survey of 240 industrial, consumer product and services firms.	ROI, sales growth, and new product success	Weak association
Fritz	1996	Germany	Cross-sectional survey of 144 industrial firms	Long term profitability	Positive (significance level not reported)
Powpaka	1996	Thailand	Cross-sectional survey of 132 MBA alumni employed in a diverse range of industries and vocations.	Overall performance relative to competition	Positive and significant
Pitt, Caruana and Berthon	1996	UK and Malta	Cross-sectional survey of 161 UK service firms and 193 Maltese firms	Overall performance and relative sales growth	Positive and significant in both samples
Pelham and Wilson	1996	USA	Longitudinal study of 68 small firms in a cross-section of industries	New product success, relative product quality, profitability and growth/share	Positive and significant in all cases except for growth/share
Grewal and Tansuhaj	2001	Thailand	Cross-sectional survey of 120 firms	Satisfaction with each of ROI, sales, profit, and growth	Market orientation has a negative and significant influence on firm performance after an economic crisis

Table 3.1 shows that the vast majority of studies using subjective measures of performance have found a positive relationship between market orientation and performance. An inspection of twelve other studies not cited in the table also supports this observation.

Our review of the link between market orientation and performance shows that the relationship has been claimed almost entirely on the basis of the analysis of *subjective* measures of performance. Jaworski and Kohli (1993, p. 65) recognize that they use a narrow range of performance measures and recommend "it would be useful to explore the complexities of the relationship between market orientation and alternative dimensions of business performance in future studies." Slater and Narver (1994, p. 54) state that objective measures deserve greater attention, as "it is important to understand the effect of market orientation on performance when measured objectively." Harris (2001) cites various studies (Greenley 1995; Bhuian 1997; Chang and Chen 1998; Harris 1999) examining the link between market orientation and subjective measures of performance, which commonly suggest that the study of objective performance measures is "the next most logical step". However, we can identify only a relatively small number of studies to have done so. Table 3.2 lists studies that use objective measures only, and Table 3.3 lists studies that use both objective and subjective performance measures in their research designs. Both tables follow the same reporting format as shown in Table 3.1.

Table 3.2 Market Orientation Studies Using Objective Performance Measures Only

Author(s)	Year	Country	Sample	Objective Performance Measure(s) Used	Market Orientation - Performance Relationship
Ruekert	1992	USA	Multi-informant survey within 2 divisions of a single corporation in computer and information management services.	Sales growth and profitability	Positive and significant
Au and Tse	1995	Hong Kong and New Zealand	Cross-sectional survey of 41 Hong Kong hotels and 148 New Zealand hotels and motor lodges	Hotel occupancy rates	No association
Tse	1998	Hong Kong	13 Hong Kong property developers	Financial data supplied by external organization	No association
Hult	2001	USA	Cross-sectional survey of 181 large Multinational corporations	Five-year average for 1) ROI, 2) change in income, 3) change in stock price	Positive association. MO found to create a positional advantage, which has a positive effect on performance.
Noble, Sinha and Kumar	2002	USA	Four large retailers - longitudinal study in a single industry (1986-97)	ROA and ROS obtained from annual financial reports.	Aggregated market orientation result not reported. However Competitor orientation is significant and Customer orientation is not.

Table 3.3 Market Orientation Studies Using Both Subjective and Objective Measures of Performance

Author(s)	Year	Country	Sample	Performance Measures Used	Market Orientation - Performance Relationship
Jaworski and Kohli	1993	USA	Two samples: 222 business units from firms across industries and 230 managers	i. *Subjective measures*: overall performance of the business and overall performance relative to competitors ii. *Objective:* market share	i. Positive and significant ii. Not significant
Selnes, Jaworski and Kohli	1996	USA and Scandinavia	Multi-informant survey of 222 U.S. based SBUs and 237 Scandinavian SBUs	i. *Subjective measures:* overall performance and overall performance relative to major competitors ii. *Objective:* market share	i. Positive and significant ii. Not significant (relationship direction not reported)
Han, Kim and Srivastava	1998	USA	Single industry survey of 134 banks	i. *Subjective measures:* profitability and relative growth ii. *Objective measures:* ROA and net income growth	i. Positive but not significant ii. Positive but not significant
Dawes	1999	Australia	124 firms	i. *Subjective measure:* overall financial performance, ROI and ROA ii. *Objective measure*: ROI	MO-Performance relationship not reported but subjective and objective performance highly correlated.
Hooley et al.	2000	Hungary Poland Slovenia	1619 firms (Hungary 589, Poland 401, Slovenia 629)	i. *Subjective measure:* ROI and overall performance relative to competitors ii. "Absolute" measures: ROI, profit, sales volume and market share	i. Positive and significant ii. Positive and significant
Harris	2001	UK	Cross-sectional survey of 241 firms	i. *Subjective:* ROI and sales growth relative to competitors ii. *Objective measures:* ROI and sales growth	i. Positive association in certain environmental conditions ii. Positive association in a narrower range of environmental conditions

Table 3.2 and Table 3.3 show that when objective measures of performance have been used, results are mixed. For instance, Ruekert (1992) reports a positive relationship between market orientation and objectively measured performance. However, Jaworski and Kohli (1993) as well as Selnes, Jaworski and Kohli (1996) fail to find any significant relationship.

The literature compares the use of subjective and objective measures as follows:

1. Objective data often are difficult to obtain, with many companies either unwilling or unable to provide financial data (Fiorito and LaForge 1986; Sapienza, Smith, and Gannon 1988; Covin, Prescott, and Slevin 1990). As examples, Deng (1994) was unsuccessful in attempts to objectively measure return on invested assets due to "competitive sensitivity or because the information was collected at the depth of a recession and many respondents were reluctant to admit to negative returns." Pelham and Wilson (1996) state that private firms are reluctant to divulge this confidential information. Faced with this type of obstacle, researchers consider that higher response rates can be obtained with subjective measures.

2. Objective data can be difficult to interpret (Cooper 1979). Assuming respondents report accurate financial data, this information may be interpreted in different ways. For example, low profits or even losses in growth-oriented businesses may not necessarily indicate poor performance and could be the result of significant spending in product and market development (Covin and Slevin 1989).

3. Objective performance measures such as profitability may not be a true indication of the health of a company (Dawes 1999). For example, a firm unable to collect payment from customers may suffer from liquidity problems which until written off as a bad debt would not reflected in objective profit measures. Subjective measures are more likely to capture this type of occurrence.

4. Subjective performance measures allow for easier comparability across different industries and situations, with varying standards of acceptable performance (Pelham and Wilson 1996). Whereas, objective measures of performance are influenced by industry-specific factors (Miller and Toulouse 1986) and hence, directly comparing absolute measures for companies in different industries would be inappropriate.

5. Subjective measures have been shown to be correlated positively with objective measures of performance and therefore represent a reliable alternative (Dess and Robinson 1984; Slater and Narver 1994). Venkatraman and Ramanajam (1986) argue that subjective measures are "reasonable proxies for often unobtainable secondary-source data". Most studies investigating the effect of market orientation on performance cite Dess and Robinson (1984) who consider subjective performance measures to be viable substitutes for objective measures. Harris (2001) considers this interpretation of Dess and

Robinson (1984) rather weak given that they specifically state (p. 270) their study

> should *not* be interpreted to suggest subjective measures are convenient substitutes for objective measures of a firm's economic performance.

Dess and Robinson further state

> where accurate objective measures of performance are available their use is strongly supported and encouraged.

And that,

> this research does not suggest that subjective performance measures are interchangeable substitutes for objective performance measures.

In terms of the market orientation literature Dawes (1999) acknowledges that because the correlation is less than perfect, both types of performance measures should be used to validate results. However, relatively few market orientation studies have used objective measures.

In sum, we believe that performance is a multi-dimensional construct ranging from financial performance at its narrowest to organizational performance at its broadest. Performance should be measured both subjectively and objectively whenever possible to examine the influence that a market orientation has on an organization.

Consistent with the above, it is interesting that researchers examining objective and subjective performance in organizational behavior generally agree that study results depend on the type of performance measure used

(Murphy and Cleveland 1991). A meta-analysis conducted by Heneman (1986) exploring the relationship between subjective supervisory ratings and objective result-oriented measures reports a corrected mean correlation of only .27. The author concludes that the measures are not substitutable, and recommends that when reviews of the literature are undertaken, results should be classified according to the type of performance criteria. Further evidence is provided by Rich et al. (1999) who conducted a meta-analysis of 21 studies examining the relationship between objective and subjective measures of salesperson performance. The authors report a mean corrected correlation of .45 between the two measures, indicating that the two measures share only about twenty percent of variance. They conclude that objective and subjective measures of salesperson performance lead to different results based on the fact that relationships between performance and other constructs depend on the type of performance measure used.

3.4 Review of the Business Failure Prediction Literature

Deng and Dart (1999, p. 632) summarize a belief about market orientation and organizational survival held by eminent scholars in marketing:

> Some authors have argued that the adoption of the marketing concept is all but essential for ***survival*** in today's competitive environment (Levitt 1960; Kotler 1977; Crawford, 1983; Kotler and Andreasen 1987; Day 1994), a claim that may prove prophetic in an increasingly global economy (emphasis added)

Uncles (2000, p. iv) adds to this view:

> Does the pursuit of market orientation give rise to sustainable competitive advantage (as claimed by many researchers), or simply a competitive advantage? Indeed, does it have more to do with competitive survival, than necessarily securing an advantage? Perhaps, in a market economy, a customer focus is simply a necessary condition for doing business.

Thus, we turn our attention to the business failure prediction literature, never before studied in a market orientation context. The following review provides a basis for a prediction model that identifies companies likely to survive as well as those likely to fail, to determine whether those likely to survive differ in terms of their market orientation from those likely to fail.

Literature on the prediction of bankruptcy and business failure is immense and the degree to which information is accessible depends on techniques used. Altman's (1968) Z-score is used frequently in the corporate finance literature. However, Avery et al. (1996) reports that most credit history and application scoring systems are proprietary in nature, and that the specific factors used and the risk weights assigned to these factors in establishing scores are generally not available to the public. The present review draws only from the public domain and describes the most accurate

techniques used to predict failure as well as the statistical tools used in their development.

Predicting the likelihood of business failure is important for all company stakeholders. Creditors such as banks need to know the viability of corporations that they extend loans to. Suppliers can take appropriate measures if they are able to predict which of their customers are unlikely to meet repayments when receivables become due. Governmental regulations may be improved with more information about why companies declare bankruptcy, as in the case of Enron.

Raw financial data within profit and loss statements and balance sheets provide little insight into the financial position of the company. Rather, relationships between these numbers in the form of financial ratios are far more useful to the analyst in commercial practice and to the academic researcher in the field of business failure prediction. The overwhelming conclusion from the literature is that ratios provide a significant indication of the likelihood of financial distress. This is based on the premise that the failure process is characterized by a systematic deterioration in the value of the ratios over time (Laitinen 1991). There is however no generally accepted list of variables that best differentiate failed companies from non-failed companies as the literature reports different ratios as being significant.

Moody's Investor Services (2000) considers universal credit factors in financial statements to be determined by profitability, financial leverage, liquidity, size, inventories, growth rates, activity ratios, and audit quality. Altman (1983) is more

concise in suggesting the likelihood of bankruptcy is widely determined by profitability, financial leverage, and liquidity. In principle, a company fails if the value of its assets falls below the value of its debt. Profitability is a key determinant of the change in the value of assets. Financial leverage describes the firm's dependence on borrowed money; hence it is used to assess the firm's solvency position, i.e. its ability to meet the required interest and principal payments of its long-term debts. Liquidity is significant because a sudden shock to the balance sheet can occur which may force the company to adjust its assets or liabilities quickly. Together with a company's ability to obtain credit, the level of liquid assets that a company maintains will influence how quickly and efficiently it can make any adjustment. The order of importance of profitability, financial leverage and liquidity is not clear since most studies in both developed and developing economies cite different ratios as being the most effective indication of impending problems. However, what can be concluded from the literature is that low profitability, high financial leverage, and low liquidity lead to an increase in the likelihood of business failure across a variety of models, countries, sample periods, and company samples. This conclusion motivates their use here as indicators of corporate sector financial health.

Several analytical methods have been used to find determinants of financial distress, with a dominating method being discriminant analysis. However, discrete response models mostly in the form of logit and probit are the most commonly used alternative methods. The following section summarizes a number of studies that used a variety of these techniques.

3.4.1 Univariate Prediction Models

Beaver (1967) pioneered empirical research in bankruptcy prediction using univariate discriminant analysis, a statistical technique that focused on the size of a single financial ratio in order to discriminate between failing and non-failing firms. Beaver's study consists of 79 failed and 79 non-failed firms selected from the period 1954 through 1964 in the United States. By using five years of financial data *prior* to bankruptcy, Beaver's objective was to identify one-by-one which of 22 selected financial ratios would best distinguish failing companies from healthy ones.

He shows that for a large number of financial indicators, the mean ratio for failing companies is significantly different from the mean ratio for healthy companies. He also finds that financial ratios have the ability to predict failure for at least five years before failure. However not all ratios predict with the same degree of accuracy. The ratios with the greatest predictive power in order of predictive accuracy are:

- Cash Flow / Total Debt
- Net Income / Total Assets
- Total Debt / Total Assets
- Current Assets / Current Liabilities
- Working Capital / Operating Expenses
- Working Capital / Total Assets

The best predictor ratio one year prior to failure was cash flow divided by total debt. This ratio had type-I errors of 22 percent and type-II errors of 5 percent. A type-I error refers to the misclassification of a failed firm as non-failed and a type-II error is the misclassification of a non-failed firm as failed. Given the equal sample of failed and non-failed companies, this equates to an overall misclassification rate of 13.5 percent and accuracy classification of 86.5 percent. Accuracy dropped to 78 percent

in the fifth year before failure. In Beaver's study, the type-I error rates are much higher than the type-II error rates. The chance of a type-I error was about four times greater than a type-II error in the first or second year before failure and about ten times greater in the fourth and fifth year. A type-I error is more costly to the investor because it subjects the investor to the likelihood of losing the full amount invested. However no actual damage arises from a type-II error, other than the opportunity cost resulting from the loss of investment opportunities due to too conservative an investment decision. Univariate analysis helps to identify factors related to business failure however it does not provide a means of combining these ratios to improve accuracy classification. Beaver (1967, p. 100) states "it is possible that a multi-ratio analysis, using several different ratios and/or rates of change in ratios over time, would predict even better than the single ratios".

Subsequent research efforts led to the use of multivariate models in the form of multiple discriminant analysis and regression analysis, which permit the simultaneous effects of many variables to be measured.

3.4.2 Multivariate Prediction Models: Discriminant Analysis

Altman (1968) is the most referenced researcher in the literature on bankruptcy prediction and his model has become the standard against which all subsequent efforts to predict business failures have been compared. More than three decades since its development, the Altman model classifies bankrupt from non-bankrupt firms during the year prior to bankruptcy better than competing models (Mossman et al. 1998).

Altman considers univariate ratio analysis to be susceptible to faulty interpretation. For example, a univariate analysis of a company with poor liquidity may conclude that the company is likely to fail whereas the same company may appear to be in good condition, as determined by other ratios that measure its profitability or solvency. Altman improves on Beaver's work by using multiple discriminant analysis to study differences between bankrupt and non-bankrupt firms by combining multiple ratios simultaneously into a single bankruptcy predictor. He uses a paired sample of 33 failed and 33 non-failed U.S. manufacturing firms chosen on a stratified random basis, in terms of industry and size. Altman applies 22 ratios based on popularity in the literature and potential relevancy for the research. He includes five of the 22 ratios studied by Beaver. Amongst those ratios excluded is cash flow / total debt found by Beaver to be the single best predictor, on the basis that the companies within Altman's sample lack adequate depreciation data.

Multiple discriminant analysis reduces Altman's 22 variables to a five variable combination which best classified the 66 companies into either bankrupt or non-bankrupt. This reduction in variables is arrived at by 1) observing the statistical significance of various combinations of variables including the relative contribution of each variable independently; 2) evaluating inter-correlations between variables; 3) observing predictive accuracy of the various ratios, and 4) judgment.

His original model is $Z = 1.2\,X_1 + 1.4\,X_2 + 3.3\,X_3 + 0.6\,X_4 + 1.0\,X_5$, where

Z: overall index referred to as "Z-score"

X_1: Working Capital / Total Assets
Working capital is calculated by current assets less current liabilities. This ratio measures liquid assets in relation to the size of the company.

X_2: Retained Earnings / Total Assets
This ratio is a measure of cumulative profitability that reflects the age of the company as well as earning power.

X_3: Earnings Before Interest and Taxes (EBIT) / Total Assets
This is a measure of operating efficiency. The implication is that operating earnings are essential for long-run viability.

X_4: Equity (Market Value) / Book Value of Debt
This ratio adds a market valuation dimension.

X_5: Sales / Total Assets
This is a turnover ratio measuring efficiency. The ratio varies considerably from one industry to another.

Altman (1968) proposes that a company with a Z score below 1.80 has characteristics similar to failed companies, and a company with a score higher than 2.99 is healthy. If values lie between 1.81 and 2.99, a company is classified as being in a gray area, that is to say the company might still be in trouble but further analysis is required before a definitive assessment can be determined.

Altman's re-estimated model (see following) correctly classifies 95 percent of the sampled companies one year prior to failure. Classification errors are small for one and two years before failure, but misclassification of failed companies increases substantially three to five years before failure. Overall, Altman's re-estimated model is more accurate than Beaver in the short term but less accurate in the longer term.

Altman (1968) originally developed the Z-score model using a sample of publicly listed manufacturing companies. In the case of privately owned companies, the market value of equity (X_4) cannot be calculated. To correct for this problem, Altman (1993) re-estimated his model using book value of equity in order that the Z-score

could be applied to private firms. All coefficients, the classification criterion, and related cutoff scores were consequently adjusted. This provided a different Z-score model:

$Z = .717\ X_1 + .847\ X_2 + 3.107\ X_3 + .420\ X_4 + .998\ X_5.$

For this Z-score model, a cut-off value less than 1.23 is symptomatic of a failing firm, 1.23 to 2.9 is a gray area, and above 2.9 is representative of healthy firms.

Multiple discriminant analysis assumes that independent variables for failed and non-failed firms have normal distributions with equal variances. This is a problem within the context of bankruptcy prediction because the distribution of a financial ratio is usually not normal. Moreover, the variability of financial ratios of future bankrupt firms is likely to be different than the variability of successful firms (Collins and Green 1982).

Deakin (1972) utilizes the same 14 variables as Beaver (1968), however he applies them within a series of multivariate discriminant models. His sample comprises 32 failed firms drawn from the period 1964 to 1970 and matched with a non-failed firm on the basis of industry classification, year of financial information, and asset size. The ratios from Beaver's study are used in order to improve upon the univariate classification results by linearly combining the 14 variables for each of the five years prior to failure. Beaver points out that misclassification errors average 3 percent, 4.5 percent, and 4.5 percent for the first, second, and third years prior to bankruptcy. Deakin points to a statistical problem faced by all bankruptcy prediction models, namely that financial bankruptcy occurs to a relatively small number of companies in

any given population, which according to Zmijewski (1984) has not exceeded 0.75 percent population frequency in the United States since 1934. Thus, a naive model predicting zero failures would, at worst, be correct 99.25 percent of the time. The point subsequently made argues that, while identification of failure is difficult, the cost of not identifying failure is unacceptably high. Both Deakin (1972) and Altman (1968) agree that type-I errors are more costly than type-II errors. That is, the cost of misclassifying a company as failing that does not fail is lower than incorrectly classifying a firm that is destined to fail.

3.4.3 Multivariate Prediction Models: Logistic Regression

Ohlson (1980) provides an important contribution to the literature in that he was the first to use multiple logistic regression (logit analysis) to construct a probabilistic bankruptcy model to discriminate failed from non-failed companies. Unlike multiple discriminant analysis, logit does not require that the two groups (failed and non-failed) have equal variance-covariance matrices. Logistic regression generates a probability score representing the probability that a firm will experience failure within a given time period compared to multiple discriminant analysis which produces a Z-score, used to predict either failure or non-failure. An important advantage is that this technique does not require predictor variables to be normally distributed, which is a distinct improvement as accounting based ratios generally violate assumptions of normality and exhibit various degrees of skewness and kurtosis (Kane, Graybeal and Richardson 1996). If variables are not normally distributed, the use of multiple discriminant analysis may result in the selection of an inappropriate set of predictor variables.

Ohlson's sample comprises 105 bankrupt firms and 2,058 non-bankrupt firms. He suggests that using an equal number of bankrupt and non-bankrupt companies results in estimation biases as a matched sample contains more bankrupt firms relative to non-bankrupt firms than occur in the population. In selecting variables to include in his analysis Ohlson states, "no attempt was made to select predictors on the basis of rigorous theory. To put it mildly, the state of the art seems to preclude such an approach" (p. 118). Ohlson selected nine variables on the basis of their use in previous studies and simplicity. Four variables were found to be statistically significant: 1) Size (calculated by a logarithmic transformation of a firms total assets); 2) Total Liabilities/Total Assets; 3) Net income/Total Assets, and 4) Working Capital/Total Assets. He finds that using a probability cut-off of 3.8 percent for classifying firms as bankrupt reduces type-I and type-II errors. He reports a type-I error rate of 12.4 percent, a type-II error rate of 17.4 percent, and an overall misclassification rate of 14.9 percent.

Zmijewski (1984) conceptually and empirically examines two methodological procedures adopted in previous research. Firstly, he contends that the matched pairs design used by most empirical business failure prediction studies (e.g., Beaver 1967; Altman 1968) may lead to biased results as a result of sampling a larger proportion of failed firms than exist in the general population. In other words, despite the fact that bankruptcy occurs in a very small percentage of all firms, previous studies sample an equal number of failed and non-failed firms. Secondly, Zmijewski (1984) showed that the practice of excluding firms with incomplete data, introduces "sample

selection bias" since firms with incomplete data have greater likelihood of failure than the population as a whole.

Zavgren (1985) also prefers using logistic regression (logit) over multiple discriminant analysis for both theoretical and empirical reasons. She believes earlier multiple discriminant analysis studies "played loose with assumptions of discriminant analysis" and considers logit analysis more robust (p. 20). Her sample includes 45 manufacturing firms that filed for Chapter 10 bankruptcy. Unlike Ohlson, she thought it was important to pair-match samples in order to control for industry effects. Thus, each firm is matched with a randomly selected healthy firm from the same industry. Zavgren reports her model does distinguish between failing and healthy companies. In years one and two prior to bankruptcy, the probability of bankruptcy for failing firms is between 0.90 and 1.00 compared to less than 0.10 for healthy companies. Zavgren concludes that financial ratios are very useful in assessing the risk of failure but is hesitant to compare her results to other studies because of differences in variables, validation methods, and statistical methodology.

Since Ohlson's study, logistic regression has been extensively used for the development of business failure classification models. Extensions to Ohlson´s study include among others the following: the effect of industry-relative ratios on the likelihood of corporate failure (Platt and Platt 1990); development of industry specific models (Platt, Platt and Pedersen 1994); increasing the number of predicted outcomes so that instead of the conventional failing/non-failing dichotomy, three financial states

are used to approximate the continuum of corporate financial health in an attempt to reduce misclassification errors (Peel and Wilson 1989; Johnsen and Melicher 1994).

3.4.4 Neural Network Prediction Modeling

Subsequent literature on failure prediction has used an expanded range of techniques, including neural networking techniques. Neural networks are computer systems that take their inspiration from known facts about how the brain works and can be 'trained' to solve certain problems or identify specific patterns. Coats and Fant (1993) and Wilson and Sharda (1994) compared the results of multiple discriminant analysis against the neural network approach. Results of the two studies suggested that the neural network approach is more effective than multiple discriminant analysis in classifying failing and non-failing firms. However, Boritz, Kennedy and Albuquerque (1995), after comparing two neural network techniques to multiple discriminant analysis and logit, as well as against Altman's and Ohlson's prediction models, found that the two techniques did not provide superior classification rates. Similar results were also reported by Laitinen and Kankaanpaa (1999), who stated that neural networks "in their present form are as effective as discriminant analysis was as early as thirty years ago."

3.4.5 Prediction Studies in Thailand

Business failure prediction has been the subject of countless studies throughout the world, however, only two published studies have been conducted in Thailand. Both studies used samples consisting of public companies listed on the Stock Exchange of Thailand. Persons (1999) focused on one industry - the finance sector. His sample

consisted of 26 failed finance companies and 15 survivor companies. This equates to a failure rate of 63.4 percent, which was virtually the same as the universal population given that the Bank of Thailand had suspended 58 of 91 finance companies making up the population. Persons developed a logistic regression model that indicated failed finance companies had lower profitability, lower foreign borrowing possibly due to their poorer credit rating, lower management quality, and smaller size. His reported classification accuracy was 96 percent one year prior to failure.

The second Thai study (Tirapat and Nittayagasetwat 1999) employed logit regression to develop a 'macro-related micro crisis investigation model' for a broad sample of Thai public companies. In addition to using financial variables this study incorporated macroeconomic factors in the investigation of financially distressed firms. Tirapat and Nittayagasetwat conclude that the higher a firm's sensitivity to inflation, the higher the firm's exposure to financial distress. A number of models were tested with classification accuracy reported between 60 and 80 percent.

3.4.6 Summary of the Business Failure Prediction Literature

In sum, each of the aforementioned studies conducted in the United States and in Thailand focuses on the analysis of financial statements published at least one period preceding bankruptcy announcements. After reviewing the literature, we believe that most researchers would agree on the following points.

1. **Accuracy.** Financial ratios are able with varying degrees of accuracy, to differentiate between firms placed by the researchers into the two categories of the criterion variable.

2. **Large number of ratios tested.** Of the 89 financial ratios and variables listed in Appendix 13, a total of 53 have successfully been used in failure prediction models reported in the literature. This has resulted in a myriad of different prediction models in the literature containing different predictor variables.

3. **Reduced accuracy of early prediction.** Whilst financial variables are able to discriminate between bankrupt and non-bankrupt firms for as long as five years prior to bankruptcy (Beaver, 1967), virtually all researchers report predictive ability to be more accurate one year prior to bankruptcy, with diminishing accuracy two, three and four years prior to bankruptcy. In other words, firms on the threshold of corporate failure are likely to show more extensive deterioration in their financial position than firms that are several financial accounting periods away from failure.

4. **There is no one best model.** No single model proposed in the literature is entirely satisfactory at differentiating between failed and non-failed firms (Mossman et al. 1998). Thus, specific models should be developed to match the specific environment. Altman (1993, p. 204) states "we would like to develop a bankruptcy prediction model utilizing a homogenous group of bankrupt companies and data as near to the present as possible…. In this manner the results are more closely representative of the type of firm and of the business environment."

5. **Ratios are industry relative.** Whilst some researchers (e.g., Altman 1968; Zavgren 1985) assume companies are similar across manufacturing industries, evidence indicates that different operating and financial pressures exist which may result in inter-industry differences (Platt, Platt, and Pederson 1994). That is, ratios for high sales turnover, low profit margin firms differ from ratios for firms with low volume, high margin businesses. Similarly, ratios for a trading company differ from those of a manufacturing company.

6. **Prediction errors.** The cost associated with a type-I error is more costly than a type-II error. In other words, predicting a firm will survive when in the course of time it fails is more costly than predicting a surviving firm will fail. From an investor's perspective a type-I error leads to a real cost whereas a type-II error is an opportunity cost.

7. **Violation of assumptions**. Despite the potential presence of inter-correlations, serial correlations and instabilities in accounting data, a large number of studies either ignore or assume away the fact that statistical models include assumptions related to particular properties of the input data.

8. **Logistic regression is superior to discriminant analysis.** Discriminant analysis assumes that independent variables are multivariate normal with equal variances whereas logistic regression requires less restrictive statistical assumptions, and offers better empirical discrimination. This is a considerable

advantage as accounting based ratios generally violate assumptions of normality.

9. **Bankruptcy definitions.** Researchers disagree on a commonly accepted definition of business failure. Different definitions have been used to describe the sample of firms studied including: bankrupt/non-bankrupt, bankrupt/survivors, failed/non-failed, failed/turnaround and winners/ living-dead/ losers. Furthermore, not all firms file bankruptcy due to poor operating results. In the U.S. some firms file bankruptcy to avoid a lawsuit and some firms predicted to fail might not file for bankruptcy because they are taken over by a competitor. According to automotive industry practitioners in Thailand, many financially troubled Thai firms were taken over by Japanese competitors or new market entrants.

10. **Small sample sizes.** Many studies such as Altman (1968), Deakin (1972), Altman, Haldeman and Narayannan (1977), and Dambolena and Khoury (1980) rely on samples of bankrupt firms numbering only 33, 32, 53 and 23 (Jones 1987, p. 133).

11. **Over-sampling bias.** Using an equal number of bankrupt and non-bankrupt companies results in estimation biases as a matched sample contains more bankrupt firms relative to non-bankrupt firms than occur in the population. Notwithstanding this bias, most studies follow the lead of Beaver (1967) and

use the paired sampling method, matching bankrupt and non-bankrupt firms according to criteria such as industry.

12. **Thai prediction studies.** The two Thai studies identified in the literature sample only public companies. One of these focuses on the finance sector and the other is a multi-sector study. No study has included in their sample data from private companies.

3.5 Chapter Summary

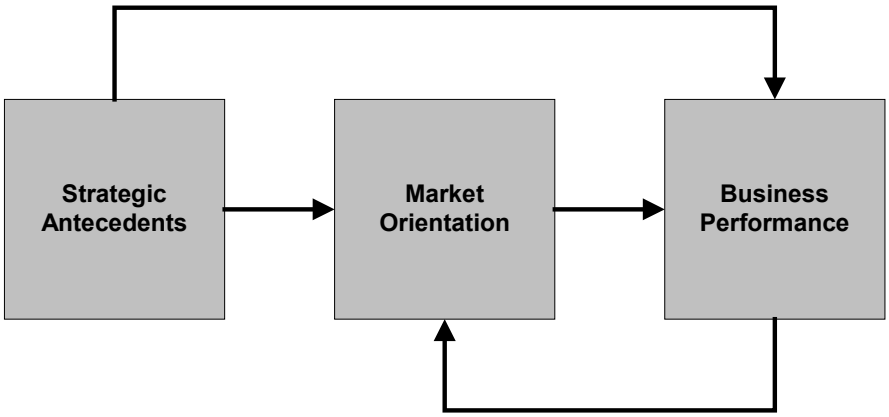
In sum, a review of the literature identified existing gaps and opportunities for future research. The next Chapter discusses the conceptual framework, research questions, and hypotheses which arise from this review of the literature.

Chapter IV

Conceptual Framework

Chapter III summarizes several important research streams, which provide the foundation for the conceptual framework for this study. Now Chapter IV presents a model of market orientation based on this literature. The Chapter is organized around seven research questions, each question addressing different elements of the conceptual model, relationships between each element, and how each element affects business performance. Each research question is accompanied by research hypotheses to be investigated. The model appears in Figure 4.1.

Figure 4.1 Conceptual Model



Strategic antecedents to market orientation include: top management emphasis on market orientation, interdepartmental conflict, imitative capability, strategic flexibility, product quality, and future orientation. *Market orientation* is measured using two different scales developed by Deshpandé and Farley (1996), and Pelham

and Wilson (1996). Finally *business performance* is captured by three different measures of performance: subjective, objective, and predicted business failure.

Reflecting a large literature base, the model in Figure 4.1 is necessarily broad and permits a very large number of research investigations. Here our investigations answer seven, quite focused research questions. Each question uses a subset of constructs to understand associative and causal relationships pertaining to market orientation and business performance. Each research question is accompanied by research hypotheses to be investigated. Together our seven research questions replicate and corroborate earlier investigations of the market orientation and performance relationship, extend earlier work by examining relatively unexplored antecedents to a market orientation, and explore new areas, which in this instance is the prediction of failed and survivor companies.

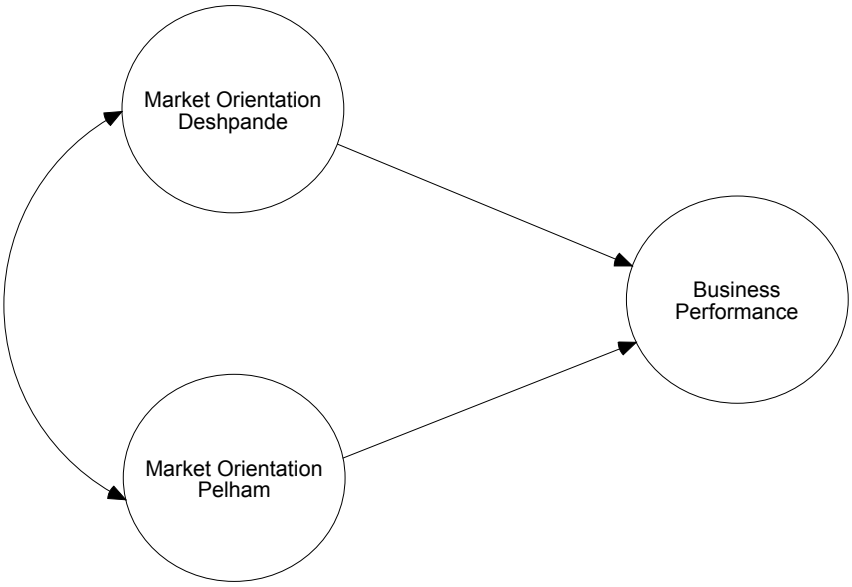
Our seven research questions organize discussion in Chapter IV, as well as later materials presented in Chapters V and VI.

4.1 Research Question 1. Do the Data Support a Relationship between Market Orientation and Performance?

We felt it important to replicate and corroborate earlier research in our specific research setting. Successful replication and corroboration will lend credence to subsequent results for research questions examined later in this dissertation. As noted in Chapter III - Literature Review, relationships between market orientation and performance are most often positive, sometimes not significant, and occasionally negative. Based on the conceptual model in Figure 4.1, we have our

replication/corroboration model in Figure 4.2. For the sake of simplicity, observed variables and error terms are omitted from the model.

Figure 4.2 Model of Market Orientation and Business Performance



We show the two measures of market orientation to influence business performance. We expect one of the two market orientation scales (Deshpandé and Farley 1996; Pelham and Wilson 1996) to have a stronger relationship with performance than the other due to content validity and other measurement properties. We also expect the two market orientation measures to be correlated. These expectations lead us to our first two hypotheses.

Hypothesis 1: The relationship between market orientation (Deshpandé and Farley 1996) and business performance is positive.

Hypothesis 2: The relationship between market orientation (Pelham and Wilson 1996) and business performance is positive.

4.2 Research Question 2. Does Common Method Variance Explain the Market Orientation and Performance Relationship?

The expected relationship in Figure 4.2 may be due partially or entirely to common method variance (Podsakoff and Organ 1986; Kline, Sulsky and Rever-Moriyama 2000; Voss and Voss 2000). Common method variance is defined as variation in scores caused by the method of data collection. Because dependent and independent measures are self-reported by the same source, any common defect contaminates both measures (Podsakoff and Organ, 1986). Thus, observed correlations between measures are due not to true relationships between the measures but simply because the same respondents provides the measures for both constructs.

Prior research into the market orientation and performance relationship has not adequately addressed the issue of common method variance. When the issue is raised, little discussion occurs other than listing the presence of common method variance as a possible limitation of the study. Voss and Voss (2000) typify the position, pointing out that common method bias is a possible limitation when examining most market orientation and business performance results. They state, "Collecting self-report data for subjective dependent and independent variables from the same source may exaggerate an expected positive or negative association, just because of the presence of common method variance". Voss and Voss (2000, p. 79) conclude this is a limitation that is potentially present in all survey research to date and call for study into method variance.

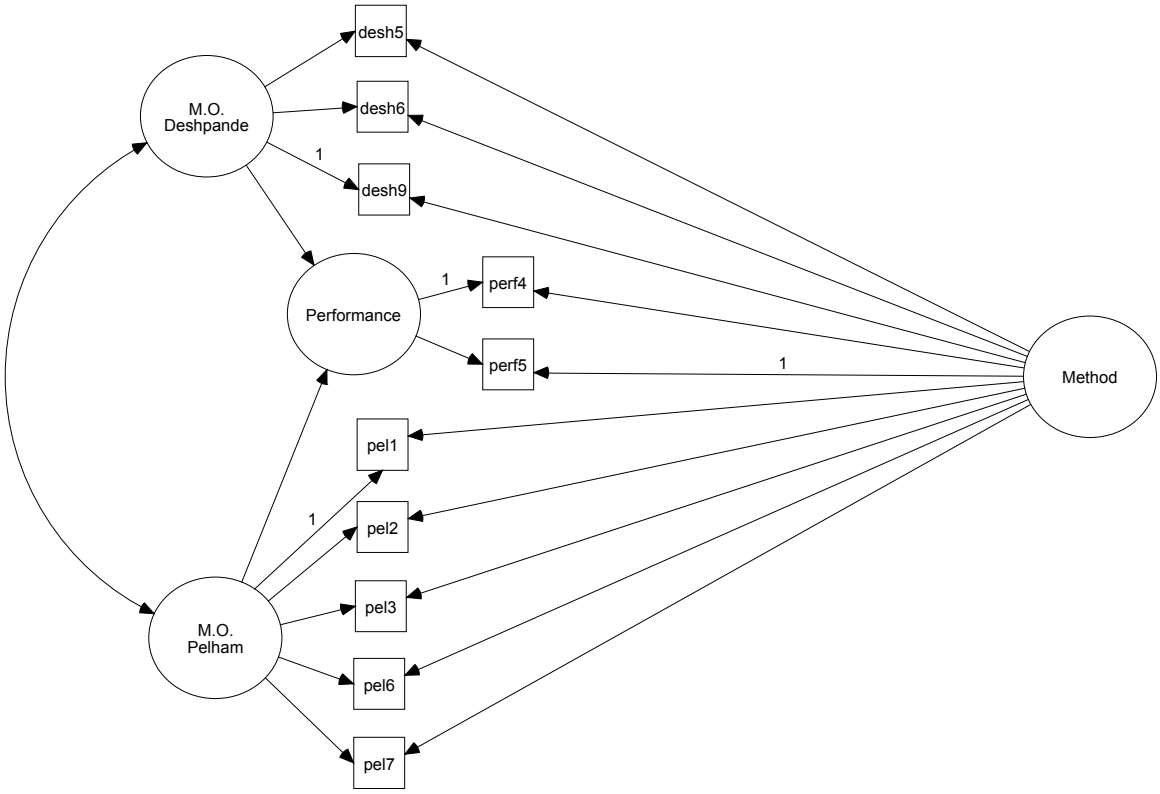
> ….for researchers, these results underscore the potential problems associated with collecting subjective measures from the same source for both dependent and independent variables; specifically, common method variance may inflate an expected positive association or attenuate an expected negative association between variables. Additional research

> should examine the validity of using managers' assessments as proxies for measures of phenomena that may be more appropriately measured objectively.

We consider it important to address common method variance since all measures to be used in our research questions 1, 2, 3, 4, and 6 are based on self-report data.

Figure 4.3 demonstrates how common method variance is hypothesized to affect all other measured variables in the model. Figure 4.3 shows a single-measure method factor on which all observed variables in the model will be loaded (Kline, Sulsky, and Rever-Moriyama, 2000). Thus, each survey item measuring the Deshpandé and Farley (1996) and Pelham and Wilson (1996) market orientation constructs as well as the business performance construct will load on a common method factor to allow removal of contaminating variance and provide an undistorted estimation of relations between substantive constructs. For the sake of simplicity, Figure 4.3 omits error terms for business performance and the 10 observed variables.

Figure 4.3 Model of Market Orientation, Performance, and Common Method Variance



Kline, Sulsky, and Rever-Moriyama (2000) hold a similar conceptual view of method variance. They demonstrate how examining bivariate correlations between items in self-report measures might assist in differentiating between possible common method variance versus model specification errors. Kline, Sulsky, and Rever-Moriyama find that effects of method variance are limited or small as long as path coefficients from the common method factor are less than .60. Thus, "method" in Figure 4.3 is viewed as either a possible source of common method variance or as a theoretically meaningful construct that should be included in the model of interest (i.e., a specification error). Note that the method factor in Figure 4.3 is shown as uncorrelated with both measures of market orientation. That is, a common

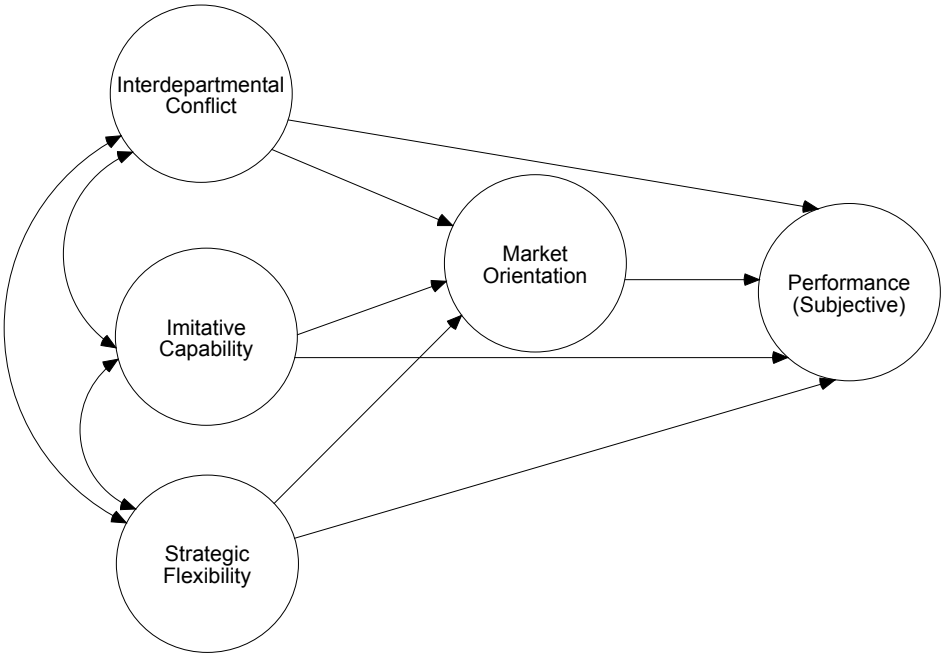
measurement method should not be associated with its latent constructs. The following hypothesis is proposed:

Hypothesis 3: Common method variance explains the previously noted relationships between market orientation and business performance in Figure 4.2

4.3 Research Question 3. What are the Effects of "Southeast Asian Perspective" Antecedents on the Market Orientation and Performance Relationship?

Research questions 3 and 4 investigate several strategic antecedents to the market orientation performance framework in the automotive parts industry in Thailand. Question 3 examines structural relationships between interdepartmental conflict, imitative capability, and strategic flexibility with market orientation and performance, as a corroboration of recent work by Grewal and Tansuhaj (2001). We refer to this model as a Southeast Asian perspective. For the sake of simplicity, observed variables and error terms are omitted from the model.

Figure 4.4 Southeast Asian Perspective Model



We seek to further our understanding of the determinants of market orientation by firstly replicating the use of interdepartmental conflict. Interdepartmental conflict is defined as tension among departments arising from the incompatibility of actual or desired responses and goals (Raven and Kruglanski 1970; Gaski 1984). This construct was examined in a market orientation context first by Jaworski and Kohli (1993). We expect to obtain a similar result in this study, despite using a sample consisting of manufacturers from a single industry. Specifically we expect interdepartmental conflict to have a negative effect on both market orientation and on business performance.

Imitative capability requires a firm to possess technical knowledge, structural flexibility, and a willingness as well as readiness to imitate the innovations of competitors. Automotive industries throughout Southeast Asia have developed

capabilities geared towards imitating competitor's products and processes. In particular, Thailand has a long-standing reputation for imitating products including computer software and music as well as automotive parts. We expect to see a positive relationship between imitative capability and market orientation.

Strategic flexibility is defined as the ability of the organization to adapt to substantial, uncertain, and fast-occurring environmental changes that have a meaningful impact on the organization's performance (Aaker and Mascarenhas 1984). Grewal and Tansuhaj (2001) examine effects of market orientation and strategic flexibility on performance in 1998, when Thailand was gripped by economic crisis. They report market orientation having a negative (and significant) effect on performance and strategic flexibility having a positive (and significant) effect on performance. This dissertation examines the state of suppliers in the automotive industry in 2002, by which time the economic situation in Thailand had stabilized and passed beyond a condition that could be described as being in crisis.

We expect strategic flexibility will have a positive effect on both market orientation and on performance. A market-oriented firm that is also strategically flexible in terms of its ability to manage economic or political risks and respond quickly to market threats and opportunities is likely to outperform market oriented firms that are not strategically flexible. Thus we hypothesize

Hypothesis 4: The relationship between interdepartmental conflict and market orientation is negative.

Hypothesis 5: The relationship between imitative capability and market orientation is positive.

Hypothesis 6: The relationship between strategic flexibility and market orientation is positive.

Hypothesis 7: The relationship between market orientation and business performance is positive.

Hypothesis 8: The relationship between interdepartmental conflict and business performance is negative.

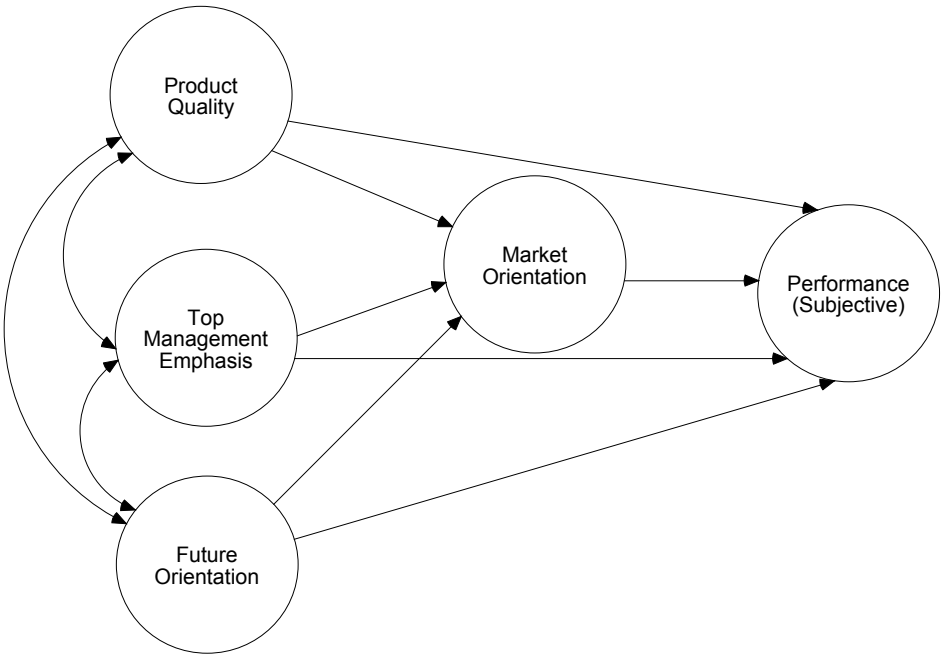
Hypothesis 9: The relationship between imitative capability and business performance is positive.

Hypothesis 10: The relationship between strategic flexibility and business performance is positive

4.4 Research Question 4. What are the Effects of Strategic Antecedents on the Market Orientation and Performance Relationship?

Our strategic model in Figure 4.5 examines two new antecedents of the market orientation and business performance constructs: product quality and future orientation. For the sake of simplicity, observed variables and error terms are omitted from the strategic model. As in research question 3, we include another construct within the model for replication purposes -- top management emphasis on market orientation. This construct measures the extent to which top management reinforces the importance of market orientation. To what extent do top management encourage individuals in the organization to track markets, share information about such markets, and respond to changing market needs? Jaworski and Kohli (1993) report top management emphasis is positively related to market orientation in the United States. Selnes, Jaworski, and Kohli (1996), and Pulendran, Speed, and Widing (2000) report positive and significant findings in Scandinavia and Australia, respectively. We expect to obtain a similar result in this study.

Figure 4.5 Corroboration and Extension of a Strategic Model



Product quality is a measure of the overall quality of the organization's products and services with respect to customer perceptions and competitive comparisons. Product quality is vital to the survival of the automotive parts sector and deserves closer examination in terms of its influence on market orientation:

> Unless Thailand's parts industry can match global quality at globally competitive prices, it will lose the business to overseas competitors. (The Brooker Group 2002)

Abolition of local content requirements in year 2000 and a diminishing labor cost advantage are forcing automotive parts manufacturers to improve the quality of their products in order to compete with foreign firms. The ISO certification has become one of the most important signals of product quality and major export customers require automotive manufacturers to be ISO 9000 or 14000 certified. To this end, the Thai government has made a concerted effort to assist producers to obtain quality certification. According to the Office of the Board of Investment, during the last five

years, 178 automotive part manufacturers obtained QS-9000, 200 obtained ISO 9000 and 34 obtained ISO 14000 (BOI 2002).

Future orientation measures the extent to which a firm's corporate culture encourages managers to plan and take a long-term view. Narver and Slater (1990) failed to operationalize their long-term orientation construct adequately and suggested that future studies might address this issue by retesting this construct to empirically determine its relationship with market orientation. We expect future oriented firms to pay close attention to markets, particularly to future customers and competitors. Thus, we hypothesize:

Hypothesis 11: The relationship between product quality and market orientation is positive

Hypothesis 12: The relationship between top management emphasis and market orientation is positive.

Hypothesis 13: The relationship between future orientation and market orientation is positive.

Hypothesis 14: The relationship between market orientation and business performance is positive.

Hypothesis 15: The relationship between product quality and business performance is positive.

Hypothesis 16: The relationship between top management emphasis and business performance is positive.

Hypothesis 17: The relationship between future orientation and business performance is positive.

4.5 Research Question 5. Can Relationships examined in Questions 1, 3, and 4 be Replicated and Corroborated Using Objective Measures of Performance?

Several scholars such as Dess and Robinson (1984), Dawes (1999), and Harris 2001) state that both subjective and objective performance measures should be used to validate results. However, our literature review in Chapter III finds that relatively few studies examine both subjective and objective measures of performance, and those that do report mixed results. This is surprising given that market orientation studies testing subjective measures only, justify doing so on the basis that subjective performance is a proxy for objective performance. Given these mixed empirical results and also the contrary position taken in the organizational behavior literature that finds subjective performance measures not to be proxies for objective performance measures, this study shall investigate these relationships further.

Thus, analyses for question 5a, 5b, and 5c replicate analyses for questions 1, 3, and 4 but use a different measure of business performance. This new measure is calculated from financial statements submitted by each respondent to the Department of Commercial Registration, Ministry of Commerce for the year preceding data collection. The new measure appears in Figures 4.6, 4.7 and 4.8 and in restatements of hypotheses 1 and 2, and 4 through 17. As with all earlier models, for the sake of simplicity observed variables and error terms are omitted from these models.

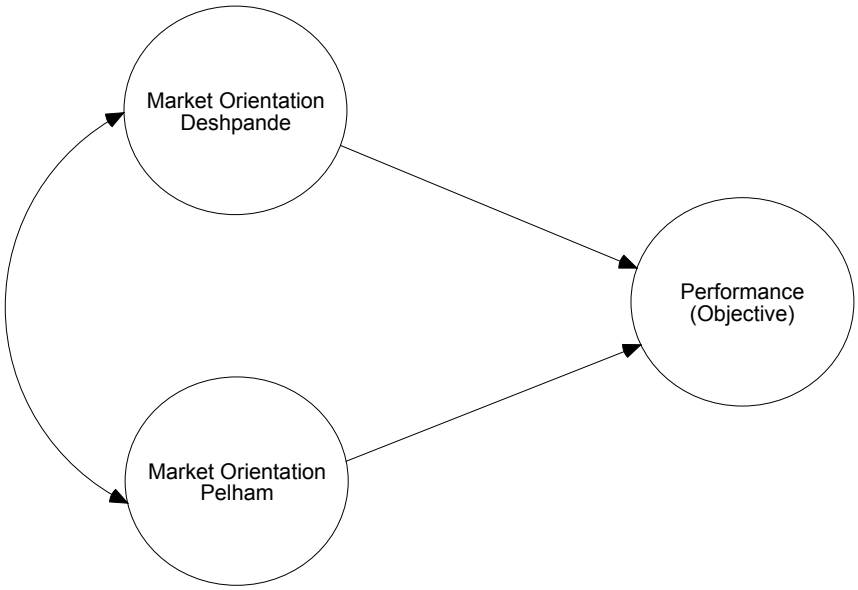
4.5.1 Question 5a. Do the Data Support a Relationship between Market Orientation and Performance Using Objective Measures of Performance?

As per research question 1 we expect both market orientation measures (Deshpandé and Farley 1996; Pelham and Wilson 1996) to influence business performance. We also expect one of the two market orientation scales to have a stronger relationship with performance than the other due to content validity and other measurement properties. We also expect the two market orientation measures to be correlated. However, when using objective performance measures we expect relationships to be smaller due to the absence of common method variance. Thus, we hypothesize:

Hypothesis 18: The relationship between market orientation (Deshpandé and Farley 1996) and business performance is positive.

Hypothesis 19: The relationship between market orientation (Pelham and Wilson 1996) and business performance is positive.

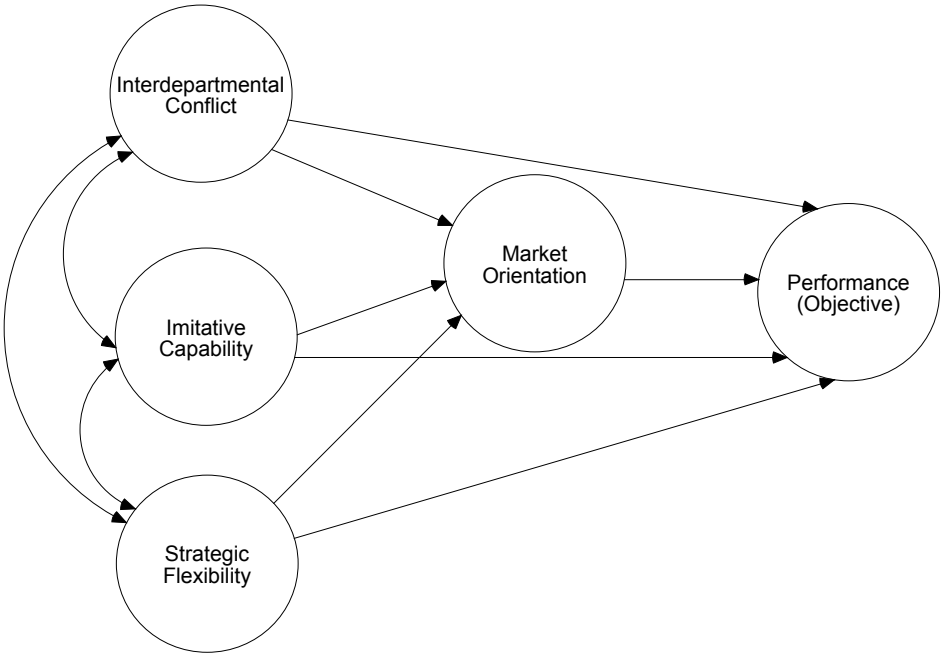
Figure 4.6 Model of Market Orientation and Objective Performance



4.5.2 Question 5b. What are the Effects of "Southeast Asian Perspective" Antecedents on the Market Orientation and Performance Relationship Using Objective Measures of Performance?

As per research question 3, we expect interdepartmental conflict to have a negative effect on both market orientation and on performance. Further, imitative capability and strategic flexibility are expected to have a positive relationship with both market orientation and performance. However, using objective performance measures (refer Figure 4.7) instead of subjective measures used in question 3 measures (refer Figure 4.4) we expect these relationships to be smaller due to the absence of common method variance.

Figure 4.7 Southeast Asian Perspective Model (Objective Performance)



Our expectations lead to the following hypotheses:

Hypothesis 20: The relationship between interdepartmental conflict and market orientation is negative.

Hypothesis 21: The relationship between imitative capability and market orientation is positive.

Hypothesis 22: The relationship between strategic flexibility and market orientation is positive.

Hypothesis 23: The relationship between market orientation and business performance is positive.

Hypothesis 24: The relationship between interdepartmental conflict and business performance is negative.

Hypothesis 25: The relationship between imitative capability and business performance is positive.

Hypothesis 26: The relationship between strategic flexibility and business performance is positive.

4.5.3 Question 5c. What are the Effects of Strategic Antecedents on the Market Orientation and Performance Relationship Using Objective Measures of Performance?

With the exception of the business performance construct (refer Figure 4.8), this question examines the same constructs as research question 4 (refer Figure 4.5). Specifically this question measures the extent to which top management reinforces the importance of market orientation, the overall quality of the respondent's products and services with respect to customer perceptions and competitive comparisons, and the extent to which a firm's corporate culture encourages planning and taking a long-term view. As in preceding questions that use objective measures of performance we expect relationships to be smaller due to the absence of common method variance. Thus, we hypothesize:

Hypothesis 27: The relationship between product quality and market orientation is positive.

Hypothesis 28: The relationship between top management emphasis and market orientation is positive.

Hypothesis 29: The relationship between future orientation and market orientation is positive.

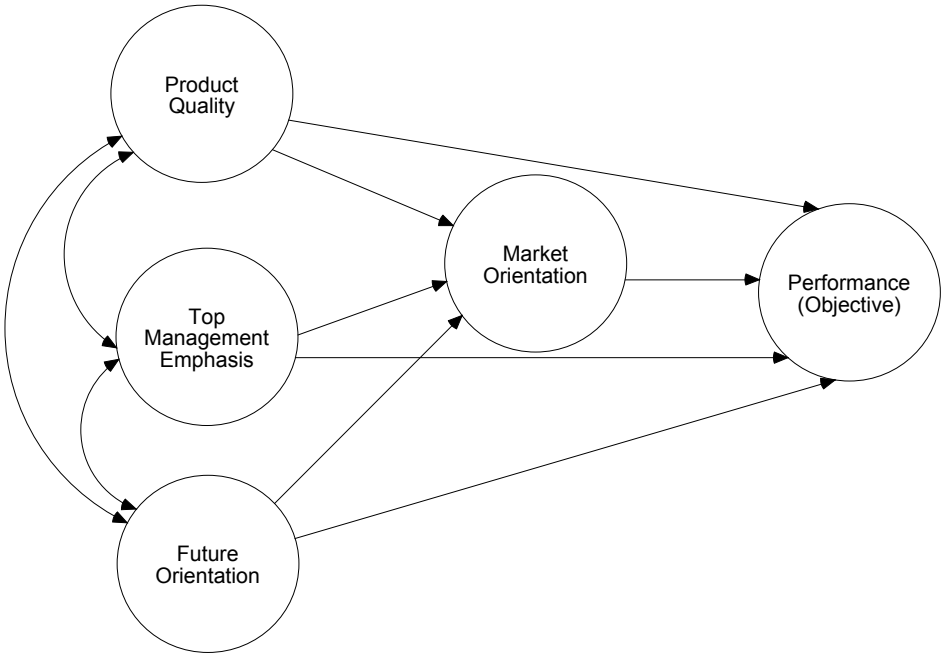
Hypothesis 30: The relationship between market orientation and business performance is positive.

Hypothesis 31: The relationship between product quality and business performance is positive.

Hypothesis 32: The relationship between top management emphasis and business performance is positive.

Hypothesis 33: The relationship between future orientation and business performance is positive.

Figure 4.8 Corroboration and Extension of a Strategic Model (Objective Performance)



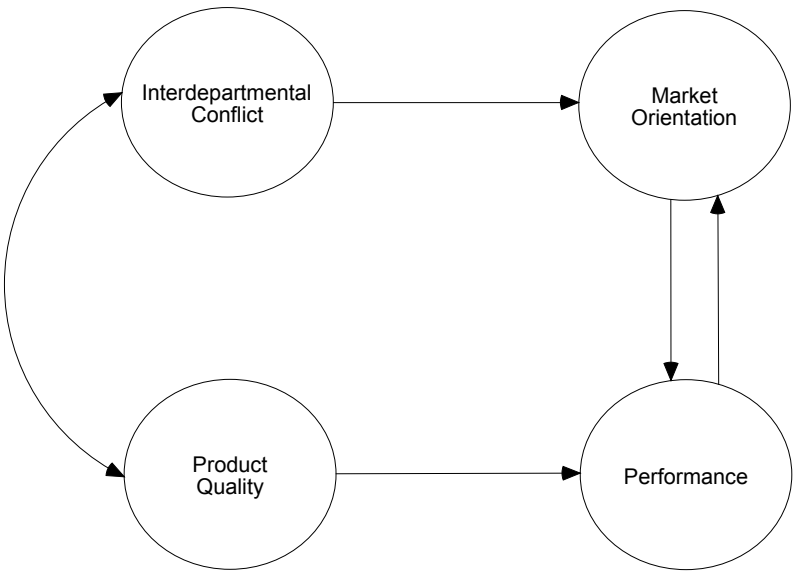
4.6 Research Question 6. Is Market Orientation both a Cause and an Effect of High Performance?

Research question 6 presents a different challenge. Two key positions noted in Chapter III - Literature Review are that market orientation is an antecedent to performance, and that high market orientation leads to high performance. However, Uncles (2000) raises the possibility that market orientation may be both a cause and an effect of high performance. In other words, causation between the two constructs runs in both directions:

> Conventionally, performance is represented as the dependent variable, but it is reasonable to suppose that performance itself provides a climate for market orientation either to flourish or be undermined. Success breeds success (Uncles 2000, p. iv).

This idea is illustrated in Figure 4.9. As with all earlier models, for the sake of simplicity observed variables and error terms are omitted from the model.

Figure 4.9 Nonrecursive Model of Market Orientation and Business Performance



In research question 6, we estimate a nonrecursive structural equation model to compare the reciprocal inter-relationships of market orientation and performance. Prior to the advent of causal and structural equation modeling, it was difficult to test for reciprocal relationships without longitudinal research designs or experimentation. Structural equation modeling has become a common technique in management research to describe and test reciprocal relationships between two constructs using cross-sectional data (Wong and Law 1999). A nonrecursive structural equation model can be used to evaluate competing models of causation, in the hope of separating cause from effect and proposing a recursive model once the cause has been determined. Structural equation modeling allows us to estimate a nonrecursive model to describe the reciprocal causal relationship between Market Orientation and Performance. Thus, we hypothesize:

Hypothesis 34: Reciprocal relationships between market orientation and business performance are positive.

4.7 Research Question 7. Do the Data Support a Relationship between Market Orientation and Strategic Antecedents and Predicted Business Failure?

Research question 7 adds predicted business failure as our final measure of organizational performance. As stated in Chapter III, several eminent marketing scholars argue that adoption of the marketing concept is all but essential for survival in today's competitive environment. Our review of the literature, however, determined that the market orientation and business performance relationship has never examined performance as a dichotomous construct with survival and failure as two predicted outcomes.

The question of why some firms' fail and others do not is not easily answered. Failure can occur in any business for a variety of reasons. The U.K. credit industry list 65 of the most common reasons for business failure such as poor cash flow, insufficient capital, low sales, poor market research, and falling property values (UK Insolvency, 2003). Because it is considered impossible to interview senior executives of failed Thai companies after the event, it is necessary to develop a prediction model that would allow us to predict which companies are in danger of failing and to collect data from these companies before failure actually occurred. Thus, this research question attempts to identify whether market orientation or any strategic constructs examined in previous questions differ in firms predicted to survive versus those predicted to fail.

If the marketing concept is essential for survival, we would expect firms predicted to survive to have a higher market orientation than those predicted to fail. We consider that when firms encounter financial difficulties, one of the first areas that face reduction is the area of marketing costs. Cutting back a marketing program would lead to a diminution of customer awareness and an erosion of the firm to attract new customers. Moreover in each of the constructs measured, we expect firms predicted to survive will outperform firms predicted to fail. Specifically, we expect firms predicted to survive to have higher mean scores for the following constructs: market orientation, imitative capability, strategic flexibility, product quality, top management emphasis on market orientation, and future orientation. Conversely we expect firms

predicted to survive to have lower mean scores for interdepartmental conflict. These expectations lead to the following hypotheses:

Hypothesis 35: Market orientation will be higher in firms predicted to survive than in firms predicted to fail.

Hypothesis 36: Imitative capability will be higher in firms predicted to survive than in firms predicted to fail.

Hypothesis 37: Strategic flexibility will be higher in firms predicted to survive than in firms predicted to fail.

Hypothesis 38: Product quality will be higher in firms predicted to survive than in firms predicted to fail.

Hypothesis 39: Top management emphasis on market orientation will be higher in firms predicted to survive than in firms predicted to fail.

Hypothesis 40: Future orientation will be higher in firms predicted to survive than in firms predicted to fail.

Hypothesis 41: Interdepartmental conflict will be lower in firms predicted to survive than in firms predicted to fail.

4.8 Chapter Summary

Thus, we see that a picture as simple as Figure 3.1, results in seven different research questions. Individually, the seven research questions, replicate, corroborate and extend knowledge of previous research. Taken together, the seven research questions highlight the centrality of market orientation in influencing organizational performance. The next Chapter translates these research questions into an empirical research design.

Chapter V

Research Methods and Design

Chapter V summarizes methods by which the research questions and hypotheses described in detail in Chapter IV are investigated. Specifically, Chapter V describes study design, survey instrument, population of interest and sampling frame, data collection procedures, and data analysis procedures, as these five topics apply to research questions 1, 2, 3, 4, and 6. Chapter V ends with two sections describing unique research methods used for questions 5 and 7.

5.1 Study Design For Research Questions 1, 2, 3, 4, 6

This research design can be described as a descriptive, cross-sectional, mail survey study using structural equation modeling to investigate structural and associative relationships in a set of strategically oriented constructs. The design proceeded in three phases. In the initial phase, a survey research design collected primary data to test hypotheses developed in the previous Chapter. Survey research via questionnaire was considered appropriate for four reasons:

1. The ability to collect extensive perceptual data from a large population at a relatively low cost.
2. Survey data are readily quantifiable and can be analyzed using statistical analysis and hypotheses testing.

3. Previous survey research developed most measures tested and analyzed in this dissertation. To replicate and extend past studies it is important to use a similar methodology.
4. Slater (1995) believes that information obtained from survey research is often quite accurate, because the measurement instrument is specifically developed to address the research questions. He indicates that survey research can sometimes be the only data collection method for researching marketing strategy questions, and that the validity of survey research, when complex organizational variables are involved (e.g., market orientation), has been largely accepted in the marketing and organizational sciences.

All these reasons support the selection of a survey design for this dissertation.

In the final part of the research, we collected secondary data in the form of financial statements consisting of audited profit and loss statements and balance sheets. These data were used in analyses for question 5 to extract financial performance ratios and in question 7 to develop a business failure prediction model, to classify each respondent company as either likely to survive or likely to fail.

5.2 The Survey Instrument

A self-report type questionnaire (refer Appendix 1 and 2) was designed and organized into seven sections: industry (22 items), market orientation (19 items), strategic position (12 items), business processes (35 items), business performance (8 items), general questions to identify the company's primary product, its recruitment practices,

mission statement, etc. as well as to obtain information about the managing director's background, (32 items), and respondent information (6 items).

All questions were easy to answer, requiring a simple circling of a number, either on a scale or among few categories. Harrison and McLaughlin (1993) showed that Likert-type scales tend to bias participants' responses toward center points of the scale because participants implicitly assume that the center point is the normal or average. Furthermore in the Thai context, many respondents tend to "sit on the fence" and respond with a neutral option when available. Thus, we considered it necessary to force respondents to express a definite opinion one way or the other and used a six-point Likert scale throughout the questionnaire. Scale anchors were strongly disagree =1 and strongly agree=6.

The questionnaire was printed on both sides of A4 paper. The Thai questionnaire was printed on ten pages and the English questionnaire was printed on eight (the difference because of additional height required by Thai fonts).

The questionnaire development procedure involved the following steps: item selection, translation, back-translation, pre-testing, and measure purification. Two phases of the instrument development procedure construct validity and reliability are discussed in Chapter VI, Analysis and Results.

5.2.1 Construct Measurement

The literature search identified suitable measures for all nine constructs included in our conceptual models. Our intent was to use existing measures of constructs as much as possible. Table 5.1 identifies these nine constructs, their corresponding item(s) on the survey instrument, and their construct labels used in data analysis. Additional constructs not directly related to this study also were included for purposes of disguise and investigation of management behaviors beyond the scope of this dissertation.

Table 5.1 Constructs Measured in the Questionnaire

Construct name	Items	Section	Question no.	Construct labels
Market Orientation (Deshpandé)	10	2	1-10	DESH1 - DESH 10
Market Orientation (Pelham)	9	2	11-19	PEL1 - PEL9
Interdepartmental Conflict	7	4	19-25	COI1 - 7
Imitating Capability	5	4	26-30	IC1 - 5
Strategic Flexibility	5	3	1-5	SF1 - SF5
Product Quality	3	5	6-8	QUAL1 - QUAL3
Top Management Emphasis	4	4	9-12	TME1 - TME4
Future Orientation	3	4	16-18	FUT1 - FUT3
Performance (subjective)	2	5	1-5	PERF1 - PERF5

Market Orientation

We used two measures of market orientation developed by Deshpandé and Farley (1996) and Pelham and Wilson (1996) respectively.

Deshpandé and Farley (1996) derived their 10-item summary scale for Market Orientation as a result of a meta-analysis of three market orientation scales, consisting

44 separate items from Narver and Slater (1990), Deshpandé, Farley and Webster (1993), and Kohli, Jaworski and Kumar (1993). The 10-item scale combines elements of the aforementioned scales. However, all 10 items deal with "customer focus" notions of market orientation. In other words, the scale does not deal with issues such as competitive intelligence, competitor orientation, embedding of the marketing concept throughout the organization, or human resource drivers of market orientation such as teamwork.

Despite this content validity shortcoming, Grewal (2001, personal communication) recommends the Deshpandé scale as most appropriate for further examination in Thailand, because it exhibits better psychometric properties and is more parsimonious than Jaworski and Kohli's (1993) 31-item measure. A coefficient alpha of .72 was reported in Deshpandé, Farley, and Webster (1993). The following items appear in Section 2, questions 1 to 10 of the questionnaire (question 1 will hereafter be referred to as DESH1, question 2 as DESH2 up to question 10 as DESH10).

DESH1	Our business objectives are driven primarily by customer satisfaction.
DESH2	We constantly monitor our level of commitment and orientation to serving customer needs.
DESH3	We freely communicate information about our successful and unsuccessful customer experiences across all business functions.
DESH4	Our strategy for competitive advantage is based on our understanding of customers' needs.
DESH5	We measure customer satisfaction systematically and frequently.
DESH6	We have routine or regular measures of customer service.
DESH7	We are more customer-focused than our competitors.
DESH8	I believe this business exists primarily to serve customers.

DESH9 We survey end-users at least once a year to assess the quality of our products and services.

DESH10 Data on customer satisfaction are disseminated at all levels in this company on a regular basis.

Deshpandé and Farley (1996) describe the above measures as the set of cross-functional processes and activities directed at creating and satisfying customers through continuous needs assessment.

A second market orientation scale was adapted for this study primarily because of its applicability to small businesses. Given that the Thai automotive sector comprises largely small and medium-sized enterprises (SMEs) we considered this measure worthy of inclusion. Another reason in support of its use is that the Deshpandé and Farley (1996) scale contains no items concerning competition whereas the Pelham and Wilson (1996) scale does.

Pelham and Wilson (1996) developed their measure of market orientation derived from items in measures constructed by Narver and Slater (1990) and Jaworski and Kohli (1993). Pelham and Wilson's scale has a total of nine items, of which eight were drawn from the Narver and Slater measure. This was because "factor loadings and model fit revealed the superiority of Narver and Slater items and dimensions, compared to Jaworski and Kohli items and dimensions, as far as convergent/discriminant validity", (Pelham 1997, p.62).

These nine scale items are located in Section 2, Q11-19 of the questionnaire. A coefficient alpha of .92 was reported in the original study. Pelham and Wilson (1996)

used a variety of anchors in his scale including agree/disagree, slowly/quickly, never/very frequently, etc. In order that a uniform Likert scale could be used throughout our questionnaire modifications were made to several original items to support a strongly disagree/strongly agree response. (Appiah-Adu and Ranchhod (1997) made similar but not identical changes to several Pelham and Wilson (1996) Market Orientation scale items).

PEL1 All our functions (not just marketing and sales) work together to serve our target markets.

PEL2 Our firm's strategy for competitive advantage is based on our thorough understanding of our customer needs.

PEL3 All our managers understand how the entire business can contribute to creating customer value.

PEL4 Information on customers, marketing success and marketing failures is rarely communicated throughout the firm.

Note that PEL4 was reverse coded. The original item does not contain the word "rarely". The amendment is justified in order to have a balance of positive and negatively worded statements so as to increase the likelihood of respondents providing a considered response to each question.

PEL5 If a major competitor were to launch an intensive promotional campaign targeted at our customers, we would respond immediately.

PEL6 Our firm's market strategies are to a great extent driven by our understanding of possibilities for creating value for customers.

The original item stated "our firm's market strategies are to a moderate/great extent driven by our understanding of possibilities for creating value for customers." The word "moderate" was deleted.

PEL7 We respond to negative customer satisfaction information throughout the firm slowly.

The original item stated, "our firm responds slowly/quickly to negative customer satisfaction information throughout the organization." The word quickly was removed. The scale now has a negative direction relative to other items and was reverse coded, as were all other negative direction items, prior to analysis of results.

PEL8 Managers discuss competitive strengths and weaknesses very frequently either formally or informally.

The original item stated, "How frequently do top managers discuss competitive strengths and weaknesses (Never / Very frequently)". Again the original item was rephrased, whilst retaining the original intent of the question.

PEL9 We frequently capitalize on targeted opportunities to take advantage of competitors' weaknesses.

The original item stated, "How frequently do you take advantage of targeted opportunities to take advantage of competitors' weaknesses." (Never / Frequently). This item also was rephrased to conform so that consistent scale anchors be used throughout the questionnaire. Appiah-Adu and Ranchhod (1997) used identical wording to our scale in the above instance.

In sum, Pelham and Wilson (1996) believe that the above nine items measure the degree to which an organization exhibits a corporate culture that effectively and efficiently creates value for buyers.

Antecedents

In two of our research models, three different antecedents of market orientation are tested. The Southeast Asian model measures interdepartmental conflict, imitative capability, and strategic flexibility whilst the Strategic model measures product quality, top management emphasis on market orientation, and future orientation.

Interdepartmental Conflict

As noted in Chapter III, Gaski (1984) describes interdepartmental conflict as the extent to which tension exists among departments due to the incompatibility of actual or desired responses. Several authors point to interdepartmental conflict as an inhibitor of market orientation (Felton 1959; Levitt 1969). Essentially, interdepartmental conflict likely inhibits communication among departments, thereby hampering market orientation (Ruekert and Walker 1987). This dissertation utilized a seven-item, Likert-type scale ranging from one to six, where one equals strongly disagree and six equals strongly agree. The scale was developed by Jaworski and Kohli (1993) and was used later by Menon, Jaworski and Kohli (1997) who reported coefficient alpha of .87.

COI1	Most departments in this company get along well with each other.
COI2	When members of several departments get together, tensions frequently run high.
COI3	People in one department generally dislike interacting with those from other departments.
COI4	Employees from different departments feel that the goals of their respective departments are in harmony with each other.
COI5	Protecting one's departmental turf is considered to be a way of life in this company.

The original scale item used the term "business unit" rather than company. The Thai automotive parts industry has many small companies that do not operate with formally structured business units and this edit was necessary.

COI6 The objectives pursued by the marketing department are incompatible with those of the manufacturing department.

COI7 There is little or no interdepartmental conflict in this company.

Note that all items are used exactly as published by Jaworski and Kohli (1993) except where noted above. COI1, COI4 and COI7 are phrased in a positive direction relative to other items and will be reversed coded, prior to analysis of results. Once these items have been reversed higher scores for respondents represent greater quantities of interdepartmental conflict.

In sum, these items measure the extent to which tension occurs in interdepartmental interactions and the existence of goal incompatibility between departments.

Imitative Capability

Imitation capability is a five-item scale with a reported Cronbach alpha of .91 (Olavarrieta Soto 1997). All items are scored directly so that the higher the score the higher the level of imitative capability exhibited.

IC1 Our company responds fast to the competitors' introductions of new products, by rapidly examining them and analyzing the possibility to imitate them.

IC2 Our company structure and systems are well designed to facilitate rapid adaptation of product offerings in order to respond to competitors' moves.

IC3 The introduction of new products by our competitors, calls for immediate meetings of our top executive teams.

IC4 In our company, we closely observe direct competitors, firms from other industries, suppliers, and customers, in order to identify business practices that can be imitated or improved within our firm.

IC5 Our imitation efforts are implemented fast enough to almost eliminate the lead-time of competitors.

Thus, a firm's imitation capability requires technical knowledge, structural flexibility, and willingness to observe and imitate the innovations of competitors. The scale captures the willingness and readiness to imitate as well as past imitative behavior.

Strategic Flexibility

The strategic flexibility scale consists of five-items (Section 3, Q1 - Q5 of the questionnaire) with a reported alpha of .77 (Grewal and Tansuhaj 2001).

SF1 We regularly share investments and costs across business activities.

SF2 We seek to derive benefits from diversity in environments.

SF3 Our strategy emphasizes exploiting opportunities arising due to variability in the environment.

SF4 Our strategy reflects high level of flexibility in managing risks, political, economic, and financial.

SF5 Our strategy emphasizes versatility in allocating human capital.

These items capture the ability of an organization to manage economic and political risks by promptly responding in a proactive or reactive manner to market threats and opportunities (Grewal and Tansuhaj 2001). An organization high in strategic flexibility will monitor its environments closely and adjust its resources quickly in order to exploit opportunities or solve problems.

Product Quality

The product quality scale consists of three-items developed by Menon, Jaworski and Kohli (1997) using a six-point Likert scale. They reported a .79 alpha reliability coefficient.

QUAL1 The quality of our products and services is better than that of our major competitors.

QUAL2 Our customers often praise our product quality.

QUAL3 Our customers are firmly convinced that we offer very good quality products.

Whilst Menon, Jaworski, and Kohli (1997) specified scale anchors ranging from poor to excellent, the phrasing of the items suggest they may also be used in a traditional Likert strongly disagree to strongly agree format in keeping with our other scale anchors.

These items measure the overall quality of an organization's products with respect to customer perceptions and competitive comparisons.

Top Management Emphasis on Market Orientation

Jaworski and Kohli (1993) developed a four-item scale of top management emphasis on market orientation (Section 4, Q9 - Q12) and reported a coefficient alpha of .66.

TME1 Top managers repeatedly tell employees that this company's survival depends on its adapting to market trends.

Original scale item used the term "business unit" rather than "company". However, as previously stated, this term is not valid for all companies operating within the Thai automotive industry.

TME2 Top managers often tell employees to be sensitive to the activities of our competitors.

TME3 Top managers keep telling people around here that they must gear up now to meet customers' future needs.

TME4 According to top managers here, serving customers is the most important thing our company does.

As per TME1, "business unit" was replaced with "company" in item TME4.

Overall, these items assess the extent to which top management in an organization reinforce the importance of market orientation. Note that method of reinforcement is limited to communications involving "top management" and "employees".

Future Orientation

Kitchell (1995) developed this three-item scale called "Corporate Culture (Future Oriented)" and reported a Cronbach alpha of .80. These items appear in Section 4, Q16 – Q18 of the questionnaire. Question 16 will hereafter be referred to as FUT1, question 17 as FUT2 and question 18 as FUT3.

FUT1 The ability to plan ahead is highly valued here.

FUT2 Management is constantly planning for the future of the company.

FUT3 People here are encouraged to take a long-term view of their career with the company.

In sum, these items measure the extent to which a firm's corporate culture encourages planning and takes a long-term view.

Business Performance

Questions 1, 2, 3, 4 and 6 use subjective measures of performance as reported by each respondent. Subjective measures of performance are widely used in studies of market orientation and performance as well as in studies of organizational behavior (Bommer et al. 1995) and strategy (Venkatraman and Ramanajam 1986).

The subjective performance measures were based on those used by Gupta and Govindarajan (1983) and Covin, Prescott, and Slevin (1990), which assessed the respondent's satisfaction with their firm's performance (relative to competitive performance) on each measure. The five dimensions of performance examined were word of mouth, market share, profitability, sales growth and overall success. The items are located in Section 5, (Q1–5) of the questionnaire and use the same six-point Likert response format.

PERF1 Our customers are more likely to recommend us to others, than they are likely to recommend our competitors.

PERF2 Relative to our major competitors, we have a smaller market share.

PERF3 Relative to our major competitors, our firm has been less profitable in the last year.

PERF4 Relative to our major competitors, our sales have been growing faster in the last year.

PERF5 Relative to our major competitors, overall we have been more successful in the last year.

Note that Both PERF2 and PERF3 are phrased in a negative direction relative to other items and were reversed coded prior to analysis of results.

5.2.2 Translation and Back Translation

The questionnaire was developed in English, however the sample included a large number of Thai speaking key informants. Therefore an equivalent Thai language version of the questionnaire was required. The strategic flexibility scale used by Grewal and Tansuhaj (1996) has been used previously in Thailand. Grewal was contacted in order to obtain the precise Thai language to incorporate in our questionnaire. A professional English - Thai translator translated all other scales into Thai language. Then, a Thai market research executive subsequently back-translated this draft into English. Only insignificant changes were required as the back-translated questionnaire was very similar to the original English version, ensuring measurement equivalence of the instrument.

5.2.3 Pre-Testing

All measurement scales identified in Table 4.2 have been used extensively in the marketing and management literature and have generally met standard criteria for reliability and validity (Churchill 1979). Pre-testing refers to the testing of the questionnaire on a small sample of respondents in order to identify and eliminate potential problems (Malhotra 1999). Objectives of the pretest were to evaluate question content, wording, sequence, form, and layout, question difficulty, and instructions.

The mail survey instrument was pre-tested in three stages. In stage one, both a professor of marketing and a market research executive (both citizens of Thailand) evaluated the questionnaire. Neither individual found problems associated with item

content and item sequence. However, both individuals suggested several small changes to questionnaire instructions and the overall layout.

In stage two, the questionnaire was tested on seven Thai colleagues at Thammasat University who were selected on the basis that their families were engaged in manufacturing businesses and they could relate to questions being asked. The questionnaire was completed in an interview environment so that each respondent was observed for reactions and attitudes. These seven individuals also were asked to consider whether items covered the scope of the construct. Finally, each individual was asked for feedback about perceived length of the questionnaire, the time required to complete the questionnaire, as well as appearance and layout of the questionnaire. This feedback led to minor changes, specifically in relation to improving and refining Thai vocabulary used to describe various concepts.

In the third and final pretest stage, the questionnaire was administered to fifteen automotive parts manufacturers randomly drawn from our sample. Frequency and descriptive analyses indicated that all measures had reasonable ranges and variances. There was no evidence of item non-response and items that were reverse coded, had not been misinterpreted by respondents. Finally, each pretest respondent was contacted to identify whether there were any specific questions that posed difficulty. No further changes were required and we were satisfied that the final survey instrument is simple, well presented, and should produce data that accurately reflects the constructs being measured. Note also that all measures included in the final questionnaire were subjected to scale validation and reliability analyses prior to

hypotheses testing. Details of the scale validation process with the final data are provided in Chapter VI, Analysis and Results.

5.3 Population of Interest and Sampling Frame

In conceptual terms, our population of interest is top-level executives employed at Thai companies competing in the Thai automotive parts manufacturing industry in 2002. Characteristics of this population as uncovered in our survey were previously summarized in Section 2.2.2.

Our population of interest represents a single industry. We did this because a fundamental assumption in a cross-sectional study such as this is that relationships among the variables of interest are essentially homogeneous among all units of analysis. If different kinds of relationships exist across industries, estimates derived from the data pooled over these sub-groups can lead to erroneous conclusions. To control for this problem, this study focuses on one industry alone. Harris (2001, p. 37) advocates this approach on the basis that "research into the dynamics of market orientation in differing industrial contexts may provide interesting and valuable insights." In terms of research question 7, earlier failure prediction studies (Altman 1968; Zavgren, 1985) assume companies are similar across manufacturing industries. However, the evidence indicates that different operating and financial pressures exist which may result in inter-industry differences (Platt, Platt and Peterson 1994), thus, providing further justification for our decision to focus on a single industry.

Thailand has three major manufacturing industries: electronic components, textiles and automotive. We selected the automotive industry for a number of reasons. It is extremely well structured and organized with efficient industry associations including: The Thai Auto-Parts Manufacturers Association (TAPMA); The Thai Automotive Industry Association; The Automotive Industry Club of the Federation of Thai Industries; and The Auto-Parts Industry Club of the Federation of Thai Industries. The Thai automotive industry is widely considered to be the "Detroit of Southeast Asia" and has the support of the Department of Export Promotion. We envisaged that this infrastructure would make the task of obtaining adequate industry support including access to address lists much easier to expedite our research effort.

Furthermore, relatively little market orientation or business failure prediction research has been undertaken on a sectoral basis and most business failure prediction research has examined public companies only. An industry wide study will include all types of companies operating within the sector. The companies surveyed may be either foreign joint venture, public, or privately owned Thai companies, all of whom operate at least one automotive parts manufacturing facility within Thailand's territories and employ Thai workers.

5.3.1 Unit of Analysis

Narver and Slater (1990) and Jaworski and Kohli (1993) used the strategic business unit (SBU) as their unit of analysis. The SBU is defined as a business unit within the organization that has a well-defined business strategy. In the context of Thailand, the SBU may refer to the company as a whole since many Thai companies are much

smaller and less formal in terms of their organizational structure than their Western counterparts. The unit of analysis in this study is the company.

In general, the Thai automotive industry consists of two distinct sectors: assemblers and parts manufacturers. Auto assembler firms manufacture complete automobiles from components manufactured either locally or imported from offshore. Sixteen assemblers operate in Thailand and include well-known companies such as Honda, General Motors, Toyota and Isuzu. Assemblers however, are not the subjects of this dissertation. Our sample was derived exclusively from the second category, Automotive parts manufacturers consisting of more than one thousand companies whose principal business is the design and/or manufacture of steel, electrical, plastic, and rubber components to be used in automobile assembly and/or sold as spare parts in domestic and foreign markets as identified by the Thailand Standard Industrial Classification[2]:

- 38439: Manufacture of engine parts, transmissions, brakes, steering, or suspension systems
- 38431, 38432, 34839, 38440: Manufacture of other vehicle parts

Top-level executives are defined as individuals holding a position that can impose influence, or directly effect the directions and results of company performance. They may hold positions of responsibility with such titles as: Owner, Chief Executive Officer, Managing Director, Executive Directors of Production / Manufacturing,

[2] The Thailand Standard Industrial Classification (TSIC) is a classification that defines at a national level, existing Thai industries to facilitate uniformity in statistical analyses. For the purpose of promoting international comparability of economic statistics, this standard complies with the "International Standard Industrial Classification" of all economic activities, which is recommended by the United Nations Organization for use by member countries.

Marketing, and Human Resources. It was important that we obtain the response of top-level executives because we need perspectives of strategic decision makers who could comment on such key constructs in this study as market orientation, strategic flexibility, and business performance.

The discussion here and in the next section avoids use of the word "tier" to describe the population of interest and sampling frame. We do so for three reasons. Firstly, no agreed upon definition of tier levels either by industry or by Thai government department exists. Secondly, suppliers often operate at multiple tier levels simultaneously, by supplying components directly to an assembler or to other manufacturers within the supply chain. Thirdly, apart from first tier suppliers, many suppliers do not know where they are situated in the supply chain or are not familiar with the tier concept, and therefore would not know how to respond to such a question if posed in our survey.

5.3.2 Sampling Frame

The population of interest is almost certainly over one thousand in number although it could be significantly larger. The Thai Board of Investment have indicated that the total population of automotive parts manufacturers (foreign joint venture, public, and Thai) is at least 1,186 and could be as large as 1,700. As with almost any "large" population no one knows its exact size at any given time.

We obtained a list of contact details for automotive parts exporters from the Department of Export Promotion, which included both suppliers and manufacturers.

We also obtained a copy of the Thailand Automotive Industry Handbook (Media Overseas Co. 2000-2002), which contained a similar but not identical list of contact details for suppliers, distributors, manufacturers, assemblers and other companies with a peripheral interest in the industry. Using these two sources, we were able to obtain contact details for 861 companies as identified by Standard Industrial Classification codes as being automotive part manufacturers. Contact details included names of senior executives, factory and office addresses, phone and fax numbers, e-mail and web site addresses. We carefully screened this list and identified 51 companies closely affiliated with other companies within the sample and eliminated these from our sampling frame. For example, Thai Asco Brake Co., Ltd. shares the same office address and Board of Directors as Thai Asco Filter Co., Ltd. and therefore only one of these companies was retained. A total of 20 other companies were subsequently excluded from our sample due to having either relocated, closed business, or were unknown at the listed address. Our final sample consisted of 790 companies (foreign joint venture, public, private, and Thai).

This "contacted sample" is a large probability sample in the sense that as many as 910 companies were excluded (from our data collection) for many reasons, at least one of which we construe to be random or chance as this phenomenon operated in the assembly of the sampling frame listing.

Several reasons support selection of this sample. First, relatively few market orientation and failure prediction studies have focused on a single industry. This research will benefit the automotive parts industry, corroborate previous findings in

the market orientation performance relationship, and produce important directions for future research. Second, at the outset of this study the author was living and working in Thailand and enrolled in the Doctoral program on a part time basis. These circumstances necessitated that the sample be drawn from Thailand for logistical reasons.

5.4 Data Collection

Through a contact at Thai Farmers Bank we obtained immediate but limited access to the Business Online[3] (BOL) database, allowing us to collect secondary data in the form of audited financial statements (profit and loss statement and balance sheet) for any 260 automotive parts manufacturers operating in the industry. These data would be used for research questions 5 and 7. Several market orientation studies recognize that this type of information is extremely difficult to obtain (e.g., Pitt, Caruana, Berthon 1996; Pelham and Wilson 1996) and therefore when presented with this opportunity it was vital we obtain this data immediately rather than waiting to see who responded to our questionnaire. Failure to do so would necessitate the same financial information be purchased from its original source, the Ministry of Commerce, a task which would require much greater time and effort to firstly, navigate the bureaucracy to access the records and secondly, to interpret and disseminate financial accounts reported in the Thai language. We therefore provided the bank with a list of 260 randomly selected companies from our sample of 790 companies and they supplied us with this secondary data.

[3] Business Online Co., Ltd. (BOL) is a joint venture between the Thai Ministry of Commerce and Dunn and Bradstreet.

Having these data presented us with the challenge of yielding a high response rate from the 260 companies. Initially we recruited eight undergraduate students to assist with the collection of survey data. Each student was allocated contact details for between 15 and 30 companies whom they were to personally visit and obtain a completed questionnaire for which they would be remunerated. This approach was successfully employed in a Thai corporate setting (Nicholas et al. 2000) as a means of efficiently obtaining a high response rate from a limited sample. Most automotive manufacturers are located outside of Bangkok in the provinces and our research assistants proved reluctant to travel, preferring to contact each company by telephone. This approach yielded a net total of only 31 responses, (11.9 percent response rate) over a six-week period and was therefore abandoned in favor of data collection by mail survey targeting the remaining 530 companies from our sample for whom contact details were available. Given the lack of success in using students as research assistants, we considered it necessary to target this number in order that we obtain a reasonable large sample.

We also provided blank questionnaires to friends and colleagues with auto industry contacts to solicit the response of auto part manufacturers. We were unaware of the number or identity of companies contacted using this technique however a total of nine responses were eventually received, each of which was listed in our sample of 790. We can therefore conclude that these nine companies were contacted using more than one data collection technique.

Table 5.2 Data Collection Techniques Used

Data Collection Technique	Companies Contacted	Useable Responses	Response Rate
Student research assistants	260	31	11.92%
Colleagues with industry contacts	Not known	9	-
Mail survey	530	163	30.75%
Total	790	203	25.70%

The most successful data collection method was a mail survey. The mail survey was administered in four steps (refer Appendix 1 and 2 for a copy of the mailings). A pre-notification letter was sent to the Managing Director of each potential respondent, which was followed one week later by a mailing that contained a cover letter, a copy of the questionnaire, and a prepaid reply envelope. A reminder postcard was sent out approximately three weeks thereafter to identified non-respondents. Finally, after another three weeks elapsed, all non-respondents received a fourth mailing complete with cover letter, questionnaire, and prepaid reply envelope. All respondents were guaranteed confidentiality and promised a summary of results as an incentive. All mailings used Thammasat University letterhead and all correspondence were personally signed by the Chairman of the Doctoral program, as Thai managers are more likely to respond positively to an individual with a position of authority.

Thai language cover letters and questionnaires were distributed to Thai Managing Directors. In the event that the potential respondent had a foreign name, both a Thai and English cover letter and questionnaire were enclosed.

The mail survey was distributed in four batches at different time intervals. Of the 163 useable mail responses, 150 companies responded within a timeframe of 2 to 92 days

(refer Table 5.3). A further seven companies responded anonymously and therefore exact response time is not known. An additional six responses were received from companies with unfamiliar names. This is likely due to either a recent Japanese investment that led to a change of company name or the company uses more than one trading name and the name as recorded in the questionnaire is different from that listed with either the Department of Export Promotion or the Thailand Automotive Industry Handbook (Media Overseas Co. 2000-2002).

Table 5.3 Mail Survey Response Rates

Action taken to collect survey data:	Number of Days	Useable Responses	Percent of Total
Step 1: Advance postcard sent 1 week prior	-	-	-
Step 2: Questionnaire mailed	0-21	90	60%
Step 3: Reminder letter sent 3 weeks later	22-42	36	24%
Step 4: Questionnaire resent 6 weeks later	43-92	24	16%
TOTAL		150	100%

Data collection required more than five months. The extensive data collection effort resulted in a satisfactory response rate and a reasonably large sample size. The pretest questionnaire was almost identical to the final questionnaire except for minor changes. Since the measures and constructs in the pretest and final questionnaire are the same, the 15 responses from the pretest are included in our final analysis. A total of 214 questionnaires were received yielding an effective response rate of 26.4 percent. Of these, 203 questionnaires were useable, which equates to an effective response rate of 25.7 percent after accounting for unusable surveys. There were two reasons for unusable surveys: eight respondents returned the questionnaire completely unanswered and three respondents answered incompletely.

The overall response rate is considered quite high when compared to similar kinds of research using mail surveys in Thailand (Singhapakdi et al. 1994). However, when compared to a sample of previous market orientation studies (refer Table 5.4) it is apparent that our response rate is at the low end of the scale. Pelham and Wilson (1996) is the exception having reported a response rate of 13.3 percent.

Table 5.4 Previous Market Orientation Empirical Studies

Study	Year	Methodology	Country	Sample size	Response rate
Narver and Slater	1990	Mail Survey	USA	140	84%
Jaworski and Kohli	1993	Mail Survey	USA	222 and 230	70 and 79.6%
Diamantopoulos and Hart	1993	Interview	UK	87	46%
Greenley	1995	Mail Survey	UK	240	28%
Pelham	1997	Mail Survey	USA	160	14%
Appiah-Adu and Ranchhod	1998	Mail Survey	Ghana	74	37%
Bhuian	1998	Mail Survey	Saudi Arabia	115	77%
Han, Kim and Srivastava	1998	Mail Survey	USA	134	60%
Kumar et al.	1998	Mail Survey	USA	159	29%
Grewal and Tansuhaj	2001	Survey	Thailand	120	n/a

5.5 Data Analysis Procedures

5.5.1 Missing Data

Raw data from the survey were coded and entered into a data file. The coded database was analyzed using SPSS 10.0 for Windows. A very small amount of missing data was found in the 203 questionnaires. The 51 items comprising the nine constructs had between 199 and 203 responses complete. If each case with one missing item were eliminated, the list wise sample size would be 185, so rather than reduce the total sample to this quantity; we created new variables for each item having missing data and replaced missing values with the mean response.

5.5.2 Data Assessment

Data assessment refers to the process of checking data for problems that might affect legitimacy of hypotheses testing. Data assessment consisted of three steps: a data coding audit, a data distribution audit, and a non-response bias check.

A data coding audit checks to ensure that surveys were correctly coded and that these codes were accurately entered into a data base for analysis. This process included checking a sample of surveys to ensure that coding and data entry were accurate. Also, the minimum and maximum value of each variable were reviewed to ensure that all values fell within reasonable ranges. For example, a value of "8" on our 6-point scale would require checking. Our audit of 50 questionnaires revealed that all self-report data had been correctly entered.

The second step in data assessment was a data distribution audit. Each item was checked for mean, standard deviation, and normality, in terms of skewness and kurtosis. When a distribution is normal, the values of skewness and kurtosis should be close to zero (Tabachnick and Fidell 2001). Our analysis (refer Appendix 3), determined values of skewness and kurtosis were generally close to zero. Therefore, the assumption of normality was not violated.

The third data assessment step was a check for non-response bias. This exists when actual respondents differ from those who refuse to participate (Malhotra 1999). Non-response may occur for any one of several reasons, which in this study can be attributed to refusal to participate, pending closure of the business, scheduling difficulties, and so

on. A typical method for assessing non-response bias would be to compare the characteristics of respondents to the characteristics of the population from which the sample was drawn. However, this was not possible. Therefore, non-response bias in this study was assessed by comparing early to late respondents, as suggested by Armstrong and Overton (1977). They argued that later repliers are more representative of non-respondents than early repliers.

Non-response error was analyzed by comparing survey responses from companies that responded: promptly (0-21 days); moderately slowly (22-42 days) after a follow-up letter was sent, and very slowly (43-92 days) after a duplicate questionnaire was sent out (refer Table 5.3).

We compared the means for each of these three groups on the basis of three subjectively scaled variables: ROI, market share, and number of employees, and one objectively measured performance item: Natural log of total assets. Note that table values for subjective measures are based on the number of points in each scale: ROI (q5.14) uses a 5-point scale whereas both market share (q5.12) and employees (q6.25) use a 7-point scale. (Refer to the Questionnaire in Appendix 1 for a listing of each item). Means for each of the four variables shown in Table 5.5 are generally equal. In other words, we do not observe any variation in the means for prompt versus slow respondents. The only substantive peculiarity is the standard deviation of ROI for the fast and moderate respondents compared to that for the slow respondents.

Table 5.5 Analysis of Non-Response Data

Response Time		ROI	Market Share	Number of Employees	Log of Total Assets
Fast: 0-21 days	Mean	2.60	2.47	3.99	18.80
	N	86	86	89	83
	Std. Dev.	1.15	1.47	1.71	1.96
Moderate: 22-42 days	Mean	2.91	2.00	4.31	18.17
	N	33	32	36	36
	Std. Dev.	1.13	1.13	1.60	2.17
Very slow: 43-92 days	Mean	2.64	2.33	3.88	18.22
	N	22	21	24	23
	Std. Dev.	.79	1.46	1.60	1.99
Total	Mean	2.68	2.34	4.05	18.55
	N	141	139	149	142
	Std. Dev.	1.10	1.43	1.66	2.02

We performed a further test for non-response error by examining the same three groups in terms of our key constructs: market orientation, interdepartmental conflict, imitative capability, strategic flexibility, product quality, top management emphasis on market orientation, and future orientation. We observe a few interesting differences in Table 5.6.

Table 5.6 Analysis of Non-Response Data by Construct

RESPONSE TIME		DESH	PEL	QUAL	SF	COI	FUT	TME	IC
Fast: 0-21 days	Mean	46.83	38.90	13.49	19.93	21.91	13.78	19.32	16.19
	N	88	88	89	88	86	88	90	88
	Std. Dev.	8.48	7.11	3.13	5.12	6.03	3.42	3.91	5.04
Moderate: 22-42 days	Mean	47.81	40.69	13.71	20.94	20.29	15.03	20.17	17.54
	N	36	35	35	36	35	35	35	35
	Std. Dev.	6.48	5.36	3.30	4.13	6.43	2.46	3.40	5.27
Very slow: 43-92 days	Mean	49.50	43.22	13.21	21.17	17.04	15.75	20.42	17.48
	N	24	23	24	24	24	24	24	23
	Std. Dev.	6.74	6.68	4.00	5.47	7.28	2.57	3.67	6.06
Total	Mean	47.50	40.01	13.50	20.38	20.71	14.40	19.70	16.72
	N	148	146	148	148	145	147	149	146
	Std. Dev.	7.79	6.81	3.30	4.96	6.54	3.17	3.76	5.27

The mean market orientation score is larger for slow respondents than it is for the quicker respondents. Moreover, both market orientation measures (Deshpandé and Farley 1996; Pelham and Wilson 1996) are in the same direction, which lends credibility to the notion that non-respondents may display a similar level of market orientation. Furthermore, interdepartmental conflict is lower and future orientation is greater for slower responding firms compared to firms that responded quickly.

The first implication in this is that non-respondents might be expected to have higher market orientation scores, higher interdepartmental conflict scores, and lower future orientation scores than respondents, maybe even higher than the "very slow" respondents. The second implication follows. If non-respondents indeed have higher or lower scores than respondents, then measurements we obtained for these constructs are restricted in range, resulting relationships are said to be attenuated, and our results are conservative.

5.5.3 Analytical Procedures

Each proposed model described in Chapter IV in this study posits a relationship among a set of latent theoretical constructs measured with multiple observed items. Structural equation modeling (SEM) is the most appropriate approach for comprehensively testing each model. SEM may be used as a more powerful alternative to multiple regression, path analysis, factor analysis, time series analysis, and analysis of covariance. It combines an econometric focus on prediction with a psychometric perspective on measurement, using multiple observed variables as indicators of latent, unobserved concepts. This enables the researcher to

simultaneously cope with the issues of construct measurement and the structural relationships among the constructs.

5.6 Research Method for Question 5

Question 5 analyses use subjective measures as described earlier in the Chapter except for the performance measure. Whilst questions 1, 2, 3, 4 and 6 use subjective measures of performance as reported by each respondent, question 5 uses objective measure of performance obtained through secondary data from each company's latest audited profit and loss statement and balance sheet. Two objective measures of performance were selected: Return on Sales (ROS) and Return on Assets (ROA). These measures were selected due to prevalence in the literature, which we deemed important in order to replicate and compare results with previous studies. ROS and ROA correlated well after deleting outliers enabling us to obtain reasonable fit with the SEM. The correlation between ROS and ROA for our starting sample of 186 is .93 and for our final sample of 166 after deleting outliers is .84.

5.6.1 Return on Assets (ROA)

Return on Assets is measured by a company's net profit after tax for the trailing 12 months divided by its total assets at year-end. ROA is a measure of how effectively a company uses its assets; i.e. how much profit a company can achieve for each dollar of assets it controls. ROA will vary widely across different industries although it is a useful ratio for comparing competing companies within the same industry, as is the case in this dissertation.

5.6.2 Return on Sales (ROS)

This ratio is calculated by dividing net profit after tax for the trailing twelve months and total revenue for the same period. It measures a company's net profit margin and is therefore an indication of profitability as well as management effectiveness. Return on Sales varies widely by industry and to a lesser extent between companies within an industry. The theory is that since companies within an industry are competing with each other, the one with the highest gross margin (highest return on sales) is usually the most efficient.

5.6.3 Data Collection for Questions 5 and 7

We needed to obtain secondary data (audited financial statements) for those respondents not in the original sample of 260 (refer 5.4: Data Collection). No longer able to collect this from the Thai Farmers Bank BOL database, we sourced this information directly from the Department of Commercial Registration, Ministry of Commerce. The financial information was accessed via microfiche film and was identical to that available from BOL except for format, that is to say data was hand written or typed within a standard Thai language template rather than the English language output provided by the BOL database. The task was an arduous one requiring the assistance of a research assistant to complete the necessary application forms to obtain audited financial statements for each respondent. To make the task of data entry easier, permanent microfilm copies of audited financial statements were purchased rather than viewing and interpreting the data on site at the Ministry.

These financial variables are historical in the sense that they are derived from audited financial statements that were obtained independently without the knowledge of the companies themselves. In most cases the balance date of these year-end financial statements was 31 December 2000 although a small number of companies differed in that their annual financial statements had year-end balance dates ranging from 31 March to 30 September 2001.

The point to note is that a time lag exists between the dependent and independent variables used in this study. We estimated a model with Performance as a dependent variable and Market Orientation and several other constructs reported earlier in this Chapter as independent measures. We are aware that such a model is not theoretical sound, because we are trying explain 2000/2001 performance with variables measured in 2002 however Grewal and Tansuhaj (2001) successfully used a similar methodology.

5.6.4 Missing Data

The sample size used in analyses for questions 1, 2, 3, 4 and 6 was 203. Unfortunately, we were unable to obtain financial statements for all of these respondents. A total of seven companies responded anonymously and six responses were received from companies with company names not registered with the Ministry of Commerce. The financial statements for a further four companies were temporarily removed to Government registration offices upcountry and were therefore unavailable. We successfully obtained a profit and loss statement and balance sheet for 186 survey respondents. Three financial statements were missing values used to determine Return on Sales. The sample was further reduced by the deletion of

outliers for 17 cases as identified by using the Mahalanobis procedure. Thus, the final sample used in this analysis for question 5 and 7 was 166.

5.7 Research Methods for Question 7

Initially our intention was to interview executives of recently failed companies to determine whether their market orientation, strategic flexibility, etc. differed from surviving companies. However this design would require the cooperation of executives from failed companies, which in a country such as Thailand was unlikely to be forthcoming. An alternative approach was taken whereby companies predicted to fail or predicted to survive are interviewed before business failure occurs. To achieve this objective we developed a model using financial ratios, which would enable us to differentiate automotive parts manufacturers likely to fail from those that are likely to survive. Thus there are two stages to this research: the development of a model using *actual* failed companies and a sample of non-failed ("survivor") companies (n=34 firms) followed by application of the model on each of our respondents to the questionnaire (n=166 firms).

5.7.1 Sample Selection and Data Collection for Development of the Prediction Model

The approach taken was to identify all recently failed companies within the industry and then an equal sample of randomly selected surviving companies. To assemble the set of failed companies, two different sources were used. The Thai Auto-Parts Manufacturers Association (TAPMA) was able to provide the names of only three companies on the basis that in their opinion not many companies had been adversely affected by the economic crisis and that those companies which had been affected,

had diversified into different business activities and had not failed. Eventually, however another 17 failed automotive part manufacturers were identified through the BOL database, which is linked to the Commercial Registration Department, Ministry of Commerce and able to identify companies no longer operating. Thus, a total of twenty companies were identified that either had been declared bankrupt or had ceased trading due to financial difficulties. Specifically these companies either had completed bankruptcy proceedings; were in the midst of such proceedings; or were bankrupt according to TAPMA, but did not show up in any bankruptcy records. In the first two cases their accounts are usually either classified as "resolved" or "unresolved" by the Ministry of Commerce. However it may take years for categories 2 and 3 to be formally dissolved and some in fact never will be such is the evolving nature of bankruptcy law in Thailand. The fact is they failed and ceased operating up to one, two or three years previously despite the fact that in some cases they continued to file annual accounts as required under the law.

At least two years and generally three years of historical financial data (profit and loss statement and balance sheet) were required for each company in order that we could recreate certain ratios that required a balance as at the beginning and end of the financial year. However, it was subsequently determined that six of these failed companies did not submit accounts in the year immediately prior to bankruptcy and were excluded from the final sample. Financial statements were obtained from the Commercial Registration Department, Ministry of Commerce, for 14 failed companies and 20 randomly selected survivor companies. Two years prior to failure, financial data were obtained for 33 of the original 34 companies.

Table 5.7 Number of Companies Included in Q7 Sample to Develop Prediction Model

Years Prior To Failure	Failed Companies	Survivor companies	Total Companies
1	14	20	34
2	13	20	33

The sample size is small, however several previous business failure studies rely on samples of bankrupt firms numbering only 33, 32, and 23 (Jones 1987, p. 133). As previously noted this study seeks to eliminate any industry effect by focusing on one specific manufacturing industry. The limitation is the finite number of failed companies with which to work.

The income statements and balance sheets for each company were recreated in *Excel* and from this data cash flow statements were constructed. Using revenue, expense, assets, liabilities, equity and cash flow items, 89 financial ratios identified in the literature were generated for each company in each of the four years, which they were available. These ratios were then imported into SPSS and analyzed using appropriate procedures.

5.7.2 Statistical Method Used to Develop Prediction Model

The consensus throughout the failure prediction literature is that the Altman Z-score is the standard against which all subsequent attempts have been compared. We initially applied Altman's Z-score on our sample using his re-estimated model for privately owned companies: $Z = .717\ X_1 + .847\ X_2 + 3.107\ X_3 + .420\ X_4 + .998\ X_5$. The result proved inadequate because in many cases the X_4 variable (Book Value of

Equity / Total Liabilities) was unacceptably large as several failed companies report Total Liabilities to be very small, relative to Book Value of Equity. Despite the relatively small coefficient for X_4, this ratio reduces overall predictive accuracy of the Z-score model. Thus, an attempt was made to develop a better model using logistic regression for theoretical and empirical reasons.

Discriminant analysis requires the unlikely assumption that independent variables for failed and non-failed companies have identical normal distributions, whereas logistic regression requires fewer restrictive statistical assumptions and offers better empirical discrimination (Zavgren 1983). The accuracy of the model is determined by how well it classifies companies as failed or surviving. A classification matrix shows the number and percentage of firms that are classified appropriately is the measurement device used.

5.7.3 Statistical Variables Used

Dependent variable: In order to develop a logistic regression model that could be compared, it was necessary for the dependant variable to be dichotomous. The dichotomous dependant variable was assigned a value of 0 (failed) where the company had ceased to operate as a going concern and coded as 1 (survivor) if the company continued to operate.

Independent variables: A total of 89 financial ratios were identified from the literature and through discussions with insolvency practitioners. Specifically, 53 of these have successfully been used in prediction models reported in the literature. This

was supplemented with 36 additional ratios as a result of discussions with insolvency practitioners from Grant Thornton (Thailand) Ltd. The 89 ratios are identified in Appendix 13. However, given that private companies in Thailand are not required to meet the same level of reporting standards as public companies, many of these ratios could not be tested in the current study due to the abbreviated nature of the financial information available from the Ministry of Commerce. Therefore, in the event of missing or abnormal data, the ratio was eliminated from further analysis. In the year immediately prior to failure, 31 of the 89 ratios were complete and usable for all companies included in the sample.

These 31 ratios used have been derived from the broad class of financial ratios found to be significant explanatory variables in past prediction models or suggested by insolvency practitioners and financial analysts. These ratios are either based on income statement, balance sheet, and cash flow items. This means revenue, expenses, assets, liabilities and equity have all been accounted for in this analytical process.

Table 5.8 Financial Variables Used in Q7 to Develop Prediction Model

#	Financial ratio / Variable	Previous prediction studies that used relevant variable
X1	Accounts Receivable / Current Assets	Not previously used empirically
X6	Cash Flow / Total Assets	El Hennawy and Morris (1983)
X14	Current Assets / Total Assets	Beaver (1967), Deakin (1972, 1977), El Hennawy and Morris (1983), Lo (1986), Gombola et al. (1987)
X18	Current Liabilities / Current Assets	Ohlson (1980)
X19	Current Liabilities / Total Assets	Takahashi et al. (1979)
X20	Current Liabilities / Equity	Edmister (1972)
X22	Total Liabilities / Total Assets *(known as Debt Ratio)*	Beaver (1967), Deakin (1972), Ohlson (1980), Altman and Lavallee (1981), Zmijewski (1984), Gloubos and Grammatikos (1988), Shumway (1999), Nam and Jinn (2000)
X23	Debt-to-Equity *(known as Gearing ratio)*	Ta and Seah (1981)
X24	EBIT / Total Assets	Altman (1968), Altman, Haldeman et al. (1977), Altman, Baidya et al. (1979), Theodossiou (1993), Shumway (1999)
X25	EBIT / Fixed Assets	Not previously used empirically
X31	Earnings after interest & tax / P.U. Capital	Bidin (1988)
X33	Equity / Fixed Assets	Not previously used empirically
X36	Book Value of Equity / Total Liabilities	Altman (1968), Altman, Haldeman et al (1977), Altman, Baidya et al. (1979), Ko (1982), Altman, Kim and Eom (1995)
X38	Retained Earnings / Total Assets	Altman (1968), Altman, Haldeman et al. (1977), Bilderbeek (1979), Shumway (1999)
X39	Fixed Assets / Total Assets	Theodossiou (1993)
X40	Sales / Fixed assets (*also known as Fixed Asset Turnover)*	Not previously used empirically
X43	Gross Profit / Total Assets	Gloubos and Grammatikos (1988)
X56	Long Term Debt / Total Assets	Beaver (1967)
X58	Long Term Debt / Equity	El Hennawy and Morris (1983)
X61	Net Expenditure PP&E / Total Assets	Not previously used empirically
X62	Net Income / Fixed Assets	Not previously used empirically
X63	Net Profit AT / Total Assets *(also known as Return on Assets (ROA)*	Beaver (1967), Deakin (1972, 1977), Takahashi et al. (1979), Ohlson (1980), Zmijewski (1984), Lo (1986), Gombola et al. (1987), Persons (1999), Shumway (1999), Nam and Jinn (2000)
X66	Net Profit AT / BV of Equity	Van Frederikslust (1978), Bilderbeek (1979)
X67	Profit before Tax / Equity	TA and Seah (1981)
X72	Quick Assets / Total Assets	Deakin (1972), El Hennawy and Morris (1983)
X74	Retained Earnings / Issued Capital	Not previously used empirically
X76	Sales / Total Assets	Altman (1968), Altman, Baidya et al (1979), Bilderbeek (1979), Altman and Lavallee(1981), Gombola et al. (1987), Shumway (1999), Nam and Jinn (2000)
X78	Sales / Working Capital	Bidin (1988)
X83	Working Capital / Total Assets	Beaver (1967), Altman (1968), Deakin (1972), Altman, Baidya et al. (1979), Ohlson (1980), Bhatia (1988), Gloubos and Grammatikos (1988), Theodossiou (1993), Shumway (1999)
X85	Working Capital / Equity	Not previously used empirically
X89	Natural Log of Total Assets (Firm size)	Ohlson (1980), Altman, Kim and Eom (1995)

Question 7 used the same financial statements sourced for each respondent as described in detail earlier in this Chapter in question 5. Of the 203 survey respondents, we obtained profit and loss statements for 186 respondents. In terms of the two key variables eventually used in the prediction model, there were no missing values, however there were 20 outliers as identified by using the Mahalanobis procedure. The final sample used in this analysis was 166.

5.8 Chapter Summary

This Chapter discusses the research methodology, including overall study design, data collection procedure, and survey instrument in detail. The methodology adopted differs considerably from that used in previous studies and enables us at a very minimum to replicate, corroborate, and extend understanding of the market orientation and performance relationship. We measure market orientation using two different scales (Deshpandé and Farley 1996; Pelham and Wilson 1996) and examine the effect of common method variance, and the reciprocal relationship between market orientation and performance. This methodology allows us to also investigate several different measures of performance including subjective, objective, and predicted business failure, collected from primary and secondary sources. The next Chapter reports and analyzes results for each of our research questions.

Chapter VI

Analysis and Discussion of Results

Each research question listed in Chapter IV (except for question 7) is separately analyzed in accordance with a procedure advocated by Jöreskog (1993). The initial task in analyses for each question is to conduct confirmatory factor analysis to consider the adequacy of measures used for the question's theoretical factors and to evaluate discriminant validity of the constructs. Having specified a model for each question on the basis of substantive theory and having stated the respective hypotheses, we begin by estimating the measurement model for each construct in the model separately. We then estimate measurement models for each pair of constructs in the model, combining them two and two. Finally, we estimate the measurement model for all constructs in the model without constraining the covariance matrix of the constructs. The structural equation model, which specifies causal interrelationships between constructs, then is estimated and evaluated. All analyses in this study use Version 4.01 of AMOS to examine the fit of measurement and structural research models with observed data.

The structural equation modeling literature identifies many indices that can be used to evaluate the goodness of fit of a specified model to observed data. Because researchers do not agree on a single optimal test or even a composite of optimal tests to assess model fit (Maruyama 1998), we report several indices: chi square (χ^2), chi square divided by degrees of freedom, goodness of fit or GFI (Bentler and Bonett 1980); adjusted goodness of fit, or AGFl (Bagozzi and Yi 1989), root mean square

residual or RMR, and root mean square error of approximation index or RMSEA (Steiger 1990). Table 6.1 illustrates acceptable standards by which these and other indices are applied.

Table 6.1 Indices Used and Acceptable Standards

Convergent Validity	For CFA in covariance-based SEM the following measures should be obtained. GFI >.90, AGFI >.80 (or >.90) and a not significant χ^2 to show unidimensionality. In addition, item loadings should be above .707, to show that over half the item variance is captured by the latent construct (Barclay, Higgins and Thompson 1995; Segars, 1997; Chin, 1998 ; Hair et al. 1998)
Internal Consistency Reliability	Cronbach's alpha should be above .60 for exploratory research and above .70 for confirmatory research (Nunnally 1978; Peter 1979).
Unidimensional Reliability	Single factor CFA: CMIN/df less than 3 to 1 and p value more than .05 (Anderson and Gerbing 1988; Gerbing and Anderson 1988)
Chi Square (χ^2)	Not significant (p > .05)
CMIN / df	χ^2 to degrees of freedom ratio of less than 3:1 indicate an acceptable fit between the model and the data (Chin and Todd 1995; Hair et al. 1998; Arbuckle and Wothke, 1999)
Goodness of Fit (GFI)	GFI is always between zero (0) and unity (1), where unity indicates perfect fit. (Joreskog 1993). Higher values indicate better fit, no established thresholds (Hair et al. 1998). GFI values above .95 are regarded as a good fit.
Adjusted Goodness of Fit (AGFI)	AGFI > .80 (Segars and Grover 1993). Recommended level of .90 (Hair et al. 1998)
Squared Multiple Correlations (SMC)	No conventional guidelines exist, but SMC's should be greater than .5 for each item.
Root Mean Square Residual (RMR)	The smaller the RMR, the better. An RMR of zero indicates perfect fit.
Root Mean Square Error of Approximation index (RMSEA)	A value of .05 or less would indicate a close fit of the model in relation to the degrees of freedom. (Browne and Cudeck 1993). Acceptable values are under .08. (Hair et al. 1998).
Path Validity Coefficients	The structural coefficients must be significant; standardized values should be reported for comparison purposes (Bollen 1989; Joreskog and Sorbom 1989; Segars 1997; Hair et al. 1998)

6.1 Research Question 1: Do the Data Support a Relationship between Market Orientation and Performance?

Our analysis for question 1 uses the same subjective measures as used by other marketing scholars in order to replicate and corroborate previous findings. Item content for these performance measures as well as for all other measures are described in Chapter V. Item content can also be located by referring to Table 5.1 (p. 109) and Appendices 1 and 2 for the English and Thai versions of the survey instrument respectively.

6.1.1 Measurement Model

Separate confirmatory factor analysis models for the two market orientation scales and the performance scale assessed internal consistency of items comprising each scale. Each measurement model was estimated separately and subsequently combined in a two-step approach (Jöreskog 1993). A final measurement model then was estimated for all constructs without constraining the covariance matrix of the constructs.

The first scale used to measure market orientation in this study was developed by Deshpandé and Farley (1996). The 10 items in the scale were subjected to confirmatory factor analysis and then were pruned or reduced in number over several iterations. At each iteration, items having low squared multiple correlations and high-standardized residuals with other measures of the same latent construct were considered for elimination, with the weakest item finally targeted for removal. Items 4, 8, 1 and 2 were removed sequentially from the model in this fashion (refer Table

6.2). The final iteration produced an acceptable fit (χ^2 = 16.31; df = 9; GFI = .97; AGFI = .94; RMSEA = .06) and it was concluded that the six-item scale was unidimensional. The range of standardized factor loadings is .42 to .89. Note that all structural equation results are reported as "completely standardized values". That is, all paths, and correlations shown in the model will have maximum values of 1 and minimum values of –1.

The final single factor measurement model consists of items 3, 5, 6, 7, 9, 10. However, several of these items are considered marginal based on squared multiple correlations and are likely to be deleted when combined in a two-factor measurement model. In other words, at this point we erred on the side of caution by keeping more indicators than we likely would require.

Table 6.2 Model Fit Statistics: Single Factor - Market Orientation Deshpandé and Farley 1996 (completely standardized solution)

Single factor	χ^2	df	χ^2/ df	Prob	GFI	AGFI	RMR	RMSEA
All items included (DESH1-10)	184.03	35	5.26	0.00	0.83	0.73	0.13	0.15
DESH4 removed	117.90	27	4.37	0.00	0.89	0.81	0.11	0.13
DESH8 removed	60.99	20	3.05	0.00	0.93	0.88	0.09	0.10
DESH1 removed	32.41	14	2.35	0.00	0.96	0.92	0.09	0.08
DESH2 removed	16.31	9	1.81	0.06	0.98	0.94	0.08	0.06

Final items (3,5,6,7,9,10)

Pelham and Wilson (1996) developed the second market orientation scale tested in this study. This scale consists of nine items, which were subjected to confirmatory factor analysis. The model was pruned over several iterations. Measures having low squared multiple correlations and high-standardized residuals with other measures of

the same latent construct were eliminated. Items 5, 4 and finally 9 were removed in sequence from the model (refer Table 6.3). The final iteration produced a very good fit (χ^2 = 7.88; df = 9; GFI = .99; AGFI = .97; RMSEA = .00) and it was concluded that the six-item scale was unidimensional. The range of standardized factor loadings is .42 to .84.

Table 6.3 Model Fit Statistics: Single Factor - Market Orientation Pelham and Wilson 1996 (completely standardized solution)

Single factor	χ^2	df	χ^2/ df	Prob	GFI	AGFI	RMR	RMSEA
All items incl. (PEL1-9)	76.68	27	2.84	0.00	0.93	0.88	0.14	0.10
PEL5 removed	56.46	20	2.82	0.00	0.94	0.89	0.14	0.10
PEL4 removed	24.23	14	1.73	0.04	0.97	0.94	0.07	0.06
PEL9 removed	7.88	9	0.88	0.55	0.99	0.97	0.04	0.00

Final items (1,2,3,6,7,8)

Next, the purified market orientation scales were estimated simultaneously in a two-factor model. Each item was restricted to load on its *a priori* factor and the two factors were allowed to correlate (Gerbing and Anderson 1988). Each factor started with the final six items as determined by the single factor process performed above. Several iterations were conducted to eliminate measures having low squared multiple correlations and high-standardized residuals with other measures of the same latent construct. Four scale items: DESH3, PEL8 and DESH7 and finally DESH10 were removed in sequence from the model (refer Table 6.4). The final iteration produced a good fit (χ^2 = 24.00; df = 19; GFI = .97; AGFI = .95; RMSEA = .04), and it was concluded that the six-item scale was unidimensional. The range of standardized factor loadings is .42 to .89, almost identical to that for the Deshpandé and Farley (1996) items.

Table 6.4 Model Fit Statistics: Two Factor - Market Orientation Deshpandé and Farley 1996; Pelham and Wilson 1996 (completely standardized solution)

Two factor	χ^2	df	χ^2/ df	Prob	GFI	AGFI	RMR	RMSEA
DESH 3,5,6,7,9,10 &								
PEL1,2,3,6,7,8	112.38	53	2.12	0.00	0.92	0.88	0.02	0.07
DESH3 removed	91.04	43	2.12	0.00	0.92	0.88	0.09	0.07
PEL8 removed	75.62	34	2.22	0.00	0.93	0.89	0.09	0.08
DESH7 removed	47.97	26	1.85	0.01	0.95	0.92	0.08	0.07
DESH10 removed	24.00	19	1.26	0.20	0.97	0.95	0.05	0.04

Final items: DESH5,6,9 + PEL 1,2,3,6,7

The performance scale consists of five subjective measures of performance that were self-reported by each respondent. Several confirmatory factor analysis iterations were conducted to eliminate performance measures having low squared multiple correlations and high-standardized residuals with other performance measures. Items 2 and 3 were removed from the model (refer Table 6.5). With only three items in the model, fit was necessarily "perfect". However, the squared multiple correlation for PERF1 was only .13 and this item therefore was eliminated from the final measurement model. Standardized factor loadings for PERF4 and PERF5 were .84 and .92 respectively.

Table 6.5 Model Fit Statistics: Single Factor – Performance (completely standardized solution)

Single factor	χ^2	df	χ^2/ df	Prob	GFI	AGFI	RMR	RMSEA
Start PERF1,2,3,4,5	65.02	5	13.00	0.00	0.90	0.69	0.26	0.24
PERF2 removed	1.56	2	0.78	0.46	1.00	0.98	0.03	0.00
PERF3 removed	Perfect fit but SMC for PERF1 = .13 and was removed							
Final items PERF4, PERF5	Model is not identified							

6.1.2 The Structural Model

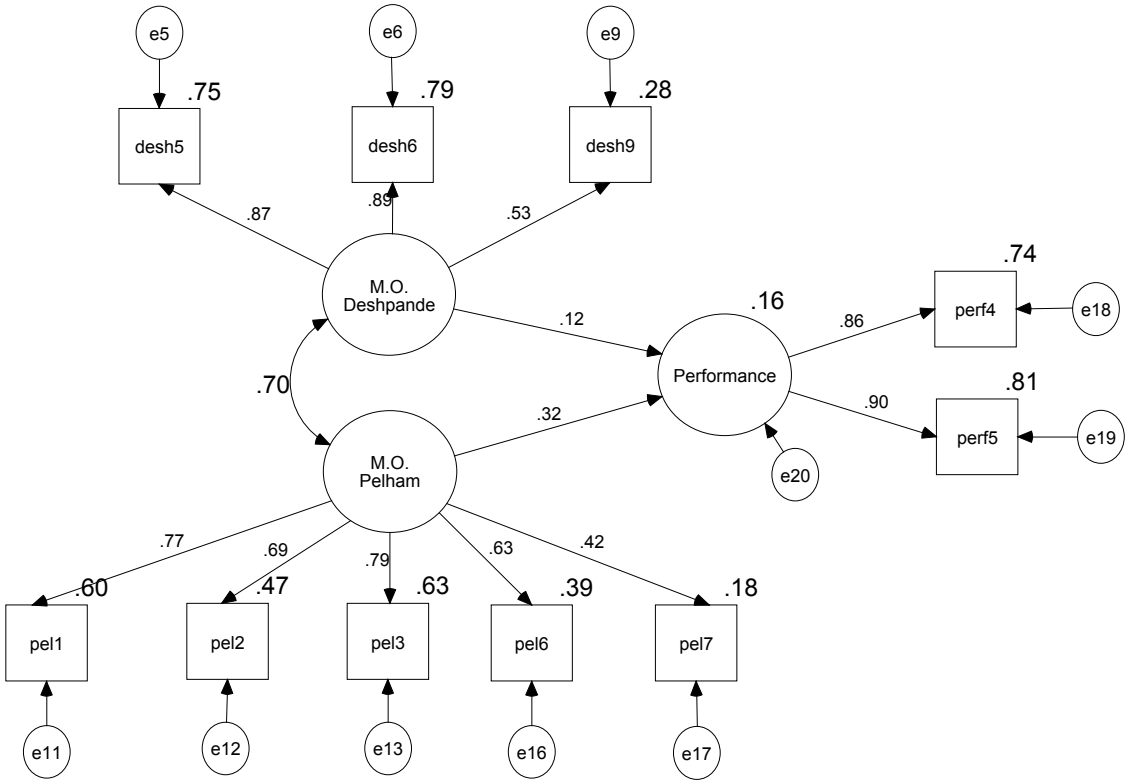
With observed indicators of the three constructs having acceptable measurement properties, the full structural equation model then was estimated and evaluated. This model incorporates the three purified scales and their measurement items and was used to estimate relationships between market orientation and performance. The model (refer Table 6.6 and Figure 6.1) showed a good fit (χ^2 = 32.15, df = 32, GFI = .97, AGFI = .95, RMSEA = .005). The range of standardized factor loadings is .42 to .90. The standardized reliability coefficients (Cronbach's alpha) for each of the final measurement models also were found acceptable: .80 for Deshpandé and Farley (1996), .79 for Pelham and Wilson (1996) and .87 for business performance. Content for the 10 measurement items identified in Table 6.6 may be found in Chapter 5.2.1 or in Appendix 4.

Table 6.6 Model Fit Statistics: Full Market Orientation and Business Performance Model (completely standardized solution)

Items included	χ^2	df	χ^2/ df	Prob	GFI	AGFI	RMR	RMSEA
DESH 5,6,9, PEL 1,2,3,6,7, PERF4,5	32.15	32	1.01	0.46	0.97	0.95	0.05	0.01

Figure 6.1 presents parameter values for our model. Values for factor loadings and structural paths appear beside each arrow. Values for squared multiple correlations appear beside each indicator and the Performance construct.

Figure 6.1 Structural Model - Market Orientation and Performance (completely standardized solution)



Hypothesis 1: The relationship between market orientation (Deshpandé and Farley 1996) and business performance is positive.

Hypothesis 2: The relationship between market orientation (Pelham and Wilson 1996) and business performance is positive.

Note that both hypotheses are stated in directional terms. Thus, all tests and p-values reported in this section represent one-tail procedures. The standardized parameter estimate between market orientation (Deshpandé and Farley 1996) and business performance was found to be positive (.12) but not significant ($p > .10$). In contrast, the path for market orientation (Pelham and Wilson 1996) and business performance was positive (.32) and significant ($p < .01$). Thus, H1 was rejected while H2 was supported.

This model tests two measures of market orientation. Results indicate that Pelham and Wilson's (1996) scale is more strongly associated with business performance than Deshpandé and Farley's (1996). Pelham and Wilson's (1996) scale is significant whereas Deshpandé and Farley's (1996) scale is not. However, this result needs to be considered in the context of the estimated structural model. The two measures of market orientation are highly correlated (.70) when included in the same structural model. If we would instead fit a single factor structural model for Deshpandé and Farley's (1996) scale and business performance and replicate for Pelham and Wilson's (1996) scale and business performance, we would find that the two causal coefficients are virtually the same: Deshpandé and Farley's (1996) scale is .33 and Pelham and Wilson's (1996) scale is .39. This argument is further supported by correlations implied in the two-factor model: .396 for Pelham and Wilson (1996) and business performance compared to .341 for Deshpandé and Farley (1996) and business performance. Thus, both the Pelham and Wilson (1996) and Deshpandé and Farley (1996) scales demonstrate a positive relationship between market orientation and business performance.

Results suggest that market orientation in this industry influences business performance. This finding corroborates assertions made by Narver and Slater (1990) and many other marketing scholars (e.g., Deng and Dart 1994; Pelham and Wilson 1996) that there is a positive relationship between market orientation and business performance.

Results differ from Grewal and Tansuhaj (2001) who found that market orientation has a negative effect on firm performance immediately after an economic crisis. Three reasons may explain this result. First, our study is conducted two years following Grewal and Tansuhaj (in somewhat more stable economic conditions) and uses a more representative sample. Second, Grewal and Tansuhaj (2001) began with a sample consisting of students enrolled in an Executive MBA program at a business school in northeastern Thailand. Such a sample does not represent the economic make-up of Thailand as nearly 50 percent of the Country's GDP is produced in the vicinity of Bangkok, while the entire northeast region only contributes 12 percent (Alpha Research Co. 2002). The northeast region is primarily agricultural, while most industry is located in Bangkok or in the industrial provinces of Cholburi and Rayong, southeast of Bangkok. Students attending a business program in the northeast are likely to come from within the region, and thus are likely to work in service industries or agriculture. Third, to expand their sample, Grewal and Tansuhaj (2001) added managers' responses taken from different units of a large Thai conglomerate located in Bangkok. This will tend to provide greater representative of Thailand as a whole, but will also likely suffer some bias, and restriction in range since all respondents in this pool worked in the same company.

6.2 Research Question 2: Does Common Method Variance Explain the Market Orientation and Performance Relationship?

Just as with question 1, procedures recommended by Anderson and Gerbing (1988) were followed for analyses for question 2. First, confirmatory factor analysis was used to examine the adequacy of the measurement component of the proposed model and to evaluate discriminant validity of the constructs. However, because we apply

the same measurement model for Pelham and Wilson's market orientation scale and business performance as used in question 1 we do not duplicate those results here.

Since responses to the market orientation and performance scales were obtained from single sources at a single point in time using identical response formats, the potential for common method variance (e.g., Podsakoff and Organ 1986; Cote and Buckley 1987, 1988) to influence results was examined by including an additional latent factor in the measurement model. Each item measuring the Deshpandé and Farley (1996) and Pelham and Wilson (1996) market orientation constructs as well as the business performance construct was allowed to load on this general method factor. Thus, path coefficients from this factor to each survey item represented the effects of the common method.

The same sample size of 203 was used as in question 1. However the initial iteration contained two negative variances. Three outliers based on Mahalanobis distance were eliminated which led to a working model. The final sample therefore consisted of 200. Results reported in Table 6.7 indicate that the structural model fits the data exceptionally well. Chi-square for the model is 15.91 (df = 22, p = .82). The goodness-of-fit index (GFI) is .99, and RMSEA is .00. Hypothesis testing therefore was undertaken based on this model. Content for the 10 measurement items identified in Table 6.7 may be found in Chapter 5.2.1 or in Appendix 4.

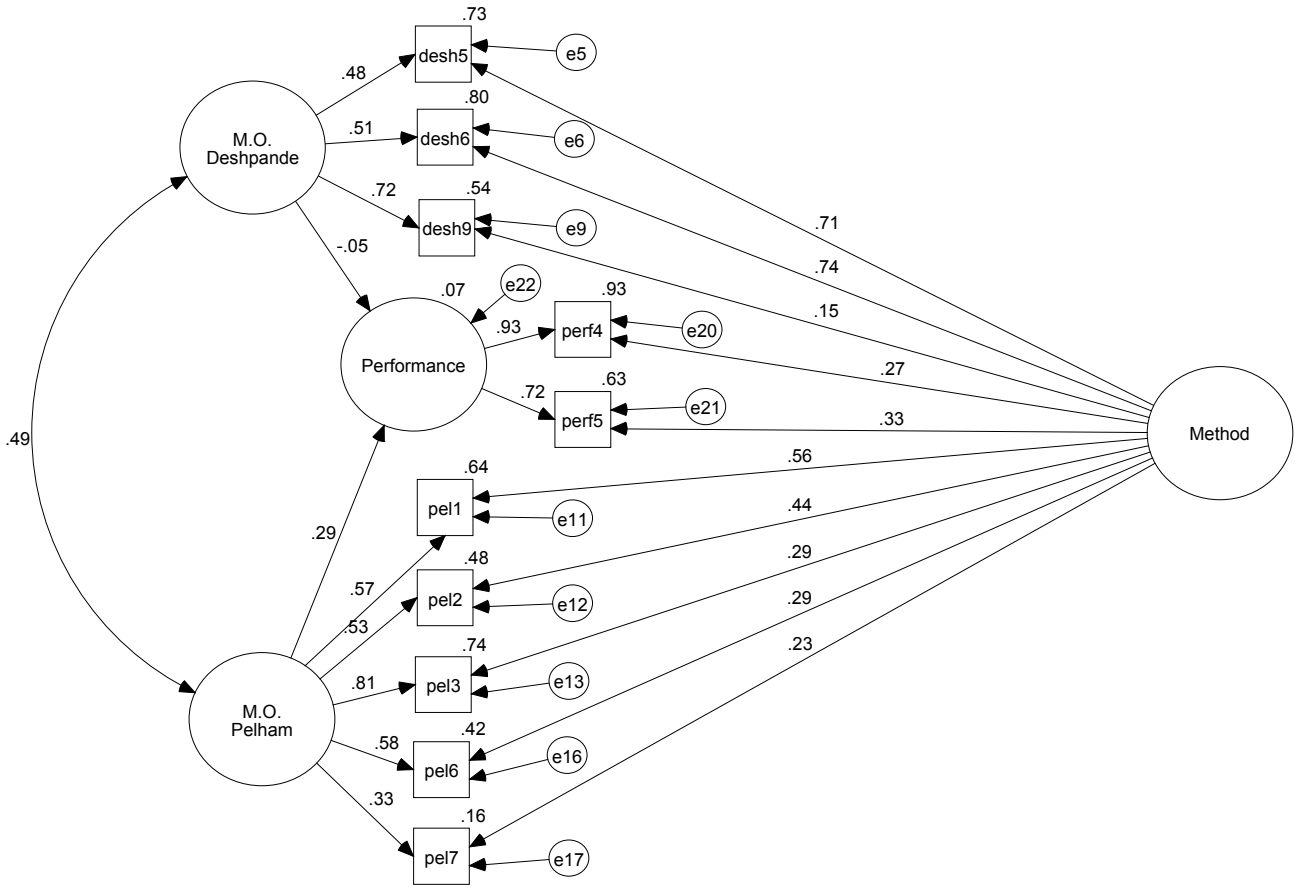
Table 6.7 Model Fit Statistics: Full Common Method Variance Model (completely standardized solution)

Items included	χ^2	df	χ^2/ df	Prob	GFI	AGFI	RMR	RMSEA
DESH5,6,9, PEL1,2,3,6,7, PERF4,5, METHOD	15.91	22	0.72	0.82	0.99	0.96	0.03	0.00

Hypothesis 3: Common method variance explains the previously noted relationships between market orientation and business performance.

As can be seen from the structural model (Figure 6.2) the standardized parameter estimate between market orientation (Deshpandé and Farley 1996) and business performance was negative (-.05). However, the value was not significant, a result similar to that obtained in analyses for question 1 without the method factor. The path between market orientation (Pelham and Wilson 1996) and business performance was positive (.29) and significant ($p < .005$) which also is comparable with the result obtained without the method factor. Finally, the correlation between the two measures of market orientation has reduced in size to .49 (from .70) but remains significant, as with results for question 1. Thus, results here support our conclusion from question 1: the Deshpandé and Farley (1996) and Pelham and Wilson (1996) measures of market orientation are highly correlated; the Pelham and Wilson (1996) measure has a larger influence on business performance than the Deshpandé and Farley (1996) measure.

Figure 6.2 Structural Model - Market Orientation, Performance, and Common Method Variance (completely standardized solution)



The model's implied correlations of .09 and .27 (Table 6.8) are method free estimates of associations between the two respective measures of market orientation (Deshpandé and Farley 1996; Pelham and Wilson 1996) and business performance. These values compare to correlations of .33 and .39 noted earlier for question 1. Note also the high factor loadings from the Method factor to DESH5 (.71) and to DESH6 (.74). These values exceed factor loadings from the Deshpandé and Farley (1996) market orientation construct, indicating that squared multiple correlations for these two measures of market orientation depend more on the common method than on the common construct. Note that Figures 1 and 2 show the Pelham and Wilson (1996) measure to contain one very weak indicator, PEL7, and one weak indicator, PEL6,

based on squared multiple correlations. Consequently, in analyses for questions 3, 4, and 6, we used a three-item Pelham and Wilson (1996) scale of market orientation consisting of PEL1, PEL2, and PEL3. The need to keep all five Pelham and Wilson (1996) indicators will be apparent only for the analysis of question 5. Finally, recall that the method factor in Figure 6.2 is modeled to be uncorrelated with both measures of market orientation. This explains the three zero values in Table 6.8.

In sum, our results show that common method variance inflates observed relationships between market orientation and business performance and suggest that the Deshpandé and Farley (1996) measure of market orientation seems more influenced by common method variance than the Pelham and Wilson (1996) measure. However, common method variance alone does not explain the relationship between market orientation and business performance because the path from the Pelham and Wilson (1996) measure to business performance (.29) remains significant. Thus, data fail to support H3 and we believe that common method variance is not a substantive concern in this study.

Table 6.8 Implied Correlations: Market Orientation, Performance, and Common Method Variance (completely standardized solution)

	Method	Market Orientation (Deshpandé)	Market Orientation (Pelham)	Performance
Method	1.00			
Market Orientation (Deshpandé)	0.00	1.00		
Market Orientation (Pelham)	0.00	0.50	1.00	
Performance	0.00	0.09	0.27	1.00

6.3 Research Question 3: What are the Effects of "Southeast Asian Perspective" Antecedents on the Market Orientation and Performance Relationship?

Question 3 examines structural relationships between interdepartmental conflict, imitative capability, and strategic flexibility with market orientation and business performance, as a replication and corroboration of recent work by Grewal and Tansuhaj (2001). Question 3 uses the same methodology as used in question 1. That is, separate confirmatory factor analysis models for each construct were estimated to assess internal consistency for each set of items. Each measurement model was estimated separately and subsequently combined in a two-step approach. A final measurement model then was estimated for all constructs without constraining the covariance matrix of the constructs.

6.3.1 Measurement Models – Single Factor Models

Interdepartmental conflict was measured using seven items that were subjected to confirmatory factor analysis as a single factor measurement model. The model was pruned by eliminating indicators over several iterations until a good fit was obtained. To achieve a good fit, measures having low squared multiple correlations and high-standardized residuals with other measures of the same latent construct were eliminated. Items COI5 and finally COI2 were sequentially removed from the model (refer Table 6.9). The final iteration produced an acceptable fit ($\chi^2 = 9.65$, df = 5, GFI = .98, AGFI = .94, RMSEA = .07) and it was concluded that the five-item scale was unidimensional. The range of standardized factor loadings is .57 to .74. The final single factor measurement model consists of items 1, 2, 4, 6 and 7. However item 6 is considered marginal and is likely to be deleted when combined in the three-factor

measurement model. In other words, we again erred on the side of caution by keeping more indicators than likely to be required.

Table 6.9 Model Fit Statistics: Single Factor - Interdepartmental Conflict (completely standardized solution)

Single factor	χ^2	df	χ^2/ df	Prob	GFI	AGFI	RMR	RMSEA
All items incl. (COI 1-7)	61.98	14	4.43	0.00	0.92	0.83	0.14	0.13
COI5 removed	37.85	9	4.21	0.00	0.94	0.86	0.11	0.13
COI2 removed	9.65	5	1.93	0.09	0.98	0.94	0.08	0.07

Final items 1,3,4,6,7

The second construct analyzed is imitative capability. The imitative capability scale consisted of five items that were subjected to confirmatory factor analysis. The model was pruned over several iterations until a good fit was obtained (refer Table 6.10). Only one item (IC1) had to be removed in order to obtain a reasonably good fit (χ^2 = 2.78, df = 2, GFI = .99, AGFI = .97, RMSEA = .04). The range of standardized factor loadings is .58 to .84. The final single factor measurement model consists of items 2, 3, 4, and 5.

Table 6.10 Model Fit Statistics: Single Factor - Imitative Capability (completely standardized solution)

Single factor	χ^2	df	χ^2/ df	Prob	GFI	AGFI	RMR	RMSEA
All items incl. (IC1-5)	10.26	5	2.05	0.07	0.98	0.94	0.07	0.07
IC1 removed	2.78	2	1.39	0.25	0.99	0.97	0.05	0.04

Final items IC 2-5

The third construct analyzed is strategic flexibility. This scale consists of five items that were analyzed as a single factor measurement model. Only one item (SF5) was removed in order to obtain an acceptable fit (χ^2 = 4.54, df = 2, GFI = .99, AGFI = .95,

RMSEA = .08). The range of standardized factor loadings is .50 to .87. The final single factor measurement model consists of items 1, 2, 3, and 4.

Table 6.11 Model Fit Statistics: Single Factor - Strategic Flexibility (completely standardized solution)

Single factor	χ^2	df	χ^2/ df	Prob	GFI	AGFI	RMR	RMSEA
All items incl. (SF1-5)	22.12	5	4.42	0.00	0.96	0.87	0.10	0.13
SF5 removed	4.54	2	2.27	0.10	0.99	0.95	0.05	0.08

Final items SF 1-4

6.3.2 Measurement Models – Two Factor Models

The next step was to combine each of the above single factor measurement models with each of the other single factor models to examine goodness of fit in two-factor models.

The first two-factor model examined was interdepartmental conflict and imitative capability. Initial analysis of the two-factor model included the final scale items determined by two single factor analyses (refer Table 6.12). One item (COI6) was removed in order to obtain a good fit. (χ^2 = 23.75, df = 19, GFI = .97, AGFI = .95, RMSEA = .04). The range of standardized factor loadings is .51 to .85. The final two-factor measurement model consists of items COI 1,3,4,7 and IC 2,3,4,5.

Table 6.12 Model Fit Statistics: Two Factor – Interdepartmental Conflict and Imitative Capability (completely standardized solution)

Two factors	χ^2	df	χ^2/ df	Prob	GFI	AGFI	RMR	RMSEA
COI 1,3,4,6,7 + IC 2,3,4,5	42.99	26	1.65	0.02	0.96	0.93	0.11	0.06
COI6 removed	23.75	19	1.25	0.21	0.97	0.95	0.09	0.04

Final items: COI 1,3,4,7 + IC2,3,4,5

The second two-factor model examined was interdepartmental conflict and strategic flexibility. The same procedure was adopted (refer Table 6.13). Two iterations were required to obtain a model with excellent fit (χ^2 = 8.76, df = 13, GFI = .99, AGFI = .97, RMSEA = .00). The range of standardized factor loadings is .52 to .90. The final two-factor measurement model consists of items SF 2,3,4 and COI 1,3,4,7.

Table 6.13 Model Fit Statistics: Two Factor - Interdepartmental Conflict and Strategic Flexibility (completely standardized solution)

Two factors	χ^2	df	χ^2/ df	Prob	GFI	AGFI	RMR	RMSEA
COI 1,3,4,6,7 + SF1,2,3,4	47.34	26	1.82	0.01	0.95	0.92	0.12	0.06
SF1 removed	19.84	19	1.04	0.40	0.98	0.96	0.08	0.02
COI6 removed	8.76	13	0.67	0.79	0.99	0.97	0.06	0.00

Final items: SF2,3,4 + COI 1,3,4,7

The final two-factor model examined was imitative capability and strategic flexibility. Two iterations were required to obtain a model with acceptable fit (χ^2 = 13.38, df = 8, GFI = .98, AGFI = .94, RMSEA = .06). The range of standardized factor loadings is .57 to .89. The final two-factor measurement model consists of items IC 3,4,5 and SF 2,3,4.

Table 6.14 Model Fit Statistics: Two Factor - Imitative Capability and Strategic Flexibility (completely standardized solution)

Two factors	χ^2	df	χ^2/ df	Prob	GFI	AGFI	RMR	RMSEA
IC 2,3,4,5, SF 1,2,3,4	33.69	19	1.77	0.02	0.96	0.93	0.10	0.06
SF1 removed	25.54	13	1.97	0.02	0.90	0.92	0.10	0.07
IC2 removed	13.38	8	1.67	0.10	0.98	0.94	0.07	0.06

Final items: IC 3,4,5 + SF 2,3,4

On the basis of the two-factor models COI6, IC2, SF1 were removed from further analysis. The next step was to analyze these constructs in a three-factor model using the final items derived from the two-factor measurement models. One iteration was required to obtain a three-factor model with excellent fit (χ^2 = 23.14, df = 25, GFI = .98, AGFI = .96, RMSEA = .00). The range of standardized factor loadings is .58 to .88. The final three-factor measurement model consists of items COI 1,4,7, IC 3,4,5 and SF 2,3,4.

Table 6.15 Model Fit Statistics: Three Factor - Interdepartmental Conflict, Imitative Capability, and Strategic Flexibility (completely standardized solution)

Three factors	χ^2	df	χ^2/ df	Prob	GFI	AGFI	RMR	RMSEA
COI 1,3,4, 7 IC 3,4,5 SF 2,3,4	32.34	33	0.98	0.50	0.97	0.95	0.08	0.00
COI3 removed	23.14	25	0.93	0.57	0.98	0.96	0.07	0.00

Final: COI 1,4,7 + IC 3,4,5 + SF 2,3,4

Reliabilities of purified scales were evaluated by examining standardized reliability coefficients and item-total correlations. For interdepartmental conflict (three items), Cronbach's alpha was an acceptable .70. Item-total correlations ranged from .49 (COI4) to .55 (COI1). For imitative capability, Cronbach's alpha was .73 and item-total correlations ranged from .47 (IC3) to .64 (IC4). For strategic flexibility, Cronbach's alpha was .77 and item-total correlations ranged from .51 (SF4) to .71 (SF3).

For market orientation (Pelham and Wilson 1996), the Cronbach's alpha was .79 and item-total correlations ranged from .58 (PEL2) to .68 (PEL3). Subjective performance was measured using the same two items (PERF4, PERF5) as was used in

question 1. Cronbach's alpha was .87 and the item-total correlations were .78 for both items.

6.3.3 The Structural Model

Having determined that latent constructs and their observed indicators possess acceptable measurement properties, the full structural equation model was estimated and evaluated. Note that all hypotheses in this section are stated in a directional fashion. Thus, all tests of path coefficients and correlations and their reported p-values represent one-tail procedures.

The model (refer Table 6.16) showed a good fit ($\chi^2 = 96.89$, df = 68, GFI = .94, AGFI = .91, RMSEA = .05). Hypothesis testing therefore was undertaken based on this model. Content for the 14 measurement items identified in Table 6.16 may be found in Chapter 5.2.1 or in Appendix 4.

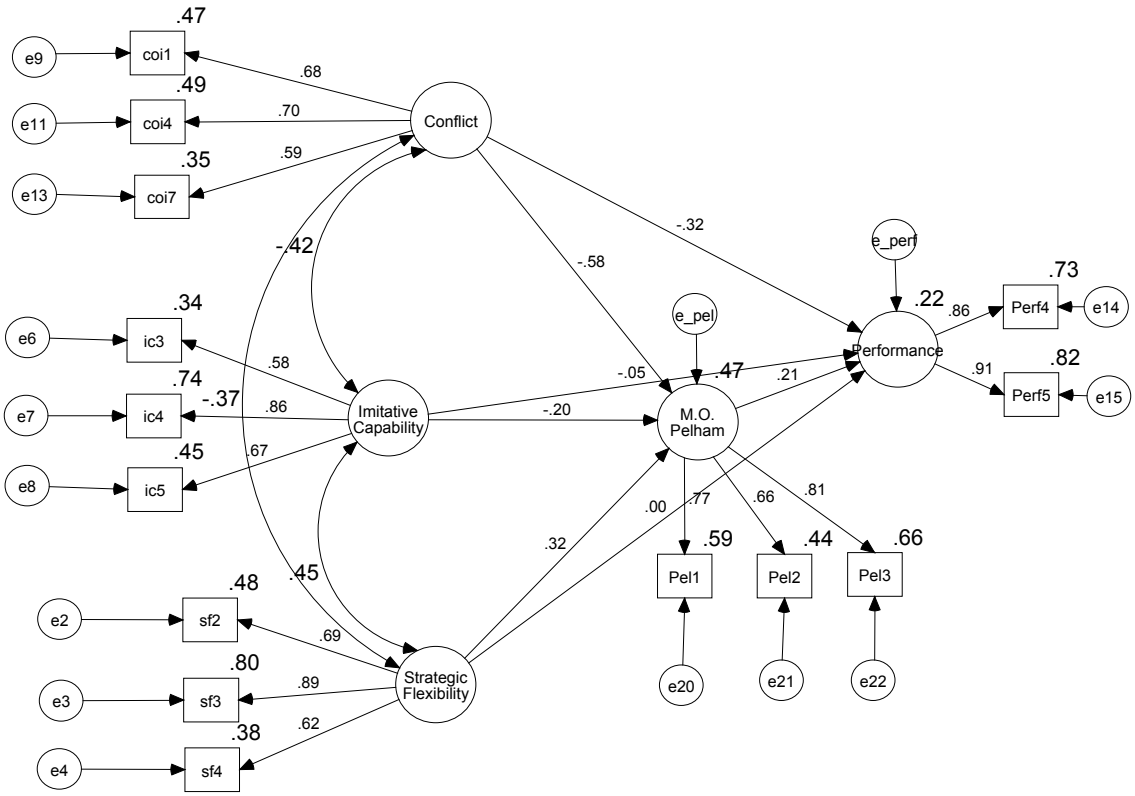
Table 6.16 Model Fit Statistics: Full Southeast Asian Perspective (completely standardized solution)

Items included:	χ^2	df	χ^2/ df	Prob	GFI	AGFI	RMR	RMSEA
COI1,4,7 IC 3,4,5 SF2,3,4 PEL1,2,3 PERF 4,5	96.89	68	1.43	0.01	0.94	0.91	0.09	0.05

Hypothesis 4: The relationship between interdepartmental conflict and market orientation is negative.

As can be seen in Figure 6.3, the standardized parameter estimate between interdepartmental conflict and market orientation was negative (-.58) and found to be significant ($p < .01$). Thus, as interdepartmental conflict increases, business performance tends to go down.

Figure 6.3 Structural Model - Southeast Asian Perspective (completely standardized solution)



Hypothesis 5: The relationship between imitative capability and market orientation is positive.

The standardized parameter estimate between imitative capability and market orientation was negative (-.20) and found to be not significant. We find that an imitative capability does not assist in developing a market orientation. Moreover, we note that the sign of the path coefficient is opposite to that which we posited. This may be attributed to the composition of our sample, which is made up of a large proportion of OEM part suppliers compared to REM suppliers. The former produce directly for a handful of customers such as Toyota, General Motors, or Chrysler whereas REM produce replacement parts for the after market and deal with a much

larger number of customers including exporters, wholesalers and retailers. One OEM marketing executive (2002) stated,

> We are slaves to General Motors…. we do exactly what they want us to do. Everything we do, whether it be products or processes is focused on GM's specific requirements. We are effectively a captured supplier.

Furthermore, many parts producers lack design capability. They are used to receiving job orders for which the customer provides the product drawing, sample and technical specifications. For instance, aspiring suppliers to Toyota are provided with a specification handbook that must be followed precisely. They cannot deviate from these instructions. Effectively an imitative capability is not required but a market orientation is. Therefore REM suppliers producing replacement parts may have a greater imitative capability as they have to look out to the market place compared to OEM suppliers who produce to specification directly for a single customer such as Toyota, General Motors or Chrysler and thus focus entirely on the demands of one or more customers.

Hypothesis 6: The relationship between strategic flexibility and market orientation is positive.

The path from strategic flexibility to market orientation was positive (.32) and significant ($p < .01$), indicating that as a firm increases its ability to manage economic and political risks by responding promptly in a proactive or reactive manner to market threats and opportunities its market orientation also increases.

Hypothesis 7: The relationship between market orientation and business performance is positive.

The standardized parameter estimate between market orientation and business performance was positive (.21). The critical ratio was 1.64, which is not significant at .05 but significant at .051.

The p-value of .051 is tantalizingly close to .050 and it is tempting to label the result as "significant". Indeed, to do so increases the potential for Type I error by only two percent over the conventional .050 standard used in this study. Moreover, calling the result "not significant" when the path truly is positive creates a Type II error. Based on the sample size of 203 and an α of .05, our protection against making a Type II error or power to detect a true path coefficient of 0.21 is approximately .70 (Bollen 1989). Further, calling the result "not significant," means that business performance can change only through a direct effect of interdepartmental conflict, imitative capability, or strategic flexibility. It cannot change via indirect effects operating through market orientation. Based on these considerations, our conclusion will be to describe the path from market orientation to business performance as "marginally significant", to treat this result with extra caution, and to stress the need for replication of this result with other samples.

Whilst our finding corroborates the majority of other market orientation studies that use subjective performance measures, this is the opposite result to that obtained by Grewal and Tansuhaj (2001) who examine the effects of market orientation on performance at a time when Thailand was gripped by economic crisis. They report a negative influence of market orientation on performance and conclude that market

oriented companies which focus too closely on customers may become locked into applying standard solutions to unique challenges as experienced during a crisis.

Hypothesis 8: The relationship between interdepartmental conflict and business performance is negative.

The standardized parameter estimate between interdepartmental conflict and business performance was negative (-.32) and significant at $p < .05$. Thus, as interdepartmental conflict increases or the objectives of employees from different departments increases in incompatibility, the greater will be the negative impact on performance.

Hypothesis 9: The relationship between imitative capability and business performance is positive.

The standardized parameter estimate between imitative capability and business performance was negative (-.05) and not significant. Thus, we reject Hypothesis 9.

Hypothesis 10: The relationship between strategic flexibility and business performance is positive.

The standardized parameter estimate between strategic flexibility and business performance was barely positive (.003) and not significant ($p > .10$). Together, results of tests for Hypotheses 9 and 10 suggest that paths from imitative capability and strategic flexibility to business performance can be trimmed. However, these two strategic factors still may have an indirect effect on business performance.

This finding also differs from Grewal and Tansuhaj (2001) who report that strategic flexibility has a positive and significant effect on performance. They consider

strategic flexibility to be useful when firms need to steer their way out of a crisis. We expected strategic flexibility to have a significant direct effect on performance in all economic conditions but results suggest otherwise. This key difference may be explained by the fact that this dissertation examines the state of suppliers in the automobile industry in 2002, by which time, the economic situation in Thailand had stabilized and passed beyond a condition that could be described as being in crisis, as examined by Grewal and Tansuhaj (2001).

In addition to the negative and significant direct effect (-.32) interdepartmental conflict has on business performance, interdepartmental conflict also has an indirect effect (-.12) operating through the "marginally significant" market orientation path. Using a bootstrapping technique we find the indirect effect is not significant but total effects are significant ($p < .01$).

In terms of imitative capability, the direct effect on business performance is negative (-.05) and not significant. The path coefficient for this path as well as the indirect path of imitative capability on market orientation is opposite to that which we posited therefore we do not measure for an indirect effect.

Finally, strategic flexibility has no direct effect on business performance (.003) although the indirect effect of strategic flexibility on market orientation approaches significance, being comprised of the .32 path from strategic flexibility to market orientation and the "marginally significant" path from market orientation to business performance.

We can conclude that both interdepartmental conflict and strategic flexibility have a significant influence on market orientation ($p < .01$). However the direct effect of interdepartmental conflict exceeds the direct effect of strategic flexibility on market orientation. The effect of imitative capability on market orientation is not significant.

6.4 Research Question 4: What are the Effects of Strategic Antecedents on the Market Orientation and Performance Relationship?

Our Strategic model was developed and tested using the same technique as in previous questions. The three new constructs, product quality, top management emphasis, and future orientation were all evaluated as single-factor models, two-factor models, and then as a three-factor measurement model. Chapter IV describes product quality as a three-item scale measuring the overall quality of the respondent's products and services with respect to customer perceptions and competitive comparisons. Top management emphasis is a four-item scale that measures the extent that top management reinforces the importance of market orientation. Future orientation is a three-item scale that measures the extent to which a firm's corporate culture encourages planning and taking a long-term view.

The final three-factor measurement model (refer Table 6.17) shows an excellent fit ($\chi^2 = 5.57$, df = 6, GFI = .99, AGFI = .97, RMSEA = .00). The range of standardized factor loadings is .71 to .95. The final three-factor measurement model consists of items QUAL 2, 3, TME 1, 3 and FUT 1, 2.

Table 6.17 Model Fit Statistics: Three Factor - Product Quality, Top Management Emphasis, and Future Orientation (completely standardized solution)

	χ^2	df	χ^2/ df	Prob	GFI	AGFI	RMR	RMSEA
QUAL2, 3. TME1, 3. FUT1, 2	5.57	6	0.93	0.47	0.99	0.97	0.03	0.00

QUAL2, 3. TME1, 3. FUT1, 2

Business performance was measured with the same two items (PERF4, PERF5) as used in questions 1 and 3. Cronbach's alpha was .87 and the item-total correlations were .78 and .78, respectively.

Market orientation was measured with the same items (PEL1, PEL2, PEL3) as used in question 3. Reliability for the scale, it will be recalled, was .79, with item-total correlations ranging from .58 (PEL2) to .68 (PEL3). Standardized reliability coefficients (Cronbach's alpha) for product quality, top management emphasis, and future orientation are: .87, .74, and .85, respectively. Item-total correlations for the three scales ranged from .59 to .77.

6.4.1 The Structural Model

Having established that latent constructs and observed indicators possess acceptable measurement properties, the full structural equation model then was estimated and evaluated. The model (refer Table 6.18) showed a good fit (χ^2 = 45.61, df = 34, GFI = .96, AGFI = .92, RMSEA = .04). Hypothesis testing therefore was undertaken based on this model. Note again that all hypotheses in this section are stated in a directional fashion. Thus, all tests and reported p-values represent one-tail

procedures. Content for the 11 measurement items identified in Table 6.18 may be found in Chapter 5.2.1 or in Appendix 4.

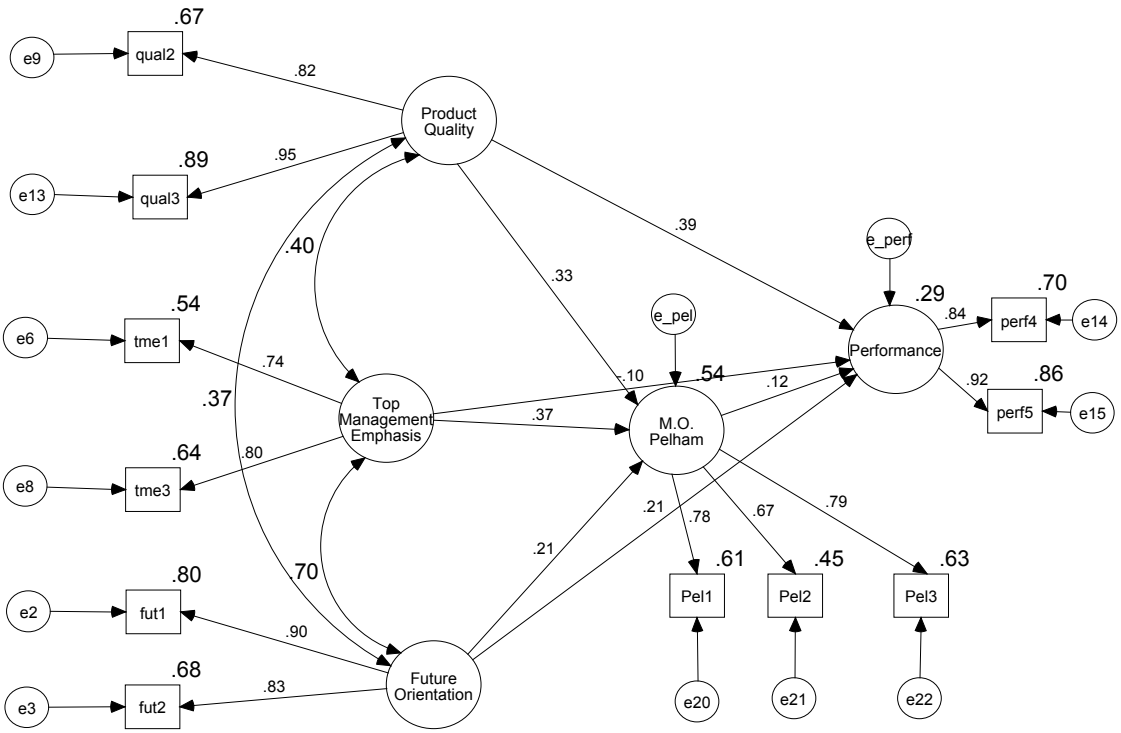
Table 6.18 Model Fit Statistics: Full Strategic Model (completely standardized solution)

Items included:	χ^2	df	χ^2/ df	Prob	GFI	AGFI	RMR	RMSEA
PEL 1,2,3 QUAL 2,3 TME 1,3 FUT 1,2 PERF4,5	45.61	34	1.34	0.09	0.96	0.92	0.04	0.04

Hypothesis 11: The relationship between product quality and market orientation is positive.

As can be seen from the structural model (Figure 6.4) the standardized parameter estimate between product quality and market orientation was positive (.33) and found to be significant ($p < .01$). This result indicates that as a firm increases the overall quality of its products with respect to customer perceptions and competitive comparisons its market orientation also increases.

Figure 6.4 Structural Model - Corroboration and Extension of a Strategic Model (completely standardized solution)



Hypothesis 12: The relationship between top management emphasis and market orientation is positive.

A strong positive association was found between top management emphasis and market orientation (.37, $p < .01$). Thus, the more often top management tell employees of the need to adapt to market trends and to regard customers as important, the more market oriented will be the company.

Hypothesis 13: The relationship between future orientation and market orientation is positive.

The standardized parameter estimate between future orientation and market orientation was positive and significant (.21, $p < .05$). This means that adopting a long-term view and planning for the future has a positive influence on market orientation capability.

Hypothesis 14: The relationship between market orientation and performance is positive.

The standardized parameter estimate between market orientation and business performance was positive (.12) and the critical ratio was .98, not significant with $p > .10$). This result differs from our Southeast Asian model. However, both results are consistent with the literature in the sense that sometimes a relationship is identified and other times it is not. Note, however, that the model's implied correlation between market orientation and business performance is substantial (.394). If other constructs were not included in the model, then market orientation would show a strong causal relationship with business performance.

Hypothesis 15: The relationship between product quality and business performance is positive.

The path coefficient between product quality and business performance was strong and significant (.39, $p < .01$). This means that increases in product quality in terms of customer perceptions and competitive comparisons will lead to increases in business performance. The empirical evidence supports the argument that by focusing on quality a business can substantially improve its performance.

Hypothesis 16: The relationship between top management emphasis and business performance is positive.

The path coefficient between top management emphasis and business performance was small, negative (-.10) and not significant) $p > .10$). A trimmed model would remove this path.

Hypothesis 17: The relationship between future orientation and business performance is positive.

The standardized parameter estimate between future orientation and business performance was positive and significant (.21, $p < .05$). This means that adopting a long-term view and planning for the future has a positive influence on business performance.

In sum, our results corroborate earlier strategic research that found product quality has a significant influence on business performance (Phillips, Chang and Buzzell 1983; Murray and O'Gorman 1994). Moreover, we confirm the important role of top management emphasis in developing a market orientation (e.g. Jaworski and Kohli

1993; Pulendran, Speed and Widing 2000). Future orientation was found to have a positive influence on both market orientation and performance, which represents a new empirical finding since Narver and Slater's attempt to study the relationship between long-term orientation and market orientation was previously unsuccessful due to a low Cronbach alpha coefficient.

6.5 Research Question 5: Can Relationships examined in Questions 1, 3, and 4 be Replicated and Corroborated Using Objective Measures of Performance?

Analyses for question 5 replicate analyses for questions 1, 3, and 4 but use a different measure of performance. This new measure is calculated from financial documents submitted by each respondent to the Thailand Ministry of Commerce for the year preceding data collection. The measure is based on a confirmatory factor analysis of 13 measures of financial performance, the final iteration having return on assets (ROA) and return on sales (ROS) as a two-item business performance factor. It should be noted that ROA and ROS data were available for only 183 companies in the original sample, which was further reduced to 166 as the Mahalanobis procedure identified 17 cases as outliers.

Analyses for question 5 used the same hypotheses, and the same latent constructs and indicators as identified earlier for questions 1, 3, and 4. However, because analyses for question 5 used samples that were different from samples for questions 1, 3, and 4, factor loadings, factor squared multiple correlations, and reliability coefficients reported here will differ from earlier results. Note that all hypotheses for question 5

are stated in a directional fashion. Thus, all tests and reported p-values represent one-tail procedures. All tests use a value for α of .10, because of the smaller sample size.

6.5.1 Question 5a: Do the Data Support a Relationship between Market Orientation and Performance Using Objective Measures of Performance?

In this analysis we employ the same two measures of market orientation used in question 1. The sample consists of 166 companies. Standardized reliability coefficients (Cronbach's alpha) for the measurement models were acceptable with the reduced sample: .81 for market orientation (Deshpandé and Farley 1996), .79 for market orientation (Pelham and Wilson 1996), and .88 for objective performance.

Having previously determined in question 1 that latent constructs and observed indicators possess acceptable measurement properties, the full structural equation model for objective performance was estimated and evaluated. As can be seen in Table 6.19 the model displayed an acceptable fit (χ^2 = 50.75, df = 32, GFI = .94, AGFI = .90, RMSEA = .06). The same hypotheses used in question 1 were re-tested. Content for the eight measurement items identified in Table 6.19 may be found in Chapter 5.2.1 or in Appendix 4.

Table 6.19 Model Fit Statistics: Full Market Orientation and Objective Performance Model (completely standardized solution)

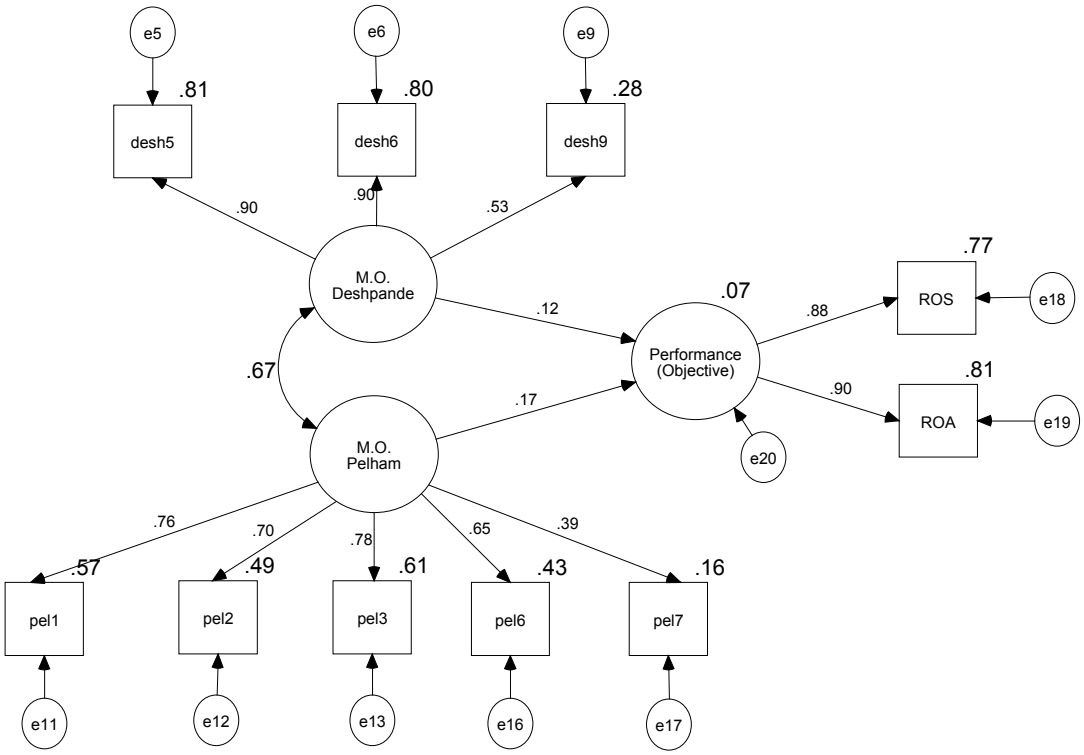
Items included	χ^2	df	χ^2/ df	Prob	GFI	AGFI	RMR	RMSEA
Desh 5,6,9. Pel 1,2,3,6,7. ROA, ROS	50.75	32	1.59	0.02	0.94	0.90	0.04	0.06

Hypothesis 18: The relationship between market orientation (Deshpandé and Farley 1996) and business performance is positive.

Hypothesis 19: The relationship between market orientation (Pelham and Wilson 1996) and business performance is positive.

As can be seen from the structural model (Figure 6.5) the standardized parameter estimate between market orientation (Deshpandé and Farley 1996) and business performance was positive (.12) but found to be not significant ($p > .10$). Likewise, the path for market orientation (Pelham and Wilson 1996) and business performance was positive (.17) and not significant ($p > .10$). Thus, H1 and H2 were rejected. However, inspection of path magnitudes shows both values to be in predicted directions and consistent with results for question 1 (shown in Figure 6.1). Inspection also shows that the Pelham and Wilson (1996) measure is more strongly associated with business performance than the Deshpandé and Farley (1996) measure.

Figure 6.5 Structural Model - Market Orientation and Objective Performance (completely standardized solution)



This model tests two measures of market orientation and we expect both to be positively related to performance. Whilst relationships between market orientation and objective performance were not significant, this finding needs to be considered in the context of the structural model. If we fit a single factor structural model for Pelham and Wilson's (1996) scale and objective performance, we find that the standardized parameter estimate increases to .26 with a critical ratio of 2.98, significant at $p < 0.01$. This suggests that the relationship between market orientation (Pelham and Wilson (1996) and objective business performance is positive and significant.

However, if we fit a single factor structural model for Deshpandé and Farley's (1996) scale and objective performance, the final iteration contained a negative variance. Eliminating outliers based on Mahalanobis distance would lead to a working model but is outside the intent of this study. Indeed, we have already established high correlation (.67) between the two measures of market orientation when included in the same structural model (refer Figure 6.5). Moreover, correlations implied in the two-factor model: .25 for Pelham and Wilson's (1996) scale and business performance compared to .23 for Deshpandé and Farley (1996) and business performance. We can therefore conclude that both Pelham and Wilson (1996) and Deshpandé and Farley (1996) scales demonstrate a positive relationship with business performance.

Our research findings again suggest that market orientation in this industry influences business performance. However, by using objective measures of business

performance we have demonstrated that the strength of the relationship is not as strong as the case when perceived or subjective measures are used.

6.5.2 Question 5b: What are the Effects of "Southeast Asian Perspective" Antecedents on the Market Orientation and Performance Relationship Using Objective Measures of Performance?

In this analysis we use the same three-factor measurement model developed in question 3, together with objective measures of business performance extracted from financial accounts submitted by each respondent to the Ministry of Commerce. We use the same sample of 166 companies as in question 5a. Standardized reliability coefficients (Cronbach's alpha) for each of the final measurement models also were found to be acceptable with the reduced sample: .72 for interdepartmental conflict, .74 for imitative capability, .77 for strategic flexibility, .78 for market orientation (Pelham and Wilson 1996) and .88 for objective performance.

Having established that latent constructs and observed indicators possess acceptable measurement properties, the full structural equation model for objective performance was estimated and the same hypotheses used in question 3 were re-tested. As can be seen from Table 6.20, the full structural model shows a good fit (χ^2 = 82.83, df = 68, GFI = .93, AGFI = .90, RMSEA = .04). Content for the 12 measurement items identified in Table 6.20 may be found in Chapter 5.2.1 or in Appendix 4.

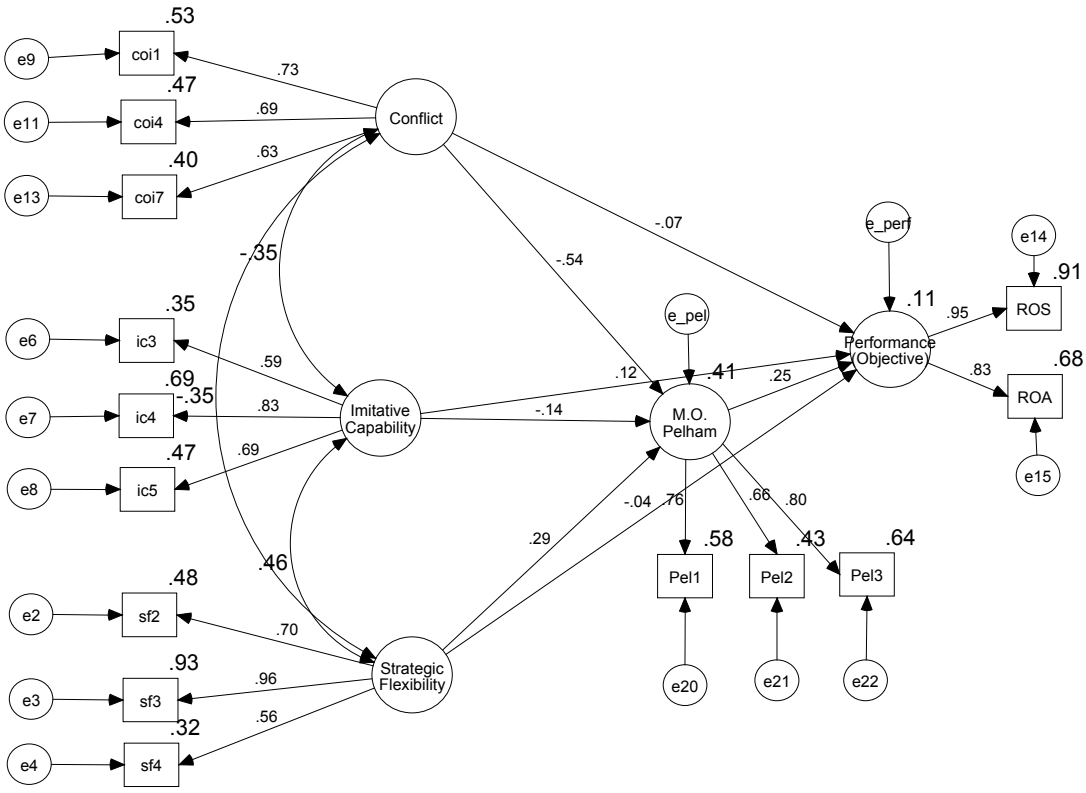
Table 6.20 Model Fit Statistics: Full Southeast Asian Perspective and Objective Performance (completely standardized solution)

Items included:	χ^2	df	χ^2/ df	Prob	GFI	AGFI	RMR	RMSEA
COI 1,4,7 IC 3,4,5 SF 2,3,4 Pel 1,2,3 ROA, ROS	82.83	68	1.22	0.11	0.93	0.90	0.07	0.04

Hypothesis 20: The relationship between interdepartmental conflict and market orientation is negative.

As can be seen in Figure 6.6, the standardized parameter estimate between interdepartmental conflict and market orientation was negative (-.54) and found to be significant ($p < .01$). A similar result was obtained in analyses for question 3 with the larger sample of 203 that used subjective measures of business performance.

Figure 6.6 Structural Model - Southeast Asian Perspective and Objective Performance (completely standardized solution)



Hypothesis 21: The relationship between imitative capability and market orientation is positive.

The standardized parameter estimate between imitative capability and market orientation was negative (-.14) and found to be not significant. Using objective measures of business performance the influence of imitative capability is still not

significant. We also find that the sign of the path coefficient is opposite to that which we posited, which is a similar result to that obtained in question 3.

Hypothesis 22: The relationship between strategic flexibility and market orientation is positive.

The path from strategic flexibility to market orientation was positive (.29) and significant ($p < .01$). A similar result was obtained with subjective measures of business performance.

Hypothesis 23: The relationship between market orientation and business performance is positive.

The standardized parameter estimate between market orientation and business performance was positive (.25). The critical ratio was 1.92, significant at $p < .05$. This result is marginally stronger than the significance of .051 obtained using subjective measures of business performance. We expected market orientation to be positively related to business performance and that has proven to be the case. Once more this result differs from Grewal and Tansuhaj (2001) who reported a negative influence of market orientation on business performance.

Hypothesis 24: The relationship between interdepartmental conflict and business performance is negative.

The standardized parameter estimate between interdepartmental conflict and business performance was negative (-.07) and not significant ($p > .10$). This result differs from that achieved using subjective measures of business performance where a significant negative relationship was identified.

Hypothesis 25: The relationship between imitative capability and business performance is positive.

Hypothesis 26: The relationship between strategic flexibility and business performance is positive.

Both imitative capability and strategic flexibility had no significant effects on business performance. A similar result obtained using subjective measures of business performance. However, strategic flexibility may have an indirect effect on business performance, given that this antecedent has a significant effect on market orientation and the path from market orientation to business performance is also significant as described below.

Interdepartmental conflict has no direct effect on business performance (-.07). However the model demonstrates an indirect effect of interdepartmental conflict (-.54) operating through the intermediary market orientation path (.25). Thus, the indirect effect equals -.14, which means the total effect is -.21 and likely significant.

Imitative capability has no direct effect on business performance (.12), and because the path from imitative capability to market orientation is negative (-.14), the indirect and total effects will be not significant.

Finally, strategic flexibility has no direct effect on business performance (-.04) although the indirect effect of strategic flexibility on market orientation is likely significant, being comprised of the significant path from strategic flexibility to market orientation (.29) and the significant path from market orientation to business performance (.25).

We can conclude that the three antecedents have no direct influence on performance when using objective measures of performance. However, in terms of the influence on market orientation, both interdepartmental conflict and strategic flexibility have a significant influence on market orientation ($p < .01$), although the direct effect of interdepartmental conflict exceeds the direct effect of strategic flexibility on market orientation. Thus, two of the antecedents to market orientation have substantive indirect and, hence, total effects. The results lend support to our findings in questions 3 and 5a. When using objective measures of business performance, we generally find that relationships with latent constructs are not as strong as the case when perceived or subjective measures are used.

6.5.3 Question 5c: What are the Effects of Strategic Antecedents on the Market Orientation and Performance Relationship Using Objective Measures of Performance?

Analyses for question 5c use the same model developed in question 4 except that we substitute objective performance for subjective performance. However, the resulting structural equation model produced negative variances for QUALl3 and ROS from the same sample of 166 companies as used in questions 5a and 5b. To resolve this problem, five additional respondents were removed from the data on the basis of outliers. Thus, the final sample for analyses for question 5c consisted of 161 companies.

Standardized reliability coefficients (Cronbach's alpha) for each of the final measurement models were found to be acceptable: .86 for product quality, .76 for top

management emphasis, .83 for future orientation, .78 for market orientation (Pelham and Wilson 1996) and .92 for objective performance.

Having established that latent constructs and observed indicators possess acceptable measurement properties, the full structural equation model was estimated and evaluated. As can be seen from Table 6.21, the full structural model has a good fit (χ^2 = 43.77, df = 34, GFI = .95, AGFI = .91, RMSEA = .04). Content for the nine measurement items identified in Table 6.21 may be found in Chapter 5.2.1 or in Appendix 4.

Table 6.21 Model Fit Statistics: Full Strategic Model and Objective Performance (completely standardized solution)

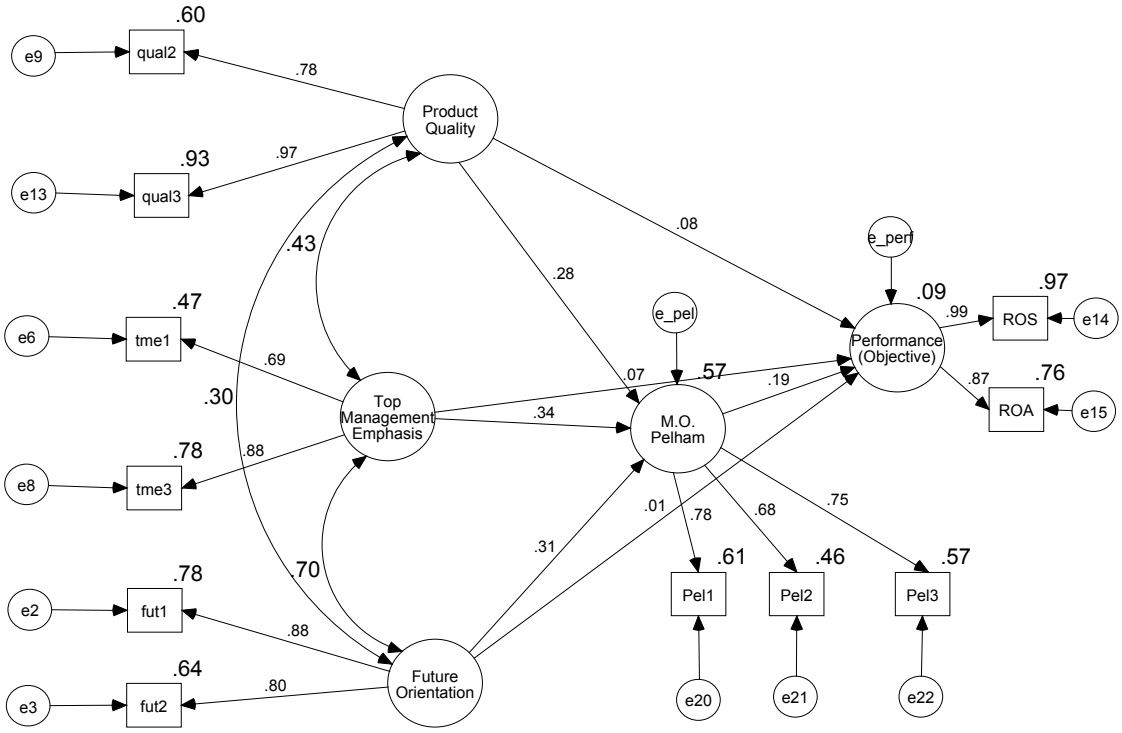
Items included:	χ^2	df	χ^2/ df	Prob	GFI	AGFI	RMR	RMSEA
PEL 1,2,3 PQ2,3 TME 1,3 FUT 1,2 ROA, ROS	43.77	34	1.29	0.12	0.95	0.91	0.04	0.04

The same hypotheses used in question 4 were re-tested.

Hypothesis 27: The relationship between product quality and market orientation is positive.

As can be seen from the structural model (Figure 6.7), the standardized parameter estimate between product quality and market orientation was positive and found to be significant (.28, $p < .01$). A similar relationship was found using subjective measures in question 4.

Figure 6.7 Structural Model - Corroboration and Extension of a Strategic Model and Objective Performance (completely standardized solution)



Hypothesis 28: The relationship between top management emphasis and market orientation is positive.

A strong, positive, and significant association was found between top management emphasis and market orientation (.34, $p < .01$). The same relationship was found using the subjective measure of business performance.

Hypothesis 29: The relationship between future orientation and market orientation is positive.

The standardized parameter estimate between future orientation and market orientation was positive and significant (.31, $p < .01$). The strength of this

relationship is slightly greater using objective measures of business performance than it was using perceived measures of business performance (refer Figure 6.4).

Hypothesis 30: The relationship between market orientation and business performance is positive.

The standardized parameter estimate between market orientation and business performance was positive (.19) but not significant ($p > .10$). This is a similar result to that obtained with subjective business performance data. Both results are consistent with the literature in the sense that sometimes a relationship is identified and other times it is not. Note, however, that the model's implied correlation between market orientation and business performance is substantial (.278). If other constructs were not included in the model then market orientation would show a strong causal relationship with business performance.

Hypothesis 31: The relationship between product quality and business performance is positive.

The standardized parameter estimate between product quality and business performance was positive (.08) but not significant ($p > .10$). This is different from the significant result obtained using subjective measures of business performance.

Hypothesis 32: The relationship between top management emphasis and business performance is positive.

Results showed no significant relationship between these variables (.07, $p > .10$). The same not significant result was obtained using subjective data.

Hypothesis 33: The relationship between future orientation and business performance is positive.

Results showed no significant relationship between these variables (.08, $p > .10$). This confirms our result obtained using subjective data.

In most respects we obtain results similar to those obtained in question 4, when subjective performance measures were examined. In both studies there is no significant relationship found between either subjective or objective performance and market orientation in our "strategic model". However, similar to the preceding question that also used objective performance measures, the size of relationships is not as strong as when subjective measures were used. For example, the influence of product quality and future orientation on business performance is not significant, whereas in question 4 we report a significant finding.

6.6 Research Question 6: Is Market Orientation both a Cause and an Effect of High Performance?

Question 6 examines a reciprocal causal relationship between market orientation and business performance in a nonrecursive structural model. A nonrecursive model with only two reciprocal structural paths between two endogenous variables will be unidentified (Wong and Law 1999). Thus, analysis requires at least two exogenous variables; at least one different exogenous variable must be excluded as a cause of market orientation or as a cause of business performance. Such excluded exogenous variables essentially play the role of instrumental variables, commonly used to estimate paths in structural equation models that contain only observed variables (e.g.,

Schaubroeck 1990; Anderson and Williams 1992). Our nonrecursive model used two exogenous variables, one excluded as a cause of market orientation and one excluded as a cause of business performance. The two exogenous variables were selected on the following bases:

1. The **strength of causal direct effects**, as found in two preceding analyses. Firstly, interdepartmental conflict was selected from the Southeast Asian model (question 3) because it demonstrated a significant direct effect on market orientation. Secondly, product quality was selected from the Strategic model (question 4) as it had a significant direct effect on business performance.
2. The **relative size of the effect** of each exogenous variable on their respective endogenous variable in our model. The rationale behind this is as follows. Wong and Law (1999) state that if instrumental variables have different effects on their corresponding endogenous variables in a model, then the endogenous variable with the weaker instrumental variable would have a relatively larger disturbance term, allowing random error to have a greater effect on resulting estimates of reciprocal relationships. Wong and Law consider it unfortunate that management researchers using nonrecursive models have not taken this factor into consideration when interpreting their results. We have selected two exogenous variables that demonstrate relatively similar influences.

Structural equation modeling was used to estimate a nonrecursive model (refer Figure 6.8) to describe the reciprocal causal relationship between market orientation and business performance. The disturbances or error terms—e_pel and e_perf—for

market orientation and business performance, respectively, are shown in the model to be correlated. On a conceptual basis, such a path is necessary because errors in predicting market orientation result in errors in predicting business performance, which result in errors in predicting market orientation etc., for as many cycles of the reciprocal relationship that we want to consider. On an empirical basis, a failure to model for correlated errors will distort results (Wong and Law 1999).

The same sample of 203 was used as in question 1. However the initial iteration contained two negative variances. Three outliers based on Mahalanobis distance were eliminated providing a final sample of 200, identical to that used in question 2.

Results reported in Table 6.22 indicate that the structural model fits the data exceptionally well (χ^2 = 35.03; df = 29; GFI = .97; RMSEA = .03). The range of standardized factor loadings is .69 to .94. The stability index for the market orientation, business performance reciprocal variables is 0.376. According to (Fox 1980) and (Bentler and Freeman 1983), if the stability index falls between –1 and 1, the system is stable. Our model is therefore admissible and hypothesis testing was undertaken. Content for the 10 measurement items identified in Table 6.22 may be found in Chapter 5.2.1 or in Appendix 4.

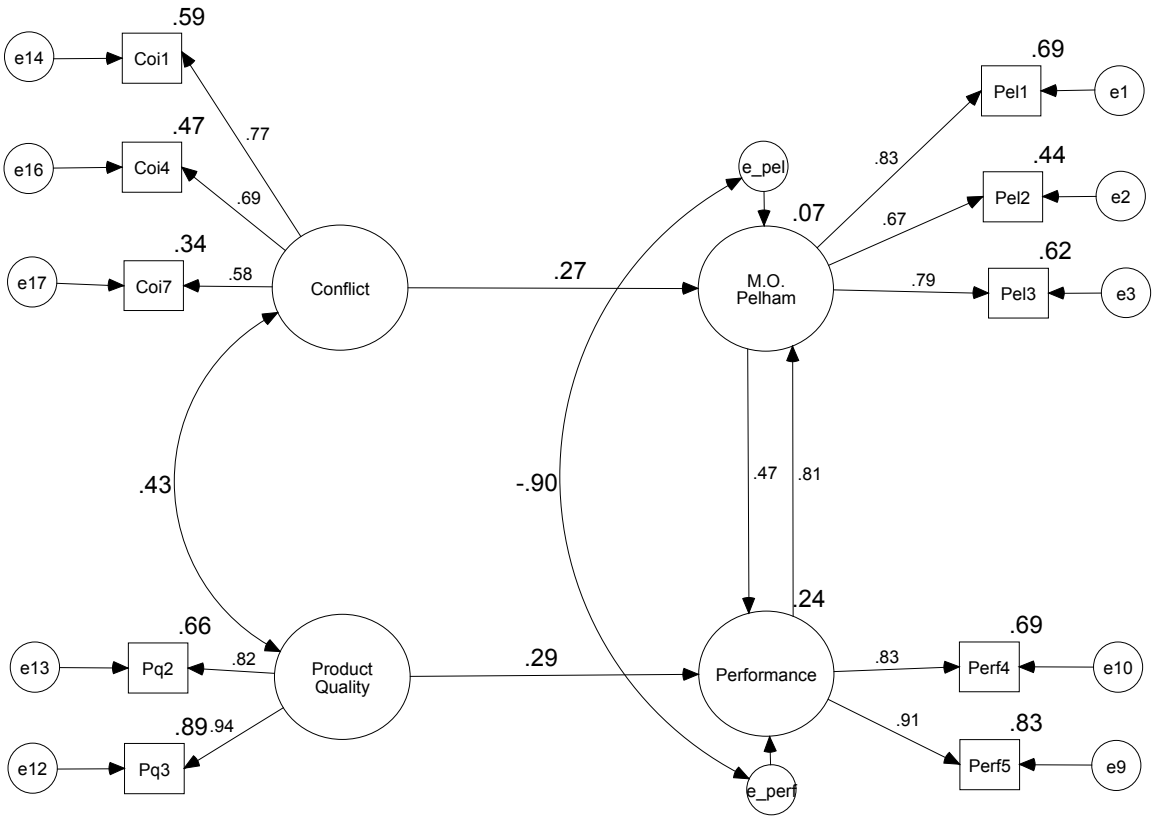
Table 6.22 Model Fit Statistics: Full Nonrecursive Model (completely standardized solution)

Items included	χ^2	df	χ^2/ df	Prob	GFI	AGFI	RMR	RMSEA
COI1,4,7, PQ2,3, PEL1,2,3, PERF4,5	35.03	29	1.21	0.20	0.97	0.94	0.07	0.03

Hypothesis 34: Reciprocal relationships between market orientation and business performance are positive.

Note that the hypothesis is stated in directional terms. Thus, all tests and p-values reported in this section represent one-tail procedures. As can be seen from the structural model (refer Figure 6.8) the standardized parameter estimate between product quality and business performance was positive (.29) and found to be significant ($p < .025$).

Figure 6.8 Nonrecursive Structural Model (completely standardized solution)



The standardized parameter estimate between interdepartmental conflict (reversed) and market orientation was found to be positive (.27) and significant ($p < .025$). That is, for ease of interpretation, we reversed the scoring for items COI1, COI4, and COI7

so that the hypothesized reciprocal relationship in Figure 6.8 would be positive. In fact, the only negative relationship appearing in the Figure is that between the disturbance terms, e_Pel and e_perf, at -.90. The magnitude of this relationship strongly supports the decision to include the path in the model. The negative sign simply means that as the error for one endogenous construct grows larger, the error for the other becomes smaller. Such a result must obtain, given the positive reciprocal paths between the two endogenous constructs (otherwise errors would become larger and larger with each cycle of the reciprocal relationship).

With regard to the hypothesized reciprocal relationship, the standardized parameter estimate, which indicates the relative influence of one variable on another net of all other variables in the model, was positive (.47) and significant ($p < .025$) for market orientation on business performance and positive (.81) and significant ($p < .001$) for business performance on market orientation. As market orientation leads to higher(lower) levels of performance, performance then feeds back and raises(lowers) the level of market orientation. However, the effect of market orientation on business performance—while strong—is much weaker than that of business performance on market orientation. In sum, we can conclude that a powerful reciprocal causal relationship exists between market orientation and business performance. This result empirically supports Uncles (2000) who raised the possibility that "performance itself provides a climate for market orientation either to flourish or be undermined."

6.7 Research Question 7: Do the Data Support a Relationship between Market Orientation and Strategic Antecedents and Predicted Business Failure?

Questions 1 through 6 and their analyses focus on relationships between market orientation, strategic antecedents, and performance, the latter measured either as a subjective perceptual construct or as a financial accounting quantity. Question 7 completes our study of these relationships, introducing a last measure of performance, predicted failure. "Predicted failure" is a probabilistic conjecture about the solvent or insolvent condition of a firm during a chosen time frame. Thus, this measure of business performance categorizes firms into two groups of vastly unequal sizes—a large group of survivors and a small group whose future seems grim. Analyses for question 7 proceeded in two stages.

In the first stage, we developed a predictor model using a sample consisting of 14 failed companies and 20 survivor companies. All 34 companies operated in the same sector as our broader study – automotive parts manufacturing.

Altman's Z-score (refer Section 3.4.2) is the best known and most widely accepted prediction model. Thus, this study initially sought to apply the Z-score developed by Altman (1993) for private companies on each survey respondent. Like Altman, this study used data from one year prior to failure. It is extremely important to note all 34 companies continued to operate for at least 12 months after the submission of financial statements with the Ministry of Commerce despite their failure status. This puts the process of prediction of failure in the first stage of our study exactly as in the second stage and legitimizes the predictive aspect of the second stage.

Initially we tested Altman's (1993) Z-score for private companies on the 14 failed and 20 survivor companies in our sample. Unfortunately the original coefficients (weights) specified for each of the five ratios that contribute to the Z-score resulted in very poor classification accuracy. We therefore sought to develop a number of different models to be tested on the same data in order to identify the most accurate model at predicting failure. The research defined the best model as that which correctly classified the most cases – the sum of failed and survivor firms correctly identified. Stated another way, the model that misclassified the least number of firms was considered the best model.

Anecdotal evidence indicates that although the published accounting standards in Thailand are similar to those of other international standards such as the Financial Accounting Standard Board (FASB) or the International Accounting Standard (IAS), the actual accounting practices are of concern (Sunti and Aekkachai 1999). Despite these concerns, several of the financial variables accurately discriminate between failed and survivor firms. One year before failure, 11 of the 31 variables listed in Table 5.8 are highly significant at discriminating between failure and survivor companies. These 11 ratios are identified in Table 6.23 and are ranked in order of t values.

Table 6.23 Financial Variables Found to be Significant

Variable	Financial variable	Mean: Failed	Mean: Survivors	t	Sig
X76	Sales / Total Assets (Altman's X5)	0.10	0.71	4.67	p < .01
X89	Natural Log. of Total Assets (Firm size)	15.27	17.66	3.55	p < .01
X43	Gross Profit / Total Assets	0.04	0.17	2.92	p < .01
X72	Quick Assets / Total Assets	0.61	0.31	2.62	p < .01
X1	Accounts Receivable / Current Assets	0.07	0.29	2.34	p < .01
X25	EBIT / Fixed Assets	-4.63	-0.36	1.83	p < .05
X36	Book value of equity / Total Liabilities (Altman's X4)	372.29	12.83	1.55	p < .10
X38	Retained earnings / Total Assets (Altman's X2)	-1.68	-0.20	1.40	p < .10
X33	Equity / Fixed Assets	47.38	9.86	1.38	p < .10
X61	Net Expenditure PP&E / Total Assets	0.24	0.39	1.37	p < .10
X39	Fixed Assets / Total Assets	0.35	0.50	1.34	p < .10

These 11 variables were analyzed through the enter method of logistic regression in SPSS 10.0 for Windows. The first iteration determined that six of the eleven predictor variables (X25, X36, X38, X33, X61, and X39) were not significant based on the Wald statistic, and therefore were excluded. To confirm the model fit, we ran the five remaining predictor variables (X76, X89, X43, X72, and X1) as a new model with results shown in Table 6.24.

Table 6.24 Financial Variables in the Equation – Second Iteration

	Variable	B	S.E.	Wald	df	Sig.	Exp(B)
Step 1(a)	X76	8.86	4.40	4.05	1	.04	7019.28
	X89	1.56	.81	3.70	1	.05	4.77
	X43	6.48	6.35	1.04	1	.31	651.91
	X72	5.71	4.32	1.74	1	.19	301.52
	X1	-2.51	2.79	.81	1	.37	.08
	Constant	-31.13	16.19	3.70	1	.05	.00

a Variable(s) entered step 1 X76, X89, X43, X72, X1

The iteration determined that three of the five predictor variables (X43, X72, and X1) were not significant based on the Wald statistic, which tests the unique contribution of each predictor, in the context of the other predictors. These three variables therefore were excluded from our final model. The reason these three variables are no longer significant (as compared to their values in Table 6.23) is because they are intercorrelated with each other and with the two variables (X76 and X89) that are in the final equation. To confirm the fit of the final model we ran the analysis once more using the final two variables only. Results for this final iteration are presented in Table 6.25.

Table 6.25 Financial Variables in the Equation – Final iteration

	Variable	B	S.E.	Wald	df	Sig.	Exp(B)
Step 1(a)	X76	5.77	2.20	6.84	1	.01	318.95
	X89	.63	.31	4.27	1	.04	1.88
	Constant	-12.13	5.46	4.94	1	.03	.00

a Variable(s) entered step 1 X76, X89

Hosmer and Lemeshow (1989) Goodness of Fit value indicates how poorly the model fits with all of the independent variables in the equation. In other words it is the test for statistical significance of the unexplained variance. A good model fit is indicated by a non-significant chi-square value. This study found a chi-square value of 6.86 with a significance level of .55. Since this is greater than .05, we fail to reject the null hypothesis that there is no difference, implying that the model's estimates fit the data at an acceptable level. We can conclude that one financial year prior to failure, the most accurate predictor of failure was determined via the application of a two variable logistic regression model comprising the following two variables.

Sales / Total Assets: This financial ratio is a measure of management capability in dealing with competitive conditions. Specifically it reflects the sales-generating ability of the company's assets, depending on the efficiency of management. A company with a high ratio is likely to generate greater profit and therefore increases its ability to service debt. We expect a positive relationship between sales / total assets and the probability of survival. This ratio has been used in other failure prediction models including: Altman (1968); Altman, Baidya, and Riberio-Dias (1979); Bilderbeek (1979); Altman and Lavallee (1981); Gombola et al. (1987); Shumway (1999); and Nam and Jinn (2000). The code used for this variable in the data analysis is X76.

Natural Logarithm of Total Assets: Calculated by a logarithmic transformation of firm's total assets to normalize the distribution of the variable, this variable is an indicator of firm size that has been found to be a highly significant in predicting corporate failure in a number of previous studies including: Ohlson (1980); Altman, Kim, and Eom (1995). It has a positive relationship with the probability of survival indicating that larger firms are more likely to survive. Two reasons may explain this. Firstly, large firms with high levels of debt may be in a superior negotiating position than smaller firms and missed interest payments might be more easily rescheduled with creditors. Secondly, large firms are more likely to receive rescue packages in the event of financial distress than smaller firms. The code used for this variable in the data analysis is X89.

The classification matrix shown in Table 6.26 is constructed consisting of correct classifications and incorrect classifications. The classification cut-off value is .410, based on 14 failed firms of a total sample size of 34 firms.

Table 6.26 Classification Table Using Logistic Regression - 1 Year Prior to Failure

	Predicted		
Observed	Predicted to fail	Predicted to survive	Percentage Correct
Observed failed (n=14)	11	3	78.6
Observed survived (n=20)	1	19	95.0
Overall Percentage			88.2

We observe the model is very accurate (95 percent) at identifying survivors and moderately accurate (78.6 percent) at identifying failed companies one year prior to failure. Overall this equates to an accuracy rate of 88.2 percent, which is comparable with the results reported for benchmark failure prediction studies: Beaver (1967) and Altman (1968) reported 87 percent and 94 percent respectively.

Even though this study chose logistic regression, Altman (2001, personal communication) recommended that the accuracy of our model should in addition be tested and results reported using multiple discriminant analysis (MDA). A similar result was obtained as can be noted from the classification matrix (Table 6.27).

Table 6.27 Classification Table using Multivariate Discriminant Analysis - 1 Year Prior to Failure

			Predicted Group Membership		
		Observed	Predicted to fail	Predicted to survive	Total
Original (note a)	Count	Observed failed	12	2	14
		Observed survived	1	19	20
	%	Observed failed	85.7	14.3	100.0
		Observed survived	5.0	95.0	100.0
Cross-validated (note b)	Count	Observed failed	12	2	14
		Observed survived	2	18	20
	%	Observed failed	85.7	14.3	100.0
		Observed survived	10.0	90.0	100.0

Notes: (a) 91.2% of original grouped cases correctly classified.
(b) 88.2% of cross-validated grouped cases correctly classified.

In stage two we applied this multivariate model to 166 companies who responded to our survey and for whom we were able to obtain annual financial accounts from the Commercial Registration Department at the Ministry of Commerce. The two key variables for the 34 companies sampled in stage one analysis were merged with the SPSS dataset containing the sample of 166 companies used in stage two. Using logistic regression, the dependent variable is predicted failures / predicted survivors. The covariates are Sales divided by Total Assets and Natural Logarithm of Total Assets. The fourteen failed companies are coded 0, the twenty survivor companies are coded 1, and the 166 companies for whom we are attempting to predict group membership are left uncoded.

Each application of logistic regression creates a new variable, predicted group membership. As the input classification cut-off criteria of failure changes, the number

of firms predicted to fail also will change. This is useful given a lack of consensus amongst automotive industry insiders as to the annual rate of business failure within the sector. We assumed annual failure was between approximately three and six percent and performed two analyses based on different rates of failure within this range.

The first iteration used the SPSS default classification cut-off rate of 0.5 which predicted six (3.6 percent) of the 166 companies surveyed to belong to group 0 who are predicted to fail and 160 companies to belong to group 1, who are predicted to survive. In the second iteration we adjusted the SPSS classification cut-off rate in order to yield an alternative result with a different but equally realistic rate of failure for this industry. The second iteration used a higher classification cut-off rate of .65 and predicted nine (5.4 percent) of the 166 companies likely to fail.

Prior to examining results for question 7, we conducted a further series of ANOVA tests using other financial oriented dependent variables to determine whether the two groups were significantly different. Confirmation using other measures would reinforce our belief that the prediction model performs as intended.

ANOVA results in Table 6.28 and Table 6.29 indicate that several variables display significant differences between companies predicted to fail and those predicted to survive. The objective measures of performance (ROS, ROA) used in research question 5 were both significant, as were other financial ratios not previously used in this study such as Gross Margin (Cost of Goods Sold divided by Sales), Inventory

divided by Sales, and Current Liabilities divided by Current Assets. The variables included in our failure prediction model (see items 3 and 6) have been included only for reconciliation and comparison purposes.

Furthermore, the five financial variables (without coefficient weights) employed in Altman's Z-score, the de facto benchmark by which all failure prediction models are compared with, also displayed a significant difference between the two groups. This in itself provides sufficient evidence that our predictor model performs as intended.

Table 6.28 Comparison of Means - 3.6% Assumed Failure Rate

Financial Variable	Predicted Failures	Predicted Survivors	t	Sig
1. Inventory / Sales	1.39	0.20	7.44	$p < .01$
2. Current Liabilities / Current Assets	17.40	1.25	5.19	$p < .01$
3. Natural Log. of Total Assets	15.09	18.72	4.81	$p < .01$
4. Cost of Goods Sold / Sales	1.18	0.82	4.40	$p < .01$
5. Altman's Z-score	8.75	0.80	4.18	$p < .01$
6. Sales / Total Assets	0.14	1.18	3.72	$p < .01$
7. Return on Sales (ROS)	-0.57	-0.01	3.56	$p < .01$
8. Return on Assets (ROA)	-0.13	0.01	2.42	$p < .01$
9. Sales Growth	-0.03	0.40	1.25	n/s
10. Sales / Fixed Assets	0.93	7.18	0.52	n/s
11. Quick Assets / Total Assets	0.37	0.34	0.39	n/s

Table 6.29 Comparison of Means – 5.4% Assumed Failure Rate

Financial Variable	Predicted Failures	Predicted Survivors	t	Sig
1. Inventory / Sales	1.09	0.19	8.11	p < .01
2. Current Liabilities / Current Assets	12.28	1.23	4.20	p < .01
3. Natural Log. of Total Assets	15.91	18.74	4.51	p < .01
4. Cost of Goods Sold / Sales	1.04	0.82	3.75	p < .01
5. Altman's Z-score	5.86	0.81	3.16	p < .01
6. Sales / Total Assets	0.17	1.20	4.55	p < .01
7. Return on Sales (ROS)	-0.40	-0.01	3.53	p < .01
8. Return on Assets (ROA)	-0.10	0.01	2.28	p < .05
9. Sales Growth	-0.06	0.41	1.79	p < .05
10. Sales / Fixed Assets	0.72	7.31	0.66	n/s
11. Quick Assets / Total Assets	0.28	0.34	0.91	n/s

In sum, the financial variables provide evidence that relative to predicted survivors, companies predicted to fail are: 1) smaller in size as determined by their total assets; 2) have higher manufacturing costs relative to sales; 3) hold higher levels of inventory; 4) are less profitable based on inferior ROA and ROS; 5) achieve lower sales growth; 6) are less efficient in terms of using company assets to generate sales; and 7) have poorer liquidity based on their reported current liabilities exceeding current assets.

We then conducted ANOVA tests on each of the two samples of 166 companies to test our hypotheses and determine whether there are significant differences between those companies predicted to fail and those companies predicted to survive. The independent variable is the predicted group membership for each company. The dependent variables consist of all eight constructs used in previous questions,

specifically: market orientation (Deshpandé and Farley 1996), market orientation (Pelham and Wilson 1996), interdepartmental conflict, imitative capability, strategic flexibility, product quality, top management emphasis, and future orientation.

Results for the first sample with an assumed failure rate of 3.6 percent are displayed in Table 6.30. Future orientation and imitative capability were significant ($p < .02$) for the one-tail test. The Deshpandé and Farley (1996) market orientation construct was nearly significant ($p > .10$), however all other constructs were not. However as was expected, differences in means between companies predicted to survive and those predicted to fail are in the correct direction for all constructs, with the exception of the Pelham and Wilson (1996) market orientation scale where predicted failures has a marginally higher score.

Table 6.30 Comparison of Construct Means Based on 3.6% Assumed Failure Rate

Construct	Predicted Failures	Predicted Survivors	t	Sig
Market Orientation (Deshpandé)	44.27	47.86	1.10	p < .13
Market Orientation (Pelham)	41.17	40.51	0.24	n/s
Interdepartmental Conflict	20.83	20.43	0.16	n/s
Imitative Capability	12.33	16.89	2.10	p < .02
Strategic Flexibility	19.17	20.63	0.74	n/s
Product Quality	13.33	13.75	0.33	n/s
Top Management Emphasis	19.00	20.06	0.73	n/s
Future Orientation	12.17	14.72	2.12	p < .02

Table 6.31 Comparison of Construct Means Based on 5.4% Assumed Failure Rate

Construct	Predicted Failures	Predicted Survivors	t	Sig
Market Orientation (Deshpandé)	44.29	47.93	1.36	p < .10
Market Orientation (Pelham)	40.11	40.55	0.20	n/s
Interdepartmental Conflict	20.56	20.44	0.05	n/s
Imitative Capability	15.22	16.82	0.88	n/s
Strategic Flexibility	19.67	20.63	0.59	n/s
Product Quality	12.89	13.79	0.85	n/s
Top Management Emphasis	19.67	20.04	0.31	n/s
Future Orientation	13.56	14.69	1.13	p < .12

In our second sample (Table 6.31) we assume a 5.4 percent rate of failure within the industry, and our prediction model identified nine companies likely to fail. In this case, only the Deshpandé and Farley (1996) market orientation construct was significant ($p < .10$) and all other constructs were not. However, we find a similar result to that obtained in our previous sample in that differences in means between companies predicted to fail and those predicted to survive are in the correct direction. That is, relative to predicted survivors, firms predicted to fail: 1) are less market oriented; 2) its top managers place less emphasis on the importance of market orientation; 3) are less strategically flexible, 4) are less future oriented, 5) focus less on product quality; 6) exhibit a lower imitative capability; and 7) have higher levels of interdepartmental conflict.

Based on our results, firms predicted to survive do not differ significantly with firms predicted to fail in relation to the constructs measured. We therefore reject each of

the following hypotheses and conclude that management attitudes about market and strategic antecedents show no relationships with predictions of business failure.

Hypothesis 35: Market orientation will be higher in firms predicted to survive than in firms predicted to fail.

Hypothesis 36: Imitative capability will be higher in firms predicted to survive than in firms predicted to fail.

Hypothesis 37: Strategic flexibility will be higher in firms predicted to survive than in firms predicted to fail.

Hypothesis 38: Product quality will be higher in firms predicted to survive than in firms predicted to fail.

Hypothesis 39: Top management emphasis on market orientation will be higher in firms predicted to survive than in firms predicted to fail.

Hypothesis 40: Future orientation will be higher in firms predicted to survive than in firms predicted to fail.

Hypothesis 41: Interdepartmental conflict will be lower in firms predicted to survive than in firms predicted to fail.

However, we note that our conclusions are tempered by the pattern of mean differences shown in Tables 6.28 and 6.29 and recognition of the limited power in our hypothesis tests.

6.8 Key Findings

The following conclusions are based on results reported in Chapter VI:

1. Market orientation is found to influence business performance in this industry, as long as performance is measured subjectively or objectively (and not in terms of predicted failure).

2. The Pelham and Wilson (1996) market orientation scale is more strongly associated with business performance than the Deshpandé and Farley (1996) market orientation scale.
3. Common method variance inflates observed relationships between market orientation and subjective performance. However, common method variance alone does not explain the relationship between market orientation and subjective performance.
4. Interdepartmental conflict has a significant negative effect on market orientation.
5. Strategic flexibility, product quality, future orientation, and a top management emphasis on market orientation each have significant positive effects on market orientation.
6. Imitative capability does not have a significant effect on market orientation.
7. The strength of relationship between market orientation and business performance is not as strong using objective performance measures as when perceived or subjective measures are used.
8. A large reciprocal causal relationship exists between market orientation and subjective business performance. However, the effect of market orientation on subjective business performance—while strong—is much weaker than that of subjective performance on market orientation.
9. There is no significant difference in the market orientation of companies predicted to fail and those predicted to survive. Thus, market orientation on its own, does not seem to be a necessary condition for organizational survival.

6.9 Chapter Summary

This Chapter has presented empirical results, tested hypotheses, and discussed findings for each of our seven research questions. Details have appeared in the Chapter on more than 60 pages of text and in upwards of 40 Tables and Figures.

To summarize, results in Chapter VI generally support much earlier work conducted around the world that finds market orientation to influence business performance in a positive fashion. However, the magnitude and significance (but not the direction) of this influence was found here to depend on

1. whether or not a common method factor is modeled along with market orientation and business performance,
2. the presence or absence in the model of other strategically relevant constructs that also influence business performance,
3. how market orientation, business performance, and other strategically relevant constructs are measured, and
4. whether or not the relationship between market orientation and performance is modeled as unidirectional or reciprocal.

Thus, from a conceptual or theoretical point of view, market orientation is but one of many antecedents to business performance, one whose impact is perhaps best judged in a relative sense.

From a managerial point of view, our four summary points above seem equally pertinent. However, marketing decision makers and strategists need to go beyond these four ideas (which are based on relationship magnitudes) and consider also the

methods, timings, and costs to change strategic antecedents in hopes of improving business performance. We shall have more to say about key findings for management in the next and final Chapter, which also outlines some limitations of this study and indicates the scope for future research.

Chapter VII

Limitations, Contributions, and Implications

The Chapter begins with a brief overview of the dissertation. We then address limitations of this research and discuss contributions to the market orientation, strategic management, and business failure prediction literatures and also identify opportunities for further research. The Chapter concludes with a discussion of implications and recommendations for managerial practice.

The dissertation began in Chapter I with an outline of the origins of the research, the research questions, and the research objectives. Chapter II provided a summary of the development of the automotive parts industry in Thailand. The summary was followed with descriptions of firms participating in this research and their top management. Finally, Chapter III presented a brief overview of Thailand, the country in which this research takes place. Chapter III presented our efforts to bring together four important research streams: market orientation, strategic antecedents to market orientation, business performance, and business failure prediction. Chapter IV presented a conceptual framework for the dissertation. Following this, we developed seven research questions and associated hypotheses that focused on the relationship between market orientation and business performance, antecedents to market orientation, market orientation and common method variance, and the reciprocal relationship between market orientation and business performance. Chapter V explained methodology used to investigate the research questions stated in Chapter IV. This included study design, questionnaire development, measures used, data

preparation procedures, data collection procedures and the proposed statistical analysis. Chapter VI reported on the empirical results and principal findings in relation to the seven research questions.

7.1 Limitations and Recommendations for Future Research

Research findings presented in this dissertation should be viewed in light of certain limitations. The limitations can be divided into three areas. Firstly are limitations regarding potential bias in the sample population and sample size. Secondly are limitations with the research design, methodology and data analysis technique. Thirdly are limitations in terms of measures used. Many of these limitations provide opportunities for future research.

7.1.1 Sample Population and Sample Size

The sample used in this study may not be representative of all automotive parts manufacturers in Thailand. The contacted sample consisted of 790 companies although the population of automotive parts manufacturers is at least 1,186 and could be as large as 1,700. In that sense as many as 910 companies were excluded from our data collection. On balance we consider our final sample of 203 companies (25.7 percent response rate) to be adequate given this was an industrial survey.

In terms of research question 7, relatively few bankruptcies were identified in the automotive parts sector either in stage one or stage two. Our failure prediction model was constructed using a final sample of 14 failed companies (and 20 non-failed). Whilst this would be considered an exceptionally small sample by marketing research

standards, in terms of business failure prediction studies, small samples are more common. Confirmation of the findings should be subjected to reexamination at a future date and also replicated with other industries. Our prediction model for testing Hypotheses 35 through 41 used samples of six and nine predicted failed companies.

Our stage one sample of 14 failed firms and 20 survivor firms, produces an "oversampling bias" as noted on p. 80. Notwithstanding this bias, we followed methodology used by most researchers (Beaver, 1967) by using an equivalent number of failed and non-failed firms. Six failed firms were subsequently excluded from our sample due to lack of audited financial data being reported. We maintained the sample size at this level rather than reduce the sample size further.

7.1.2 Study Design, Methodology and Data Analysis Technique

As with all research, the design of this study resulted from making a number of trade-offs. This study employed a cross-sectional research design where data was collected at a single point in time. This means our conclusions are restricted to those of association despite the implementation of a market orientation being an evolving rather than a static concept. A study conducted in a longitudinal framework would allow conclusions to be made in relation to causal relationships between the variables of interest. However longitudinal studies present their own set of limitations including high cost and potentially high attrition rates in the sample (Weiss and Heide 1993).

While using a survey to collect data from a "key informant" has numerous advantages, some negative aspects should be acknowledged. The depth and breadth of investigation are traded off due to physical limitations, such as the length of the questionnaire. Self-report data may suffer from perceptual or attitudinal biases which can reduce reliability and validity of the data. Moreover, the quality of self-report data is heavily dependent upon respondents' cooperation. Despite performing different checks to verify the quality and knowledge of the informants, we are unable to control who actually completed the survey. Letters accompanying our survey were addressed to the owner or top executive, however it is possible that some top managers partially completed the questionnaire and delegated responsibility to complete respond to a subordinate, who may not be well versed on firm strategy and performance.

Most market orientation studies gather data from firms competing in several or many industries whereas this study, much like Narver and Slater (1990), focuses on one industry setting. Restricting our study to firms in a single industry conferred the obvious advantage of being able to control for industry effects. According to Beard and Dess (1979, 1981) industry profitability is a statistically significant predictor of firm profitability, and explains consistently more variance than firm strategy. Whilst our single industry population of interest removes this as a concern it also limits the generalizability of the study's findings to other industry contexts. Our study was wholly conducted in the automotive parts sector, and this sector may not be representative of other manufacturing sectors.

The choice of a single industry (any single industry) as our research setting limits our study in two other ways. One, we face a restriction in range on all measured variables of interest because of independent variable and dependent variable homogeneity necessarily found in a single industry. Thus, all reported relationships in Chapter VI are smaller that we would expect from a multi-industry sample. Two, the choice of a single industry resulted in our somewhat small sample size of 203 because we could not find names and addresses beyond our contacted sample of 790 firms. In other words, the decision to use automotive parts manufacturers in Thailand limited the size of our sampling frame. Future studies should investigate the relationship of market orientation and performance in a variety of industry settings including other manufacturing sectors as well as in service or retail firms. Relative to this particular manufacturing sector, consumer goods firms are reputed to conduct substantially more market research, and the marketing function is traditionally more dominant. Thus, the market orientation and business performance relationship may be stronger in a consumer goods setting due to the expected high prevalence of market orientation.

The sample used in this study consists of both OEM and REM manufacturers. Results have been generalized across the automotive parts industry as a whole. The reality is that OEM and REM manufacturers differ in several respects, the most notable being type and number of customers served (see p. 163 for further discussion on this point). In terms of our findings, we consider that whether an imitative capability has a positive or negative effect on performance is likely to be dependent on whether a company operates as an OEM, an REM, or in some cases as both an

OEM and REM. A limitation of this study is we did not screen surveyed companies on the basis of whether they operate as OEM or REM. In drafting the survey instrument, consideration was given to doing this, however it was felt that many of the smaller Thai automotive part suppliers would be unable to draw a distinction between the two types of suppliers as the term is not widely used by suppliers themselves. Thus, future research within the automotive parts industry could focus on specific markets within the industry itself.

The study of organizations in a single country may produce findings that are culture-specific and difficult to generalize across other settings. In the same way that the study of market orientation has been replicated in different countries, the study of antecedents to market orientation would gain from such extensions.

The statistical technique used for hypotheses testing was structural equation modeling (SEM). Although the advantages of using SEM are numerous, one important limitation should be noted: some researchers believe that SEM is not capable of testing causal relationships between the variables. These researchers hold that to demonstrate causality requires stringent experimental control of the variables yet data for this dissertation were collected through self-administered surveys, with no experimental interventions employed. Other researchers support the idea of causality in SEM on the basis of time-oriented theory. We fall into this latter category, based on the discussion found in Section 3.1.3, item 2.

7.1.3 Measures Used

In terms of our performance measures obtained from financial statements used in research question 5, reliance on numbers alone without the benefit of context can be misleading. Companies that recently invested in new equipment and factories may show a lower return on assets than companies that did not. The resulting time lag before performance benefits would influence our Return on Assets dependent measure. Even within a single industry study such as this, meaningful comparisons between firms may be difficult. One firm may be investing for the future whereas another may be cashing out of the business.

Research question 7 represents a modest but important beginning of a research stream. Whilst a significant causal relationship was not found, this conclusion is tempered by the fact that the mean scores for our sample of predicted survivors and predicted failures are mostly in the correct direction. Given our low statistical power (n = 166), future studies should use a larger sample. Furthermore, future studies should consider longitudinal research involving the interviewing of companies and then adopting a wait and see mentality to determine which companies actually fail and which companies actually survive. However, time is a prohibitive factor in such a study design. There is also a need for replication and extension of this study, using different samples and in different national contexts.

In sum, these limitations of this research should be kept in mind when interpreting the findings. Moreover, these limitations provide some opportunities or areas of improvement for future researchers to consider.

7.2 Contributions of the Study

In Chapter I, we stated several specific research objectives. The first objective is to replicate the market orientation performance relationship established by Narver and Slater (1990) and Jaworski and Kohli (1993) in the context of the automotive parts industry in Thailand. The second objective is to extend the existing literature regarding the antecedents to market orientation by adding four new variables from the strategic management literature. The third objective is to examine the relationship between market orientation and objective measures of business performance. The fourth objective is to examine whether a reciprocal structural relationship exists between market orientation and performance. The fifth objective is to measure whether firms predicted to be in danger of failing have a different market orientation from those firms predicted to survive. The completion of these objectives provide empirical evidence linking marketing to financial performance and to firm value, declared by the Marketing Science Institute as the highest priority topic for academic study for 2002-2004 (Marketing Science Institute 2002).

Thus, this research makes contributions to a body of knowledge in several areas. The first concerns the specific context of this study. This is the first piece of empirical research to study the relationship between market orientation and performance in an industry specific setting in Thailand. The findings from this study confirm that market orientation is an important determinant of business performance in the automotive parts industry, unless performance is measured in terms of predicted business failure.

The second contribution is identification of three previously untested strategic variables found to be antecedents to market orientation. Strategic flexibility, product quality, and future orientation are found to each have significant and positive effects on market orientation. A fourth previously untested variable, imitative capability, was also examined however its effect on market orientation was found to be not significant.

The third contribution is this is the only Asian study to date which supplies contemporary evidence of the link between market orientation and both objective and subjective business performance. We extend previous findings, mostly limited to multi-industry studies conducted in the U.S. and E.U., to the automotive parts industry in Thailand. Specifically we find that when objective performance measures are used, the size of relationships is not as strong as when subjective measures are used.

The fourth contribution is our confirming the existence of a reciprocal relationship between market orientation and business performance. Conventionally, business performance is represented as the dependent variable in market orientation research, although Uncles (2000) considers it "reasonable to suppose that performance provides a climate for market orientation either to flourish or be undermined". Whilst Uncles recognizes that "prising apart of cause and effect is immensely difficult", testing a nonrecursive structural equation model enabled us to evaluate competing models of causation and find empirically support for his proposition.

The fifth contribution to the body of knowledge on market orientation theory results from validation in this study of Pelham and Wilson (1996) market orientation construct and measurement instrument. Validity was supported in this study by correlation with the Deshpandé and Farley (1996) market orientation scale. The correlation coefficient showed a high degree (.70) of association between responses to the two instruments in general. The Deshpandé and Farley (1996) scale is deficient conceptually in that eight of its 10 items address only customer orientation, two address both customer and competitor orientation, and none address "imbedding the marketing concept throughout the organization" as described by Noble, Sinha, and Kumar (2002).

The six and final contribution involves forging a link between market orientation and the business failure prediction literature. Scholars such as Levitt (1960); Kotler (1977); Kotler and Andreasen (1987); Day (1994) argue that marketing explains the superior performance of firms and why some firms survive and others do not. Our finding contradicts that position. Previous empirical market orientation research has relied on subjective measures of performance and no previous study has endeavored to measure performance in terms of survival or as in the case of the present study, predicted survival. We find there is no significant difference in the market orientation of companies predicted to survive and those predicted to fail.

Moreover, this is the first empirical study to develop a business failure prediction model consisting of both private and public Thai companies. Business failure prediction research using Thai data is limited to samples consisting of public

companies listed on the Stock Exchange of Thailand (Persons 1999; Tirapat and Nittayagasetwat 1999). Our study finds that variables comprising the multivariate model: sales/total assets and the natural logarithm of total assets, a measure for firm size, are important determinants in predicting business failure in the automotive parts sector in Thailand.

7.3 Implications for Managers

How can managers improve business performance and increase firm value? This is a key question that most performance focused academic research attempts to answer. Whilst there is no absolute answer this study does offer several important insights for managers in the automotive parts industry seeking to improve business performance.

This study provide managers with empirical evidence that market orientation is an important determinant in business performance across the automotive parts sector and that positive business performance also leads to development of a greater market orientation. Hence, managers in this industry should not overlook the importance of a market orientation. In order to develop a high degree of market orientation within their firm's managers should cultivate the three "tenets" (Noble, Sinha and Kumar 2002): customer-oriented thinking, market analysis and understanding, and embedding of the marketing concept throughout the organization.

This study identified a number of strategic antecedents that influence market orientation. Managers can take specific action to expedite the attainment of a market orientation by taking measures to ensure each antecedent found to have a significant

effect on market orientation is either implemented or restricted (depending on whether a positive or negative effect is found). The following antecedents are ranked in order of most influential to least influential effect on market orientation.

Interdepartmental conflict has an adverse effect on market orientation. This is consistent with the findings of previous studies in other countries. Thus, fostering an overall sense of mission and constructive interaction across departments is an important issue of managerial concern in the automotive parts industry. The implication is that managers must assume responsibility to recognize, address, and correct interdepartmental problems when they surface. Employees must understand how their departmental goals relate to the goals of the company. One important way of minimizing problems is to make sure interdepartmental communication takes place on a positive level. People are less likely to engage in conflict with someone they know and respect.

A focus on product quality has a positive effect on the development of a market orientation. It encourages firms to raise their aspirations and become more responsive to the marketplace. Moreover, product quality is considered vital to the survival of the automotive parts sector. Most managers would be well aware of anecdotal evidence in support of this and our study provides managers with empirical evidence of the relationship between product quality and performance. Thailand's parts industry needs to match global quality at globally competitive prices. Failure to do will result in loss of business to overseas competitors.

Strategic flexibility assists firms in the automotive parts industry to become more market oriented. A comparison of the strength of our results with those of Grewal and Tansuhaj (2001) indicates that strategic flexibility is more important in turbulent economic conditions than in calmer conditions as existed when our study was undertaken. Managers must be aware that strategic flexibility cannot be implemented overnight. Thus, in order to rapidly exploit opportunities arising from variability in the political, economic, and financial environment it is important for managers to implement and maintain a high level of flexibility at all times.

The extent to which top management reinforces the importance of market orientation, plays an important role in the automotive parts industry in Thailand. Research conducted in the U.S. (Jaworski and Kohli 1993) and Scandinavia (Selnes, Jaworski, and Kohli 1996) obtained a similar result. Thus, top management should work hard to foster a market oriented corporate climate. According to Jaworski and Kohli (1993) top managers should repeatedly remind employees: 1) that serving customers is the most important thing the company does; 2) to gear up now to meet customers' future needs; 3) that firm survival depends on its ability to adapt to market trends; and 4) to be sensitive to the activities of competitors.

Future oriented firms pay close attention to markets, particularly to future customers and competitors, which increase a firm's market orientation. Firms that are future oriented are able to identify alternatives and plan further out into the future. This study finds that this leads to significant higher performance, relative to that of less forward thinking firms.

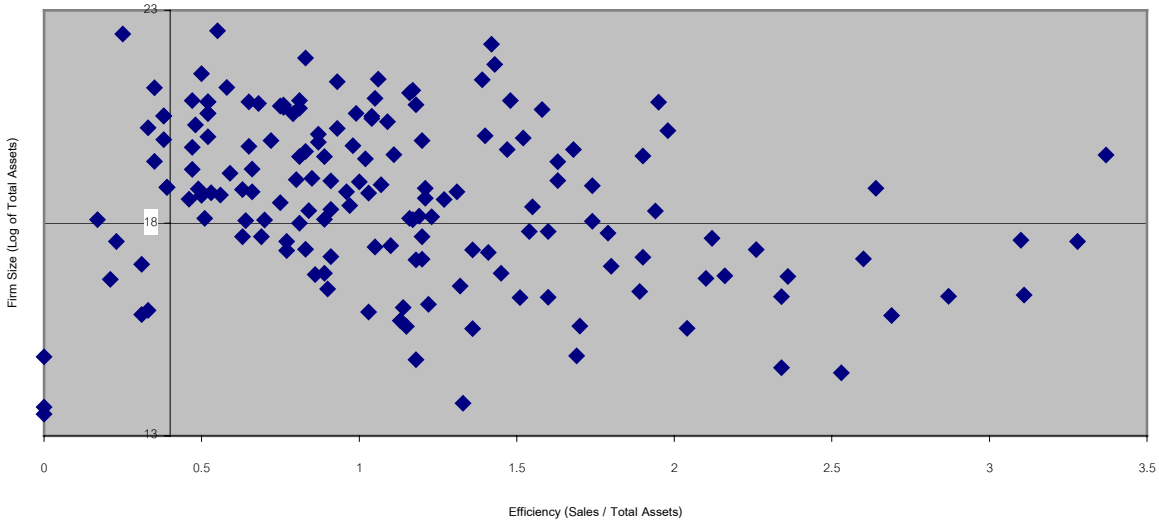
Finally, we find an imitative capability does not have a significant effect on either market orientation or business performance. In other words as firms devote more resources to imitating competitors, their market orientation and business performance does not increase. Being market oriented means listening and following customers closely whereas an imitative capability relies on observing and imitating products and processes of competitors and on adapting products from other industries. Imitative capability is not customer driven.

Two measures of performance are positively related with market orientation: Return on Sales (ROS) and Return on Assets (ROA). Thus, in a study of the automotive parts industry, these are particularly powerful ratios to identify high performing companies. Capital-intensive industries such as automotive parts manufacturing typically yield a low return on assets, since firms usually operate their own factories. Moreover, costs incurred to maintain these assets reduce ROA even more, due to the commensurate reduction in their earnings. The implication is that since companies within the automotive parts industry are competing with each other, the one with the highest ROS and ROA ratio is usually the most profitable and most effective. Our study finds that automotive parts manufacturers could positively influence these measures by adopting a market-oriented posture.

Research question 7 looked at the differences in strategic and market orientation of companies predicted to fail compared to those predicted to survive. Of 31 financial ratios examined, we found that the two key financial variables that (working in tandem) most accurately differentiate actual failed companies from surviving

companies in the automotive parts industry were Sales divided by Total Assets, a measure of efficiency and the Natural Logarithm of Total Assets, a measure of firm size. These findings indicate that firstly, managers must strive to make their firms as efficient as possible, and secondly, firm size is important to firm survival in the sense that small inefficient companies face a greater risk of failure than large inefficient firms. Thus, managers of smaller firms should be aware that their companies face a greater risk of not surviving than their larger competitors. In the post economic crisis period, liquidity was very tight and banks did not extend credit, although large firms possessed superior resources and were more likely to survive. Small firms on the other hand without existing lines of credit or with no resources to call upon struggled to survive. Figure 7.1 graphically plots these two variables for the 166 companies surveyed for whom financial statements were obtained from the Ministry of Commerce. Those firms located in the bottom left quadrant are predicted to be in most danger of failing. As a guide to managers, in very general terms, firms are at great risk of failure if their efficient use of assets, measured by the ratio, Sales divided by Total Assets, falls below 0.5, especially for small companies.

Figure 7.1 Key Indicators of Predicted Business Failure



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Appendices

Appendix 1

Cover Letters and Survey Instrument

(Original English Version)

DOCTORAL PROGRAM IN MARKETING
THAMMASAT BUSINESS SCHOOL

First letter: Advanced postcard dispatched 7 days prior to questionnaire

26 April 2002

Dear Senior Manager *<name inserted where available>*

This letter is simply to let you know that Thammasat University's Faculty of Commerce and Accountancy is conducting confidential research of the automotive parts manufacturing industry in Thailand. In about a week, you will be receiving a questionnaire in the mail. This survey asks you about many of the management practices you use to run your company. If you have any questions at all about the survey please call me on (02) 354 1446. All information will be treated as **strictly confidential.**

I would like to thank you for your help with this important project and with your valuable time to Thammasat. The University wishes to add its appreciation for your support.

Prof. Dr. Tasman Smith
Tel: 02 354 1446

Yours sincerely,

Professor Dr. Tasman Smith
Chairman
Doctoral Programme in Marketing
Thammasat University

THAMMASAT FOUNDATION BUILDING 461/5 SRI AYUTHAYA ROAD, RACHATEWEE, BANGKOK
10400 THAILAND
TEL: (662) 354 1446 FAX: (662) 354 1447 Email: tasman@ksc.th.com

DOCTORAL PROGRAM IN MARKETING
THAMMASAT BUSINESS SCHOOL

Second letter: Cover letter accompanying questionnaire

3 May 2002

Dear Senior Manager *<name inserted where available>*

Thammasat University's Faculty of Commerce and Accountancy requests your assistance with an important study it is conducting of the automotive parts manufacturing industry in Thailand. We have been very impressed how companies in this industry have managed to survive the recession Thailand has been suffering from for over the past 5 ½ years. Your response is very important to this study because we want our results to represent the entire industry.

This survey asks you about management practices you use to run your company. It should take you no more than 20 – 25 minutes to complete and there are no right or wrong answers. When you have completed the questionnaire please return it in the enclosed self-addressed envelope as soon as possible. All information will be treated as **strictly confidential**. We will distribute a summary of the research result to those who participate in this survey.

Thank you very much for your help and for giving your valuable time to Thammasat University. If you have any questions at all about the survey, please call

Prof. Dr. Tasman Smith
Tel: 02 354 1446

Yours sincerely,

Professor Dr. Tasman Smith
Chairman
Doctoral Programme in Marketing
Thammasat University

THAMMASAT FOUNDATION BUILDING 461/5 SRI AYUTHAYA ROAD, RACHATEWEE, BANGKOK
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DOCTORAL PROGRAM IN MARKETING
THAMMASAT BUSINESS SCHOOL

Third letter: Follow-up sent to companies that did not respond

24 May 2002

Dear Senior Manager *<name inserted where available>*

Your help is needed to complete an important study into the automotive parts manufacturing industry in Thailand by Thammasat University's Faculty of Commerce and Accountancy. Three weeks ago you received a questionnaire asking about the management practices that have helped your company to survive the recession. I would be very grateful if you could take some time to complete the questionnaire and return it to me as soon as possible.

Your response is very important to this study because we want the results to represent the entire industry. ***If you have already returned your questionnaire, please ignore this letter.***

Thank you very much for your valuable time and cooperation. If you have any questions at all about the survey, please call

Prof. Dr. Tasman Smith
Tel: 02 354 1446

Yours sincerely,

Professor Dr. Tasman Smith
Chairman
Doctoral Programme in Marketing
Thammasat University

THAMMASAT FOUNDATION BUILDING 461/5 SRI AYUTHAYA ROAD, RACHATEWEE, BANGKOK
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DOCTORAL PROGRAM IN MARKETING
THAMMASAT BUSINESS SCHOOL

Fourth letter: Final follow-up sent with additional copy of the questionnaire

13 June 2002

Dear Senior Manager *<name inserted where available>*

Your help is urgently needed to complete our research into the automotive parts manufacturing industry in Thailand. We know you are very busy and we know that you would like to help. It's possible that you may have misplaced the questionnaire so we have enclosed another copy. Your response is very important to this study because we want the results to represent the entire industry. Thank you very much for your valuable time and cooperation. If you have any questions at all about the survey, please call me on (02) 354 1446.

Yours sincerely,

Professor Dr. Tasman Smith
Chairman
Doctoral Programme in Marketing
Thammasat University

THAMMASAT FOUNDATION BUILDING 461/5 SRI AYUTHAYA ROAD, RACHATEWEE, BANGKOK
10400 THAILAND
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SECTION 1: INDUSTRY CHARACTERISTICS

Directions: Please consider the automotive parts industry in which your company operates and indicate the extent of your agreement with each of the following statements. If you *strongly agree* with the statement, circle 6. If you *strongly disagree*, then circle 1. If you only agree or disagree a little bit, circle one of the numbers in the middle.

		Strongly disagree					Strongly agree
1	Most companies in the automotive parts manufacturing industry in Thailand made a profit last year.	1	2	3	4	5	6
2	The technology in our industry is changing rapidly.	1	2	3	4	5	6
3	Technological changes provide big opportunities in our industry.	1	2	3	4	5	6
4	It is very difficult to forecast where the technology in our industry will be in the next 2 to 3 years.	1	2	3	4	5	6
5	A large number of new product ideas have been made possible through technological breakthroughs in our industry.	1	2	3	4	5	6
6	Technological developments in our industry are rather minor.	1	2	3	4	5	6
7	It is easy for new competitors to enter our main market	1	2	3	4	5	6
8	Competition in our industry is cutthroat.	1	2	3	4	5	6
9	There are many “promotion wars” in our industry.	1	2	3	4	5	6
10	Anything that one competitor can offer others can match readily.	1	2	3	4	5	6
11	Price competition is a hallmark of our industry.	1	2	3	4	5	6
12	One hears of a new competitive move almost everyday.	1	2	3	4	5	6
13	Our competitors are relatively weak.	1	2	3	4	5	6
14	We have the power to negotiate and impose our own terms when doing business with our suppliers.	1	2	3	4	5	6
15	Our major customers are in a strong bargaining position with us.	1	2	3	4	5	6
16	Our customers see little difference between our products and those of our competitors.	1	2	3	4	5	6
17	In our kind of business, customers' product preferences change quite a bit over time.	1	2	3	4	5	6
18	Our customers tend to look for new products all the time.	1	2	3	4	5	6
19	We are witnessing demand for our products and services from customers who never bought them before.	1	2	3	4	5	6
20	New customers tend to have product-related needs that are different from those of our existing customers.	1	2	3	4	5	6
21	We cater to many of the same customers that we used to in the past.	1	2	3	4	5	6
22	Sometimes our customers are very price sensitive, but on other occasions, price is relatively unimportant.	1	2	3	4	5	6

Please turn over….

Please answer all questions. If you are not sure, please answer to the best of your ability.

SECTION 2: MARKET ORIENTATION

Directions: Please indicate the extent of your agreement with each of the following statements. Your Answers should be given with respect to YOUR company: If you *strongly agree* with the statement, circle 6. If you *strongly disagree*, then circle 1. If you only agree or disagree a little bit, circle one of the numbers in the middle.

		Strongly disagree					Strongly agree
1	Our business objectives are driven primarily by customer satisfaction.	1	2	3	4	5	6
2	We constantly monitor our level of commitment and orientation to serving customer needs.	1	2	3	4	5	6
3	We freely communicate information about our successful and unsuccessful customer experiences across all business functions.	1	2	3	4	5	6
4	Our strategy for competitive advantage is based on our understanding of customers' needs.	1	2	3	4	5	6
5	We measure customer satisfaction systematically and frequently.	1	2	3	4	5	6
6	We have routine or regular measures of customer service.	1	2	3	4	5	6
7	We are more customer-focused than our competitors.	1	2	3	4	5	6
8	I believe this business exists primarily to serve customers.	1	2	3	4	5	6
9	We survey end-users at least once a year to assess the quality of our products and services.	1	2	3	4	5	6
10	Data on customer satisfaction are disseminated at all levels in this company on a regular basis.	1	2	3	4	5	6
11	All our functions (not just marketing & sales) work together to serve our target markets.	1	2	3	4	5	6
12	Our firm's strategy for competitive advantage is based on our thorough understanding of our customer needs.	1	2	3	4	5	6
13	All our managers understand how the entire business can contribute to creating customer value.	1	2	3	4	5	6
14	Information on customers, marketing success and marketing failures is rarely communicated throughout the firm.	1	2	3	4	5	6
15	If a major competitor were to launch an intensive promotional campaign targeted at our customers, we would respond immediately.	1	2	3	4	5	6
16	Our firm's market strategies are to a great extent driven by our understanding of possibilities for creating value for customers.	1	2	3	4	5	6
17	We respond to negative customer satisfaction information throughout the firm slowly.	1	2	3	4	5	6
18	Managers discuss competitive strengths and weaknesses very frequently either formally or informally.	1	2	3	4	5	6
19	We frequently capitalize on targeted opportunities to take advantage of competitors' weaknesses.	1	2	3	4	5	6

Please answer all questions. If you are not sure, please answer to the best of your ability.

SECTION 3: STRATEGIC POSITION

Directions: Does your firm's strategic activity agree or disagree with the following statements. *(Circle one number for each line)*

		Strongly disagree					Strongly agree
1	We regularly share investments and costs across business activities.	1	2	3	4	5	6
2	We seek to derive benefits from diversity in environments.	1	2	3	4	5	6
3	Our strategy emphasizes exploiting opportunities arising due to variability in the environment.	1	2	3	4	5	6
4	Our strategy reflects high level of flexibility in managing risks, political, economic, and financial.	1	2	3	4	5	6
5	Our strategy emphasizes versatility in allocating human capital.	1	2	3	4	5	6
6	We are never first-to-market with new products and services.	1	2	3	4	5	6
7	We are always a late entrant in established but still growing markets.	1	2	3	4	5	6
8	We never enter mature, stable markets.	1	2	3	4	5	6
9	Our company is at the cutting edge of technological innovation.	1	2	3	4	5	6
10	We always try to price our products below our competitors.	1	2	3	4	5	6
11	We have a continuing overriding concern for lowest cost per unit.	1	2	3	4	5	6
12	We never compete in lower priced market segments.	1	2	3	4	5	6

Please turn over….

Please answer all questions. If you are not sure, please answer to the best of your ability.

SECTION 4: BUSINESS PROCESSES

Directions: The following statements describe some aspects of an organizations internal working environment. To what extent does each statement below accurately describe your company's working environment? If you *strongly agree* with the statement, circle 6. If you *strongly disagree*, then circle 1. If you only agree or disagree a little bit, circle one of the numbers in the middle.

		Strongly disagree					Strongly agree
1	Our finance section could quickly determine the profitability of each of our product lines.	1	2	3	4	5	6
2	Our finance section could quickly determine the profitability of each of our customers.	1	2	3	4	5	6
3	We have a good idea of the sales potential for each of our markets.	1	2	3	4	5	6
4	Top managers in this company believe that higher financial risks are worth taking for higher rewards.	1	2	3	4	5	6
5	Top managers in this company like to take big financial risks.	1	2	3	4	5	6
6	Top managers here encourage the development of innovative marketing strategies, knowing well that some will fail.	1	2	3	4	5	6
7	Top managers in this company like to "play it safe."	1	2	3	4	5	6
8	Top managers around here like to implement plans only if they are very certain that they will work.	1	2	3	4	5	6
9	Top managers repeatedly tell employees that this company's survival depends on its adapting to market trends.	1	2	3	4	5	6
10	Top managers often tell employees to be sensitive to the activities of our competitors.	1	2	3	4	5	6
11	Top managers keep telling people around here that they must gear up now to meet customers' future needs.	1	2	3	4	5	6
12	According to top managers here, serving customers is the most important thing our company does.	1	2	3	4	5	6
13	This organization can be described as flexible and continually adapting to change.	1	2	3	4	5	6
14	Top managers in this company can be described as set in their ways.	1	2	3	4	5	6
15	This organization is always moving toward improved ways of doing things.	1	2	3	4	5	6
16	The ability to plan ahead is highly valued here.	1	2	3	4	5	6
17	Management is constantly planning for the future of the company.	1	2	3	4	5	6
18	People here are encouraged to take a long-term view of their career with the company.	1	2	3	4	5	6
19	Most departments in this company get along well with each other.	1	2	3	4	5	6
20	When members of several departments get together, tensions frequently run high.	1	2	3	4	5	6
21	People in one department generally dislike interacting with those from other departments.	1	2	3	4	5	6

Please answer all questions. If you are not sure, please answer to the best of your ability.

		Strongly disagree					Strongly agree
22	Employees from different departments feel that the goals of their respective departments are in harmony with each other.	1	2	3	4	5	6
23	Protecting one's departmental turf is considered to be a way of life in this company.	1	2	3	4	5	6
24	The objectives pursued by the marketing department are incompatible with those of the manufacturing department.	1	2	3	4	5	6
25	There is little or no interdepartmental conflict in this company.	1	2	3	4	5	6
26	Our company responds fast to the competitors' introductions of new products, by rapidly examining them and analyzing the possibility to imitate them.	1	2	3	4	5	6
27	Our company structure and systems are well designed to facilitate rapid adaptation of product offerings in order to respond to competitors' moves.	1	2	3	4	5	6
28	The introduction of new products by our competitors, calls for immediate meetings of our top executive teams.	1	2	3	4	5	6
29	In our company, we closely observe direct competitors, firms from other industries, suppliers, and customers, in order to identify **business practices** that can be imitated or improved within our firm.	1	2	3	4	5	6
30	Our imitation efforts are implemented fast enough to almost eliminate the lead-time of competitors.	1	2	3	4	5	6
31	If shareholders are unhappy, nothing else matters.	1	2	3	4	5	6
32	If the survival of a business enterprise is at stake, then you must forget about ethics and social responsibility.	1	2	3	4	5	6
33	The most important concern for a company is making a profit, even if it means bending or breaking the rules.	1	2	3	4	5	6
34	To remain competitive in a global environment, businesses will have to disregard ethics and social responsibility.	1	2	3	4	5	6
35	Efficiency is much more important to a company than whether or not it is seen as ethical or socially responsible.	1	2	3	4	5	6

Please turn over….

Please answer all questions. If you are not sure, please answer to the best of your ability.

SECTION 5: PERFORMANCE

Directions: Please indicate the extent of your agreement with each of the following statements. *(Circle one number for each line)*

		Strongly disagree					Strongly agree
1	Our customers are more likely to recommend us to others, than they are likely to recommend our competitors.	1	2	3	4	5	6
2	Relative to our major competitors we have a smaller market share.	1	2	3	4	5	6
3	Relative to our major competitors our firm has been less profitable in the last year.	1	2	3	4	5	6
4	Relative to our major competitors our sales have been growing faster in the last year.	1	2	3	4	5	6
5	Relative to our major competitors, overall we have been more successful in the last year.	1	2	3	4	5	6
6	The quality of our products and services is better than that of our major competitors.	1	2	3	4	5	6
7	Our customers often praise our product quality.	1	2	3	4	5	6
8	Our customers are firmly convinced that we offer very good quality products.	1	2	3	4	5	6

Directions: Please tick one answer only for each of the following statements.

9. The average annual **industry** growth (%) of the main market served by our company over the last three years is in the range of:

O Less than 5% O 5-10% O 11-15% O 16-20% O 21-25%
O 26-30% O 31-35% O More than 35%

10. The sales growth of **our** firm in the past 12 months was in the range of:

O Negative growth O Zero Growth (0%) O 1-5% O 6-10%
O 11-15% O 16-20% O 21-25% O 26-30%
O 31-35% O 36-40% O Over 40%

11. The market share held by our four largest competitors in our industry (include your company if it is one of the four largest) is approximately in the range of:

O Less than 15% O 16-30% O 31-45% O 46-60% O 61-75%
O 76-90% O More than 90%

12. Over the last three years our overall market share has changed by:

O Less than 10% O 11-25% O 26-40% O 41-55% O 56-70% O 71-85% O 86-100%

13. Last year our company had a: O Profit after tax O Loss

14. What is your estimate of the ROI (return on investment) for your firm last year:

O Less than 0% O 0-10% O 10-15% O 16-25% O More than 25%

15. Of those who were your regular customers three years ago, what percentage would you guess are still your customers (customer retention): _____%

Please answer all questions. If you are not sure, please answer to the best of your ability.

SECTION 6: GENERAL QUESTIONS

The following questions ask **about the characteristics and experiences of the top manager (e.g. Managing Director).** If you are not the top manager, please answer these questions about your Managing Director: (*More than one answer can be selected if applicable)*

1. Which background best describes your Managing Director's education and experience:

   ○ Engineering / Production ○ Accounting / Finance ○ Science / Technology

   ○ Personnel ○ Marketing / Sales ○ Other (please describe)_____

2. Please indicate the **highest educational level** achieved by your Managing Director:

   ○ Finished Primary School ○ Finished Secondary School ○ Finished Vocational School

   ○ University Degree ○ Postgraduate degree

3. Which of the following languages can the Managing Director communicate in **fluently:**

   ○ Thai ○ English ○ Chinese dialect ○ Other (please state) _____

4. What is the age of the Managing Director :

   ○ 20 - 29 years old ○ 30 - 39 years old ○ 40 - 49 years old ○ 50 - 59 years old

   ○ 60 - 69 years old ○ 70 - 79 years old ○ Older than 80 years

5. What is the gender of the Managing Director: ○ Male ○ Female

6. What is the nationality of the Managing Director: _____

The following questions cover basic descriptive information about your company. As noted previously, strict **confidentiality will be maintained for all data provided in the questionnaire.**

7. What percentage of your production (value) is specifically for the automotive industry:_____%

8. What is your company's **primary product:** (answer only one)_____

9. Does your company supply products directly to automotive assembly plants in Thailand: ○ Yes ○ No

10. What percentage of your total sales are directly for export markets : _____%

11. What percentage of your total sales are for domestic markets : _____%

12. How many factories does your company operate :_____

13. When was this company founded (year) _____

14. Does your company have a mission statement: ○ Yes ○ No

15. Does your company have a quality management or performance improvement program or use management techniques (such as TQM, Benchmarking): ○ Yes ○ No (If no, skip to Q17)

16. What type of program and techniques: _____

17. Does the company formally present its progress and performance to its employees at least once per year: ○ Yes ○ No

Please answer all questions. If you are not sure, please answer to the best of your ability.

18. Does your company have a Human Resources manager: ○ Yes ○ No

19. How did the company recruit its last management position:
○ Newspaper advertisement ○ Through shareholder connections ○ Headhunter
○ Through employees (other than those connected to the shareholders) ○ Other (please state)_____
○ We have never recruited any managers.

20. In the last year how many days training did the company put you through: _____(days)

21. Who is your major bank: (name one only): _____

22. Since the economic crisis has it been necessary for your company to renegotiate repayment of loans with the banks: ○ Yes ○ No

23. Has the company ever been financially restructured (or is currently being restructured): ○ Yes ○ No

24. Please indicate the number of **levels** of executive positions in the company's organisation chart:
○ One (top manager) ○ Two ○ Three ○ Four ○ Other (please specify number)_____

25. What is the total number of employees in your company (including factory staff)
○ Less than 25 ○ 25-50 ○ 50-100 ○ 100-250
○ 250-500 ○ 500-1000 ○ More than 1000

26. How many shareholder groups are there with greater than 20% equity in the company: _____

27. Are any shareholder groups related by family: ○ Yes ○ No

28. Are there any foreign (non-Thai) shareholders: ○ Yes ○ No (If no, skip to Q30)

29. What is the percentage of foreign ownership in the company : _____%

30. What percentage of **executive** positions do family members of shareholder groups occupy_____%

31. What percentage of **office** employees are family members of shareholder groups_____%

32. Is the Managing Director the eldest son/daughter of the largest shareholder group: ○ Yes ○ No

SECTION 7: RESPONDENT INFORMATION

Name: _____

Position: _____

Company: _____

Telephone: _____

How long have you worked for this company: _____

Who do you report directly to : ○ Shareholders
○ A more senior executive (please state title)_____

Please answer all questions. If you are not sure, please answer to the best of your ability.

Appendix 2

Cover Letters and Survey Instrument

(Translated Thai Version)

26 เมษายน 2545

เรื่อง การวิจัยทางวิชาการเกี่ยวกับอุตสาหกรรมอุปกรณ์และอะไหล่ยานยนต์

เรียน ท่านผู้จัดการอาวุโส

คณะพาณิชยศาสตร์และการบัญชี มหาวิทยาลัยธรรมศาสตร์ ใคร่ขอชี้แจงให้ท่านทราบว่า ขณะนี้ทางคณะฯ ได้จัดทำการวิจัยเกี่ยวกับอุตสาหกรรมอุปกรณ์และอะไหล่ยานยนต์ในประเทศไทย ซึ่งจะมีแบบสอบถามเกี่ยวกับแนวทางการบริหารการจัดการ ที่ใช้ในการดำเนินการของบริษัท ส่งไปยังท่านทางไปรษณีย์ภายในระยะเวลา 1 สัปดาห์ ซึ่งข้อมูลทั้งหมดจะถูกเก็บไว้เป็นความลับ และจะนำไปใช้เพื่อการศึกษาวิจัยเท่านั้น

ทางคณะฯ ใคร่ขอขอบพระคุณล่วงหน้าในความร่วมมือของท่านที่กรุณาสละเวลาอันมีค่าเพื่อตอบแบบสอบถามชุดนี้ หากท่านมีข้อสงสัยประการใดเกี่ยวกับแบบสอบถามชุดนี้ ติดต่อและสอบถามเพิ่มเติมได้ที่ ศาสตราจารย์ ดร. ทัศเดช อรุณสมิทธิ ที่เบอร์โทรศัพท์ (02) 354 1446

ด้วยความเคารพอย่างสูง

ศาสตราจารย์ ดร. ทัศเดช อรุณสมิทธิ
ประธานโครงการปริญญาเอกทางการตลาด
มหาวิทยาลัยธรรมศาสตร์

THAMMASAT FOUNDATION BUILDING 461/5 SRI AYUTHAYA ROAD, RACHATEWEE, BANGKOK
10400 THAILAND
TEL: (662) 354 1446 FAX: (662) 354 1447 Email: tasman@ksc.th.com

เรียนท่านผู้ตอบแบบสอบถาม

คณะพาณิชยศาสตร์และการบัญชี มหาวิทยาลัยธรรมศาสตร์ ใคร่ขอรบกวนเวลาของท่านในการตอบแบบสอบถามที่จัดทำขึ้น เพื่อศึกษาเกี่ยวกับอุตสาหกรรมอุปกรณ์-อะไหล่ยานยนต์ในประเทศไทย เนื่องจากผู้ดำเนินการวิจัย มีความประสงค์ที่จะทำความเข้าใจว่า ด้วยสาเหตุอะไรที่บริษัทขนาดกลางและขนาดเล็กในอุตสาหกรรมนี้ สามารถบริหารงานให้บริษัทผ่านพ้นวิกฤตการณ์ทางเศรษฐกิจที่ประเทศไทยได้เผชิญอยู่ในช่วงห้าปีครึ่งที่ผ่านมา

แบบสอบถามฉบับนี้จะมีคำถามที่เกี่ยวกับแนวทางการบริหารการจัดการที่คุณใช้ในการดำเนินการของบริษัท การตอบแบบสอบถามจะใช้เวลาประมาณ 20-25 นาที และในการตอบจะไม่มีคำตอบที่ถูกหรือผิด นอกจากนั้นข้อมูลทั้งหมดจะ**ถูกเก็บไว้เป็นความลับ** และจะนำไปใช้เพื่อการศึกษาวิจัยเท่านั้น หลังจากที่ทำการวิจัยแล้วเสร็จ ทางคณะฯ จะจัดการเตรียมและส่งผลการวิจัยให้กับบริษัทที่ได้ส่งข้อมูลให้กับคณะฯ

ทางคณะฯ ขอขอบคุณล่วงหน้าในความร่วมมือของท่าน และในการสละเวลาอันมีค่า เพื่อตอบแบบสอบถามชุดนี้ หากท่านมีข้อสงสัยประการใดเกี่ยวกับแบบสอบถามนี้ กรุณาติดต่อ ศาสตราจารย์ ดร.ทัศเดช อรุณสมิทธิ โทร 02-3541446

ขอแสดงความนับถือ

ศาสตราจารย์ ดร.ทัศเดช อรุณสมิทธิ
ประธานโครงการปริญญาเอกทางการตลาด
คณะพาณิชยศาสตร์และการบัญชี
มหาวิทยาลัยธรรมศาสตร์

24 พฤษภาคม 2545

เรียนท่านผู้ตอบแบบสอบถาม

ตามที่คณะพาณิชยศาสตร์และการบัญชี มหาวิทยาลัยธรรมศาสตร์ ได้ส่งแบบสอบถามเกี่ยวกับอุตสาหกรรมอุปกรณ์อะไหล่ยานยนต์ในประเทศไทย มาให้ท่านในช่วง 3 สัปดาห์ที่ผ่านมา เนื่องจากผู้ทำการวิจัยมีความประสงค์ที่จะทำความเข้าใจเกี่ยวกับแนวทางการบริหารงานที่ช่วยให้บริษัทผ่านพ้นวิกฤตการณ์ทางเศรษฐกิจไปได้ด้วยดี ทางคณะฯ ใคร่ขอความกรุณาท่านตอบแบบสอบถามและส่งข้อมูลกลับอย่างเร็วที่สุดเท่าที่เป็นไปได้

ข้อมูลการตอบแบบสอบถามของท่านเป็นสิ่งสำคัญยิ่งสำหรับการวิจัย เพราะผลลัพธ์ทั้งหมดจะนำเสนอภาพรวมของอุตสาหกรรมประเภทนี้ คณะฯ ใคร่ขออภัยหากท่านได้ดำเนินการส่งข้อมูลแบบสอบถามกลับเรียบร้อยแล้วก่อนที่จะได้รับจดหมายฉบับนี้

ทางคณะฯ ใคร่ขอขอบพระคุณเป็นอย่างสูง ในความร่วมมือของท่านที่ได้สละเวลาอันมีค่าตอบแบบสอบถามชุดนี้ หากมีข้อสงสัยประการใด กรุณาติดต่อ ศาสตราจารย์ ดร. ทัศเดช อรุณสมิทธิ โทร. 02-3541446

ขอแสดงความนับถือ

ศาสตราจารย์ ดร. ทัศเดช อรุณสมิทธิ
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13 มิถุนายน พ.ศ. 2545

เรียน ท่านผู้บริหาร

ตามที่คณะพาณิชยศาสตร์และการบัญชี มหาวิทยาลัยธรรมศาสตร์ ได้ส่งแบบสอบถามเกี่ยวกับอุตสาหกรรมอุปกรณ์อะไหล่ยานยนต์ในประเทศไทย มาให้ท่าน ซึ่งทางคณะฯก็ได้ตระหนักดีถึงความสำคัญของเวลาต่อภาระกิจของท่านจนอาจทำให้ไม่สะดวกที่จะตอบแบบสอบถาม แต่อย่างไรก็ดี ข้อมูลการตอบแบบสอบถามของท่านเป็นสิ่งจำเป็นยิ่งต่อการทำวิจัย เพราะผลลัพธ์ทั้งหมดจะสะท้อนภาพรวมของอุตสาหกรรมประเภทนี้ ทางคณะฯ จึงใคร่ขอความร่วมมือจากท่านมา ณ ที่นี้

ในการนี้ ทางคณะฯ ได้แนบแบบสอบถามมาให้ท่านอีก 1 ชุด ในกรณีที่เกิดความผิดพลาดทางด้านการจัดส่ง ซึ่งทำให้แบบสอบถามชุดแรกไม่ถึงมือท่าน ทางคณะฯ ใคร่ขอขอบพระคุณเป็นอย่างสูง ที่ท่านกรุณาสละเวลาอันมีค่า ตอบและส่งกลับแบบสอบถามมายังผู้วิจัย แต่ถ้าหากท่านได้ทำการส่งกลับแบบสอบถามก่อนได้รับจดหมายฉบับนี้ ทางคณะฯ ใคร่ขออภัยมา ณ ที่นี้ด้วยเช่นกัน หากมีข้อสงสัยประการใด กรุณาติดต่อ โทร. (02) 354 1446

ขอแสดงความนับถือ

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ส่วนที่ 1 : ลักษณะของอุตสาหกรรม/ธุรกิจ

การตอบแบบสอบถาม: โปรดพิจารณาถึงอุตสาหกรรมยานยนต์ซึ่งบริษัทคุณดำเนินงานอยู่ จากนั้นให้แสดงความคิดเห็นต่อข้อความข้างล่างนี้ว่าคุณเห็นด้วยเพียงไร โดยวงกลมที่ตัวเลขที่ตรงกับความเห็นของคุณ กรุณาเลือกเพียง 1 ตัวเลขในแต่ละข้อความ **หากคุณเห็นด้วยอย่างยิ่งเลือก "6" ไม่เห็นด้วยอย่างยิ่งเลือก"1"** การตอบคำถามนี้ไม่มีคำตอบที่ผิดหรือถูก หากแต่ต้องการทราบความคิดเห็นของคุณเท่านั้น

		ไม่เห็นด้วยอย่างยิ่ง					เห็นด้วยอย่างยิ่ง
1	ปีที่แล้วบริษัทในกลุ่มอุตสาหกรรมผลิตชิ้นส่วนรถยนต์ส่วนใหญ่ในประเทศไทยมีผลกำไร	1	2	3	4	5	6
2	เทคโนโลยีในธุรกิจของเราเปลี่ยนแปลงไปอย่างรวดเร็ว	1	2	3	4	5	6
3	การเปลี่ยนแปลงทางด้านเทคโนโลยีช่วยให้เกิดโอกาสทองในธุรกิจ/อุตสาหกรรมของเรา	1	2	3	4	5	6
4	เป็นการยากมากที่จะคาดการณ์ได้ว่าเทคโนโลยีในอุตสาหกรรมนี้จะเป็นอย่างไรใน 2 ถึง 3 ปีข้างหน้า	1	2	3	4	5	6
5	แนวความคิดเกี่ยวกับผลิตภัณฑ์ใหม่จำนวนไม่น้อยเกิดขึ้นจากเทคโนโลยีที่ก้าวหน้าในธุรกิจของเรา	1	2	3	4	5	6
6	พัฒนาการด้านเทคโนโลยีในอุตสาหกรรมของเราเกิดขึ้นน้อยมาก	1	2	3	4	5	6
7	เป็นเรื่องง่ายมากที่คู่แข่งใหม่ๆ จะเข้ามาสู่ตลาดหลักของเรา	1	2	3	4	5	6
8	การแข่งขันในธุรกิจที่บริษัทของเรากำลังดำเนินการอยู่รุนแรงมาก	1	2	3	4	5	6
9	มี "สงครามด้านการส่งเสริมการตลาด (Promotion War)"เป็นอย่างมากในอุตสาหกรรมนี้	1	2	3	4	5	6
10	สิ่งใดที่บริษัทหนึ่งเสนอให้แก่ลูกค้า บริษัทคู่แข่งรายอื่นย่อมเสนอให้ได้เช่นเดียวกัน	1	2	3	4	5	6
11	การแข่งขันด้านราคาเป็นลักษณะสำคัญของอุตสาหกรรมนี้	1	2	3	4	5	6
12	เราได้ทราบความเคลื่อนไหวคู่แข่งขันรายใหม่เกือบทุกวัน	1	2	3	4	5	6
13	คู่แข่งขันของบริษัทของเราค่อนข้างจะอ่อนแอ	1	2	3	4	5	6
14	เรามีอำนาจในการต่อรองและกำหนดเงื่อนไขกับซัพพลายเออร์ของเรา	1	2	3	4	5	6
15	ลูกค้าหลักของเรามีอำนาจการต่อรองเหนือบริษัท	1	2	3	4	5	6
16	ลูกค้าของเรามองว่าสินค้าของเราแทบจะไม่แตกต่างจากสินค้าของคู่แข่งขัน	1	2	3	4	5	6
17	ในธุรกิจที่เราดำเนินการอยู่ ความชอบเกี่ยวกับสินค้าของลูกค้ามีการเปลี่ยนแปลงบ้างตามระยะเวลาที่ผ่านไป	1	2	3	4	5	6
18	ลูกค้าของเรามีแนวโน้มที่จะมองหาสินค้าใหม่ๆอยู่ตลอดเวลา	1	2	3	4	5	6

		ไม่เห็นด้วยอย่างยิ่ง					เห็นด้วยอย่างยิ่ง
19	เราพบว่ามีความต้องการซื้อสินค้าและบริการของเรา จากกลุ่มลูกค้าที่ไม่เคยซื้อจากเรามาก่อนเลย	1	2	3	4	5	6
20	ลูกค้าใหม่มีแนวโน้มที่จะต้องการตัวสินค้าซึ่งแตกต่างจากความต้องการของลูกค้าในปัจจุบันของเรา	1	2	3	4	5	6
21	บริษัทของเราให้การดูแลลูกค้าส่วนใหญ่ที่เราเคยดูแลในอดีต	1	2	3	4	5	6
22	บางครั้งลูกค้าของเราก็มีความอ่อนไหวต่อราคาสินค้ามาก แต่ก็มีบางครั้งที่ราคาไม่มีส่วนสำคัญมากนัก	1	2	3	4	5	6

ส่วนที่ 2 : แนวทางการตลาด

การตอบแบบสอบถาม : โปรดแสดงความคิดเห็นของคุณต่อข้อความข้างล่างนี้ โดยคำตอบของคุณควรอยู่บนพื้นฐานของ **บริษัทของคุณ** โดยวงกลมที่ตัวเลขที่ตรงกับความเห็นของคุณ. กรุณาเลือกเพียง 1 ตัวเลขในแต่ละข้อความ หาก**คุณเห็นด้วยอย่างยิ่งเลือก "6" ไม่เห็นด้วยอย่างยิ่งเลือก"1"** การตอบคำถามนี้ไม่มีคำตอบที่ผิดหรือถูก หากแต่ต้องการทราบความคิดเห็นของคุณเท่านั้น

		ไม่เห็นด้วยอย่างยิ่ง					เห็นด้วยอย่างยิ่ง
1	วัตถุประสงค์ของธุรกิจเรามีพื้นฐานอยู่บนความพึงพอใจของลูกค้าเป็นสำคัญ	1	2	3	4	5	6
2	เราตรวจสอบระดับความมุ่งมั่นและทิศทางการทำตลาดเพื่อที่จะสนองตอบต่อความต้องการของลูกค้า	1	2	3	4	5	6
3	เราแลกเปลี่ยนข้อมูลประสบการณ์ที่เกี่ยวกับลูกค้าทั้งด้านที่ประสบความสำเร็จและไม่ประสบความสำเร็จ ระหว่างฝ่ายต่างๆ ในบริษัทอย่างอิสระ	1	2	3	4	5	6
4	กลยุทธ์สำหรับความได้เปรียบทางการแข่งขันของเรามีพื้นฐานอยู่บนความเข้าใจในความต้องการของลูกค้า	1	2	3	4	5	6
5	เราวัดความพึงพอใจของลูกค้าอย่างเป็นระบบและสม่ำเสมอ	1	2	3	4	5	6
6	เราวัดคุณภาพการให้บริการลูกค้าเป็นประจำ	1	2	3	4	5	6
7	เราใส่ใจต่อลูกค้ามากกว่าที่คู่แข่งเราทำ	1	2	3	4	5	6
8	เราเชื่อว่าธุรกิจนี้มีอยู่ก็เพื่อให้บริการลูกค้าเป็นหลัก	1	2	3	4	5	6
9	เราสำรวจความคิดเห็นของลูกค้าเกี่ยวกับคุณภาพสินค้าสินค้าและบริการของเราอย่างน้อยที่สุดปีละครั้ง	1	2	3	4	5	6
10	ข้อมูลด้านความพึงพอใจของลูกค้าได้ถูกส่งไปยังทุกระดับของบริษัทอยู่เป็นประจำ	1	2	3	4	5	6
11	ทุกส่วนการทำงานขององค์กร (ไม่ใช่เฉพาะฝ่ายการตลาดและฝ่ายขาย)ทำงานร่วมกันเพื่อสนองตอบต่อกลุ่มลูกค้าเป้าหมายของเรา	1	2	3	4	5	6
12	กลยุทธ์ชิงความได้เปรียบเชิงการแข่งขันของบริษัทมีพื้นฐานอยู่บนความเข้าใจความต้องการของลูกค้าอย่างถ่องแท้	1	2	3	4	5	6
13	ผู้บริหารทุกระดับมีความเข้าใจตรงกันว่าธุรกิจทั้งหมดของเราสามารถสร้างคุณค่าให้กับลูกค้า	1	2	3	4	5	6
14	บริษัทเราไม่ค่อยได้มีการสื่อสารกันด้านข้อมูลลูกค้า ความสำเร็จและความล้มเหลวทางการตลาดทั่วทั้งองค์กร	1	2	3	4	5	6
15	หากคู่แข่งสำคัญของเราจะมีกิจกรรมส่งเสริมการตลาดที่หนักหน่วง เราจะโต้ตอบกลับโดยทันที	1	2	3	4	5	6

โปรดพลิก

		ไม่เห็นด้วยอย่างยิ่ง					เห็นด้วยอย่างยิ่ง
16	กลยุทธ์ทางการตลาดของเรามีผลมาจากความเข้าใจถึงความเป็นไปได้ในการสร้างคุณค่าให้กับลูกค้า	1	2	3	4	5	6
17	เราตอบสนองช้ามากต่อข้อมูลเกี่ยวกับความไม่พึงพอใจของลูกค้า	1	2	3	4	5	6
18	ผู้บริหารแสดงความคิดเห็นกันบ่อยครั้งทั้งเป็นทางการและไม่เป็นทางการเกี่ยวกับจุดแข็งและจุดอ่อนทางการแข่งขันของบริษัท	1	2	3	4	5	6
19	บนจุดอ่อนของคู่แข่ง เราจะแสวงหาโอกาสที่ได้เปรียบเสมอ	1	2	3	4	5	6

ส่วนที่ 3 : การวางตำแหน่งกลยุทธ์

การตอบแบบสอบถาม : คุณคิดว่ากลยุทธ์ของบริษัทคุณสอดคล้องกับข้อความด้านล่างนี้เพียงไร โดยวงกลมที่ตัวเลขที่ตรงกับความเห็นของคุณ. โดยเลือกเพียง 1 ตัวเลขในแต่ละข้อความ **หากคุณเห็นด้วยอย่างยิ่งเลือก "6" ไม่เห็นด้วยอย่างยิ่งเลือก"1"** การตอบคำถามนี้ไม่มีคำตอบที่ผิดหรือถูก หากแต่ต้องการทราบความคิดเห็นของคุณเท่านั้น

		ไม่เห็นด้วยอย่างยิ่ง					เห็นด้วยอย่างยิ่ง
1	เราแบ่งสรรเงินลงทุนและต้นทุนให้กับธุรกิจประเภทต่างๆของบริษัทอย่างสม่ำเสมอ	1	2	3	4	5	6
2	เราแสวงหาผลประโยชน์จากสภาพแวดล้อมทางธุรกิจที่หลากหลาย	1	2	3	4	5	6
3	กลยุทธ์ของเราเน้นการแสวงหาผลประโยชน์จากโอกาสใหม่ๆที่เกิดขึ้นจากความหลากหลายของสภาพแวดล้อมทางธุรกิจ	1	2	3	4	5	6
4	กลยุทธ์ของเราแสดงถึงความยืดหยุ่นในการบริหารความเสี่ยงอันเนื่องมาจากการเปลี่ยนแปลงด้านการเมือง เศรษฐกิจและการเงิน	1	2	3	4	5	6
5	กลยุทธ์ของเราเน้นความคล่องตัวในการจัดสรรบุคลากร	1	2	3	4	5	6
6	เราไม่เคยเป็นผู้นำในการออกสินค้าหรือบริการสู่ตลาดเลย	1	2	3	4	5	6
7	เรามักจะช้าเสมอในการเข้าสู่ตลาดที่มีผู้ประกอบการรายอื่นอยู่แล้ว แต่ตลาดนั้นยังคงมีการเจริญเติบโต	1	2	3	4	5	6
8	เราไม่เคยเข้าสู่ตลาดที่อิ่มตัวและมั่นคงแล้ว	1	2	3	4	5	6
9	บริษัทเราเป็นผู้นำทางนวัตกรรมใหม่ๆ	1	2	3	4	5	6
10	เรามักจะกำหนดราคาสินค้าของเราให้ต่ำกว่าคู่แข่งเสมอ	1	2	3	4	5	6
11	เราใส่ใจต่อการทำสินค้าให้มีต้นทุนต่อหน่วยต่ำที่สุด	1	2	3	4	5	6
12	เราไม่เคยแข่งขันในตลาดสินค้าราคาต่ำ	1	2	3	4	5	6

ส่วนที่ 4 : กระบวนการทางธุรกิจ

การตอบแบบสอบถาม : ข้อความข้างล่างนี้แสดงถึงสภาพแวดล้อมการทำงานในองค์กร ให้คุณตรวจสอบว่าข้อความนั้นตรงกับบริษัทคุณเพียงไร โดยวงกลมที่ตัวเลขที่ตรงกับความเห็นของคุณ. กรุณาเลือกเพียง 1 ตัวเลขในแต่ละข้อความ **หากคุณเห็นด้วยอย่างยิ่งเลือก "6" ไม่เห็นด้วยอย่างยิ่งเลือก"1"** การตอบคำถามนี้ไม่มีคำตอบที่ผิดหรือถูก หากแต่ต้องการทราบความคิดเห็นของคุณเท่านั้น

		ไม่เห็นด้วยอย่างยิ่ง					เห็นด้วยอย่างยิ่ง
1	ฝ่ายการเงินของเราสามารถกำหนดการทำกำไรของสินค้าแต่ละชนิดได้อย่างรวดเร็ว	1	2	3	4	5	6
2	ฝ่ายการเงินของเราสามารถกำหนดการทำกำไรของเราที่มีต่อลูกค้าแต่ละรายได้อย่างรวดเร็ว	1	2	3	4	5	6
3	เราทราบถึงศักยภาพในการขายของแต่ละตลาดของเราเป็นอย่างดี	1	2	3	4	5	6
4	ผู้บริหารระดับสูงในบริษัทเชื่อว่าความเสี่ยงทางการเงินที่สูงกว่าจะให้ผลตอบแทนที่สูงกว่าซึ่งคุ้มค่า	1	2	3	4	5	6
5	ผู้บริหารระดับสูงในบริษัทคำนึงถึงความเสี่ยงทางการเงินเป็นหลัก	1	2	3	4	5	6
6	ผู้บริหารระดับสูงของที่นี่สนับสนุนให้มีการพัฒนาและสร้างสรรค์กลยุทธ์ทางการตลาดใหม่ๆและทราบดีว่ากลยุทธ์บางส่วนจะประสบความล้มเหลว	1	2	3	4	5	6
7	ผู้บริหารระดับสูงในบริษัทไม่ชอบความเสี่ยง	1	2	3	4	5	6
8	ผู้บริหารระดับสูงของที่นี่ชอบที่จะนำแผนงานมาปฏิบัติจริงเฉพาะเมื่อเขามั่นใจว่าแผนเหล่านั้นจะเป็นไปได้	1	2	3	4	5	6
9	ผู้บริหารระดับสูงเน้นกับพนักงานเสมอว่าความอยู่รอดของบริษัทนี้ขึ้นอยู่กับความสามารถในการปรับตัวให้สอดคล้องกับแนวโน้มของตลาด	1	2	3	4	5	6
10	ผู้บริหารระดับสูงบอกพนักงานอยู่บ่อยๆให้สนใจติดตามกิจกรรมของคู่แข่งขันของเรา	1	2	3	4	5	6
11	ผู้บริหารระดับสูงมักจะบอกพนักงานบริษัทอยู่เสมอว่าจะต้องเตรียมตัวให้พร้อมในปัจจุบันเพื่อตอบสนองความจำเป็นของลูกค้าในอนาคต	1	2	3	4	5	6
12	ผู้บริหารระดับสูงของที่นี่ถือหลักว่าการให้บริการแก่ลูกค้าคืองานที่สำคัญที่สุด	1	2	3	4	5	6
13	องค์กรของเราเป็นองค์กรที่ยืดหยุ่นและปรับตัวได้ไวต่อการเปลี่ยนแปลง	1	2	3	4	5	6
14	สามารถกล่าวได้ว่าผู้บริหารในบริษัทนี้เป็นผู้ที่ไม่ยอมรับการเปลี่ยนแปลง	1	2	3	4	5	6
15	องค์กรของเรามุ่งหน้าสู่การปรับปรุงวิธีการทำงานเสมอ	1	2	3	4	5	6
16	การวางแผนล่วงหน้าเป็นสิ่งที่มีคุณค่ายิ่งในองค์กรนี้	1	2	3	4	5	6
17	ผู้บริหารจะวางแผนเพื่ออนาคตของบริษัทอย่างต่อเนื่อง	1	2	3	4	5	6

โปรดพลิก

		ไม่เห็นด้วยอย่างยิ่ง					เห็นด้วยอย่างยิ่ง
18	พนักงานในบริษัทได้รับการกระตุ้นให้มองภาพระยะยาวในการมีหน้าที่การงานกับบริษัท	1	2	3	4	5	6
19	แผนกต่างๆในบริษัทส่วนใหญ่เข้ากันได้ดี	1	2	3	4	5	6
20	เมื่อสมาชิกจากแผนกต่างกันมาพบปะกันมักจะมีความเครียดเกิดขึ้นสูง	1	2	3	4	5	6
21	ผู้คนในแผนกใดแผนกหนึ่งมักจะไม่ชอบที่จะประสานงานกับคนจากแผนกอื่นๆ	1	2	3	4	5	6
22	พนักงานจากแผนกต่างๆรู้สึกว่าเป้าหมายของแผนกของตนสอดคล้องกับเป้าหมายของแผนกอื่นๆ	1	2	3	4	5	6
23	การปกป้องอาณาเขตของแผนกไม่ให้ผู้อื่นเข้ามาก้าวก่ายถือเป็นหลักสำคัญของบริษัท	1	2	3	4	5	6
24	วัตถุประสงค์ของฝ่ายการตลาดไม่สอดคล้องกับวัตถุประสงค์ของฝ่ายผลิต	1	2	3	4	5	6
25	แผนกต่างๆในบริษัทแทบจะไม่มีข้อขัดแย้งกันเลย	1	2	3	4	5	6
26	บริษัทของเราโต้ตอบการนำเสนอสินค้าของคู่แข่งโดยการตรวจสอบและวิเคราะห์ถึงความเป็นไปได้ในการลอกเลียนแบบอย่างรวดเร็ว	1	2	3	4	5	6
27	โครงสร้างและระบบของบริษัทเราถูกออกแบบให้เอื้อประโยชน์ต่อการนำเสนอสินค้าใหม่เพื่อโต้ตอบต่อการเคลื่อนไหวของคู่แข่ง	1	2	3	4	5	6
28	การนำเสนอสินค้าใหม่ของคู่แข่งส่งผลให้ต้องมีการประชุมด่วนของผู้บริหารของเรา	1	2	3	4	5	6
29	บริษัทเรามีการติดตามคู่แข่ง บริษัทต่างๆ ในอุตสาหกรรมอื่น ซัพพลายเออร์ และลูกค้า อย่างใกล้ชิดเพื่อกำหนดการ**ปฏิบัติทางธุรกิจ**ในการเลียนแบบหรือปรับปรุงองค์กรเรา	1	2	3	4	5	6
30	ความพยายามของเราในการเลียนแบบคู่แข่งมีความรวดเร็วเพียงพอที่จะกำจัดภาวะการนำของคู่แข่ง	1	2	3	4	5	6
31	ไม่มีสิ่งใดสำคัญกว่าความพอใจของผู้ถือหุ้น	1	2	3	4	5	6
32	หากธุรกิจของเราอยู่ในภาวะวิกฤติ เราต้องลืมเรื่องจริยธรรมและความรับผิดชอบต่อสังคม	1	2	3	4	5	6
33	สิ่งที่สำคัญที่สุดของบริษัทเราคือการแสวงหากำไร ถึงแม้ว่าจะผิดกฎ กติกาก็ตาม	1	2	3	4	5	6
34	เพื่อให้อยู่ในภาวะที่แข่งขันในตลาดโลกได้ ธุรกิจต้องลืมเรื่องจริยธรรมและความรับผิดชอบต่อสังคม	1	2	3	4	5	6
35	ความมีประสิทธิภาพของบริษัทมีความสำคัญมากกว่าความถูกต้องทางจริยธรรมหรือความรับผิดชอบต่อสังคม	1	2	3	4	5	6

ส่วนที่ 5 : การทำงาน

การตอบแบบสอบถาม : โปรดแสดงความคิดเห็นของคุณต่อข้อความข้างล่างนี้ (กรุณาวงกลมที่ตัวเลขที่ตรงกับความเห็นของคุณ).

		ไม่เห็นด้วยอย่างยิ่ง					เห็นด้วยอย่างยิ่ง
1	ลูกค้าของเรามีแนวโน้มที่จะแนะนำเรากับลูกค้ารายอื่นมากกว่าที่จะแนะนำคู่แข่ง	1	2	3	4	5	6
2	หากเปรียบเทียบกับคู่แข่งแล้ว เรามีส่วนแบ่งการตลาดที่น้อยกว่า	1	2	3	4	5	6
3	ในปีที่ผ่านมาผลกำไรของเราต่ำกว่าคู่แข่ง	1	2	3	4	5	6
4	หากเปรียบเทียบกับคู่แข่งที่สำคัญแล้ว ยอดขายของเราขยายตัวเร็วกว่าปีที่แล้ว	1	2	3	4	5	6
5	หากเปรียบเทียบกับคู่แข่งที่สำคัญ ในปีที่ผ่านมาโดยรวมเราประสบ*ความสำเร็จมากกว่าคู่แข่ง	1	2	3	4	5	6
6	คุณภาพสินค้าและบริการของเราดีกว่าของคู่แข่งรายสำคัญๆ ของเรา	1	2	3	4	5	6
7	ลูกค้าเรามักจะยกย่องคุณภาพสินค้าของเรา	1	2	3	4	5	6
8	ลูกค้าของเรามีความเชื่อมั่นเต็มเปี่ยมว่า เราเสนอสินค้าที่มีคุณภาพให้กับเขา	1	2	3	4	5	6

กรุณาตอบคำถามต่อไปนี้โดยเลือกคำตอบที่ตรงกับความคิดเห็นของคุณที่สุดเพียง 1 ข้อเท่านั้น

12. ค่าเฉลี่ยการเติบโตแต่ละปีของ**อุตสาหกรรม**ใน 3 ปีที่ผ่านมาอยู่ในช่วง

O น้อยกว่า 5% O 5-10% O 11-15% O 16-20% O 21-25%
O 26-30% O 31-35% O มากกว่า 35%

13. อัตราการเติบโตของบริษัทเราใน 12 เดือนที่ผ่านมาอยู่ในช่วง

O การเติบโตเป็นลบ O การเติบโตเป็นศูนย์ (0%) O 1-5% O 6-10%
O 11-15% O 16-20% O 21-25% O 26-30%
O 31-35% O 36-40% O มากกว่า 40%

14. ส่วนแบ่งทางการตลาดโดยรวมของบริษัทคู่แข่งหลัก 4 บริษัทในอุตสาหกรรมเดียวกับคุณอยู่ที่ประมาณ (นับรวมถึงบริษัทของคุณด้วยหากบริษัทของคุณอยู่ในอันดับ 1 ใน 4 ของบริษัทที่ใหญ่ที่สุด)

O น้อยกว่า 15% O16-30% O31-45% O 46-60% O61-75%
O76-90% O มากกว่า 90%

12. ใน 3 ปีที่ผ่านมา ภาพรวมของการเปลี่ยนแปลงส่วนแบ่งการตลาดของเรา

O น้อยกว่า 10 % O 11-25% O 26-40% O 41-55% O 56-70% O 71-85% O 86-100%

13. ในปีที่ผ่านมาบริษัทของเรา O มีผลกำไรหลังหักภาษีแล้ว O ขาดทุน

14. ประมาณการผลตอบแทนการลงทุนของบริษัทของคุณใน ปีที่แล้วอยู่ที่

O น้อยกว่า 0 % O 0-10% O 10-15% O 16-25% O มากกว่า 25%

16. คุณคิดว่า ลูกค้าประจำของคุณ 3 ปีที่แล้ว มีกี่เปอร์เซ็นต์ที่ยังคงเป็นลูกค้าคุณอยู่: _____%

ส่วนที่ 6: คำถามทั่วไป

ข้อคำถามต่อไปนี้ ถามเกี่ยวกับ**ลักษณะและประสบการณ์ของผู้บริหารระดับสูง (เช่น กรรมการผู้จัดการ)** หากคุณไม่ใช่ผู้บริหารระดับสูง กรุณาตอบ**เกี่ยวกับกรรมการผู้จัดการของบริษัทคุณเอง** (คุณสามารถตอบได้มากกว่า 1 ข้อ)

3. พื้นฐานความรู้และประสบการณ์ใดบรรยายตัวกรรมการผู้จัดการของคุณได้ดีที่สุด

O วิศวกรรม/การผลิต O บัญชี/การเงิน O วิทยาศาสตร์/เทคโนโลยี
O บริหารงานบุคคล O การตลาด/ขาย O อื่นๆ โปรดระบุ_____

4. โปรดระบุการศึกษาขั้นสูงสุดของกรรมการผู้จัดการของคุณ

O จบระดับประถม O จบระดับมัธยม O จบประกาศนียบัตรวิชาชีพ
O ระดับปริญญาตรี O สูงกว่าระดับปริญญาตรี

5. ภาษาใดต่อไปนี้ที่กรรมการผู้จัดการของคุณมีความชำนาญ

O ไทย O อังกฤษ O ภาษาจีนแต้จิ๋ว O อื่นๆ โปรดระบุ_____

4. กรรมการผู้จัดการของคุณมีอายุเท่าไร

O 20 – 29 ปี O 30 – 39 ปี O 40 – 49 ปี O 50 - 59 ปี
O 60 – 69 ปี O 70 – 79 ปี O มากกว่า 80 ปี

5. กรรมการผู้จัดการของคุณ O ชาย O หญิง

6. กรรมการผู้จัดการของคุณถือสัญชาติใด _____

ข้อคำถามข้างล่างนี้เป็นการถามเกี่ยวกับบริษัทของคุณ **ซึ่งข้อมูลดังกล่าวจะเป็นความลับ**

7. มูลค่าการผลิตของทั้งบริษัทคิดเป็นร้อยละเท่าใดที่ผลิตสำหรับอุตสาหกรรมยานยนต์:_____%

8. สินค้าหลัก (อาจหมายถึงสินค้าที่มีกำไรมากที่สุด) ของคุณคือ (ตอบได้เพียง 1 คำตอบ) _____

9. บริษัทของคุณจัดหาอะไหล่ให้กับโรงงานประกอบรถยนต์ภายในประเทศไทยโดยตรงหรือไม่ : O มี O ไม่มี

10. สินค้าที่ส่งออกต่างประเทศคิดเป็น: _____%

11. ยอดขายโดยรวมสำหรับตลาดในประเทศคิดเป็น : _____%

12. บริษัทของคุณมีโรงงานทั้งหมดกี่โรง :_____

13. บริษัทของคุณก่อตั้งเมื่อปี: _____

14. บริษัทของคุณมีพันธกิจหรือไม่ O มี O ไม่มี

(พันธกิจ แปลว่า ข้อความที่แสดงถึงทิศทางในการดำเนินธุรกิจขององค์กร)

15. บริษัทของคุณมีโปรแกรมการจัดการด้านคุณภาพหรือพัฒนาการทำงาน หรือมีการใช้วิธีการจัดการอื่นๆ เช่น การบริหารคุณภาพทั่วทั้งองค์กร (TQM) หรือการตั้งมาตรฐานการทำงาน หรือไม่ มี ○ มี ○ ไม่มี (ข้ามไปข้อ 17)

16. ใช้วิธีการหรือโปรแกรมอะไร:_____

17. บริษัทของคุณแสดงความก้าวหน้าให้กับพนักงานทราบอย่างเป็นทางการอย่างน้อยปีละ 1 ครั้งหรือไม่ ○ มี ○ ไม่มี

18. บริษัทของคุณมีผู้จัดการฝ่ายทรัพยากรบุคคลหรือไม่ ○ มี ○ ไม่มี

19. บริษัทของคุณจัดหาพนักงานในตำแหน่งบริหารตำแหน่งล่าสุดอย่างไร
○ ทางหนังสือพิมพ์ ○ ทางผู้ถือหุ้น ○ บริษัทจัดหางาน
○ ทางพนักงาน (นอกเหนือจากบุคคลที่มีความเกี่ยวข้องกับผู้ถือหุ้น) ○ อื่นๆ (โปรดระบุ)_____
○ บริษัทไม่มีการจัดจ้างในตำแหน่งบริหาร

20. ในปีที่ผ่านมาบริษัทจัดอบรมให้คุณเป็นเวลา_____วัน

21. ธนาคารใดคือธนาคารหลักของคุณ (โปรดระบุเพียง 1 ชื่อ)_____

22. เนื่องจากวิกฤติทางเศรษฐกิจมีความจำเป็นหรือไม่ในการที่บริษัทเจรจาเปลี่ยนแปลงการชำระหนี้กับธนาคาร
○ มี ○ ไม่มี

23. บริษัทของคุณเคยผ่านการปรับโครงสร้างหนี้หรือไม่ (หรือกำลังก็ตาม) ○ เคย ○ ไม่เคย

24. โปรดระบุจำนวนระดับชั้น (หรือจำนวนขั้น) ของผู้บริหารในองค์กรคุณ
○ 1 ระดับ ○ สอง ○ สาม ○ สี่ ○ อื่นๆ (โปรดระบุจำนวน)

25. จำนวนพนักงานในบริษัทของคุณมีจำนวน (รวมฝ่ายผลิต)
○ น้อยกว่า 25 ○ 25-50 ○ 50-100 ○ 100-250
○ 250-500 ○ 500-1000 ○ มากกว่า 1000

26. มีจำนวนผู้ถือหุ้นที่มีหุ้นเกิน 20 % ในบริษัทอยู่เท่าใด: _____

27. มีผู้ถือหุ้นที่เกี่ยวข้องกันโดยเป็นญาติกันหรือไม่ ○ มี ○ ไม่มี

28. มีผู้ถือหุ้นที่เป็นชาวต่างชาติหรือไม่ ○ มี ○ ไม่มี (ข้ามไปข้อ 30)

29. หุ้นของบริษัทที่ถือโดยชาวต่างชาติ คิดเป็นร้อยละเท่าใด _____%

30. มีกี่เปอร์เซ็นต์ของ **ตำแหน่งบริหาร** ที่เป็นญาติพี่น้องกับผู้ถือหุ้น_____%

31. มีจำนวน**พนักงานสำนักงาน**ที่เป็นญาติพี่น้องกับผู้ถือหุ้นอยู่กี่เปอร์เซ็นต์_____%

32. กรรมการผู้จัดการเป็นลูกชายคนโตของกลุ่มผู้ถือหุ้นใหญ่หรือไม่ ○ ใช่ ○ ไม่ใช่

ส่วนที่ 7: ข้อมูลผู้ตอบแบบสอบถาม

ชื่อ _____

ตำแหน่ง_____

บริษัท_____

โทรศัพท์_____

คุณทำงานกับบริษัทมานานกี่ปี: _____

ใครคือหัวหน้างานของคุณ

- ○ ผู้ถือหุ้น
- ○ ตำแหน่งผู้บริหารที่สูงกว่าคือ_____

Appendix 3

Descriptive Statistics: Survey items

Construct	N	Mean	Minimum	Maximum	Std. Dev.	Skewness	Kurtosis
MARKET ORIENTATION							
DESH1	203	5.49	1	6	0.92	-2.45	7.41
DESH2	203	5.04	1	6	0.97	-1.15	1.55
DESH3	203	4.30	1	6	1.34	-0.55	-0.47
DESH4	203	5.16	1	6	0.92	-1.21	1.69
DESH5	203	4.59	1	6	1.28	-0.84	0.18
DESH6	203	4.62	1	6	1.28	-0.85	0.13
DESH7	203	4.57	1	6	1.18	-0.67	0.07
DESH8	203	4.84	1	6	1.22	-1.24	1.32
DESH9	203	4.34	1	6	1.66	-0.66	-0.84
DESH10	203	4.27	1	6	1.45	-0.50	-0.68
PEL1	203	5.01	1	6	1.09	-1.25	1.64
PEL2	203	4.93	1	6	1.06	-1.17	1.82
PEL3	203	4.80	1	6	1.11	-0.95	0.68
PEL4 (r)	203	3.78	1	6	1.55	-0.15	-1.02
PEL5	203	3.46	1	6	1.40	-0.13	-0.84
PEL6	203	4.71	1	6	1.11	-0.69	0.12
PEL7 (r)	203	4.46	1	6	1.50	-0.71	-0.52
PEL8	203	4.34	1	6	1.31	-0.64	-0.18
PEL9	203	4.44	1	6	1.28	-0.76	0.15
PERFORMANCE							
PERF1	203	4.26	1	6	1.35	-0.74	0.10
PERF2 (r)	203	3.91	1	6	1.71	-0.35	-1.17
PERF3	203	3.86	1	6	1.58	-0.22	-1.02
PERF4 (r)	203	3.91	1	6	1.43	-0.31	-0.70
PERF5	203	3.86	1	6	1.41	-0.36	-0.55

(r) = reversed items

Appendix 4: Final Measurement Items

Market Orientation (Deshpandé)

DESH5 We measure customer satisfaction systematically and frequently.

DESH6 We have routine or regular measures of customer service.

DESH9 We survey end-users at least once a year to assess the quality of our products and services.

Market Orientation (Pelham)

PEL1 All our functions (not just marketing and sales) work together to serve our target markets.

PEL2 Our firm's strategy for competitive advantage is based on our thorough understanding of our customer needs.

PEL3 All our managers understand how the entire business can contribute to creating customer value.

PEL6 Our firm's market strategies are to a great extent driven by our understanding of possibilities for creating value for customers.

PEL7 We respond to negative customer satisfaction information throughout the firm slowly. (reverse coded)

Interdepartmental Conflict

COI1 Most departments in this company get along well with each other.

COI4 Employees from different departments feel that the goals of their respective departments are in harmony with each other.

COI7 There is little or no interdepartmental conflict in this company.

Imitative Capability

IC3 The introduction of new products by our competitors, calls for immediate meetings of our top executive teams.

IC4 In our company, we closely observe direct competitors, firms from other industries, suppliers, and customers, in order to identify business practices that can be imitated or improved within our firm.

IC5 Our imitation efforts are implemented fast enough to almost eliminate the lead-time of competitors.

Strategic Flexibility

SF2 We seek to derive benefits from diversity in environments.

SF3 Our strategy emphasizes exploiting opportunities arising due to variability in the environment.

SF4 Our strategy reflects high level of flexibility in managing risks, political, economic, and financial.

Product Quality

QUAL2 Our customers often praise our product quality.

QUAL3 Our customers are firmly convinced that we offer very good quality products.

Top Management Emphasis on Market Orientation

TME1 Top managers repeatedly tell employees that this company's survival depends on its adapting to market trends.

TME3 Top managers keep telling people around here that they must gear up now to meet customers' future needs.

Future Orientation

FUT1 The ability to plan ahead is highly valued here.

FUT2 Management is constantly planning for the future of the company.

Business Performance

PERF4 Relative to our major competitors, our sales have been growing faster in the last year.

PERF5 Relative to our major competitors, overall we have been more successful in the last year.

Appendix 5: Variance / Covariance Matrix for Q1 Analysis (completely standardized solution)

	DESH5	DESH6	DESH9	PEL1	PEL2	PEL3	PEL6	PEL7	PERF4	PERF5
DESH5	1.63									
DESH6	1.26	1.62								
DESH9	0.97	1.00	2.75							
PEL1	0.65	0.67	0.52	1.18						
PEL2	0.56	0.57	0.45	0.61	1.11					
PEL3	0.68	0.70	0.54	0.74	0.64	1.23				
PEL6	0.54	0.55	0.43	0.58	0.50	0.61	1.22			
PEL7	0.49	0.50	0.39	0.54	0.46	0.56	0.44	2.25		
PERF4	0.46	0.47	0.37	0.41	0.36	0.43	0.34	0.31	2.04	
PERF5	0.47	0.48	0.38	0.42	0.37	0.44	0.35	0.32	1.56	1.98

Appendix 6: Variance / Covariance Matrix for Q2 Analysis (completely standardized solution)

	METHOD	DESH	PEL	PERF	DESH5	DESH6	DESH9	PEL1	PEL2	PEL3	PEL6	PEL7	PERF4	PERF5
METHOD	0.20													
DESH	0.00	1.42												
PEL	0.00	0.36	0.38											
PERF	0.00	0.15	0.21	1.68										
DESH5	0.41	0.73	0.19	0.08	1.61									
DESH6	0.42	0.77	0.20	0.08	1.23	1.60								
DESH9	0.11	1.42	0.36	0.15	0.95	0.99	2.75							
PEL1	0.27	0.36	0.38	0.21	0.72	0.75	0.51	1.15						
PEL2	0.21	0.32	0.33	0.19	0.57	0.60	0.43	0.61	1.04					
PEL3	0.15	0.53	0.55	0.31	0.56	0.59	0.60	0.74	0.63	1.22				
PEL6	0.15	0.37	0.39	0.22	0.48	0.50	0.45	0.58	0.49	0.67	1.22			
PEL7	0.15	0.28	0.29	0.17	0.45	0.46	0.36	0.50	0.41	0.54	0.41	2.18		
PERF4	0.17	0.15	0.21	1.68	0.41	0.43	0.24	0.44	0.36	0.43	0.34	0.28	1.94	
PERF5	0.20	0.11	0.16	1.29	0.46	0.48	0.22	0.44	0.35	0.39	0.32	0.29	1.46	1.89

Appendix 7: Variance / Covariance Matrix for Q3 Analysis (completely standardized solution)

	COI1	COI4	COI7	IC3	IC4	IC5	SF2	SF3	SF4	PEL1	PEL2	PEL3	PERF4	PERF5
COI1	1.52													
COI4	0.72	1.49												
COI7	0.72	0.73	2.07											
IC3	-0.31	-0.32	-0.32	2.28										
IC4	-0.41	-0.42	-0.41	1.01	1.78									
IC5	-0.31	-0.32	-0.32	0.77	1.01	1.73								
SF2	-0.31	-0.31	-0.31	0.39	0.51	0.39	2.03							
SF3	-0.37	-0.38	-0.38	0.47	0.61	0.47	1.18	1.78						
SF4	-0.26	-0.26	-0.26	0.32	0.43	0.32	0.82	0.99	1.81					
PEL1	-0.44	-0.44	-0.44	0.14	0.18	0.14	0.37	0.45	0.31	1.18				
PEL2	-0.36	-0.37	-0.37	0.12	0.15	0.12	0.31	0.38	0.26	0.58	1.11			
PEL3	-0.47	-0.48	-0.48	0.15	0.20	0.15	0.40	0.49	0.34	0.76	0.63	1.23		
PERF4	-0.44	-0.45	-0.45	0.13	0.17	0.13	0.23	0.28	0.19	0.41	0.34	0.44	2.04	
PERF5	-0.46	-0.47	-0.47	0.14	0.18	0.14	0.24	0.29	0.20	0.43	0.36	0.46	1.56	1.98

Appendix 8: Variance / Covariance Matrix for Q4 Analysis (completely standardized solution)

	PQ2	PQ3	TME1	TME3	FUT1	FUT2	PEL1	PEL2	PEL3	PERF4	PERF5
PQ2	1.58										
PQ3	1.10	1.28									
TME1	0.34	0.36	1.30								
TME3	0.34	0.35	0.69	1.06							
FUT1	0.39	0.40	0.60	0.59	1.33						
FUT2	0.37	0.39	0.57	0.56	1.01	1.41					
PEL1	0.48	0.50	0.46	0.45	0.51	0.49	1.18				
PEL2	0.40	0.42	0.38	0.38	0.43	0.41	0.60	1.11			
PEL3	0.50	0.52	0.48	0.47	0.53	0.51	0.75	0.62	1.23		
PERF4	0.61	0.64	0.28	0.28	0.44	0.42	0.41	0.34	0.42	2.04	
PERF5	0.66	0.69	0.31	0.30	0.48	0.46	0.44	0.37	0.46	1.56	1.98

Appendix 9: Variance / Covariance Matrix for Q5a Analysis (completely standardized solution)

	DESH5	DESH6	DESH9	PEL1	PEL2	PEL3	PEL6	PEL7	ROA	ROS
DESH5	1.46									
DESH6	1.24	1.61								
DESH9	0.94	0.98	2.68							
PEL1	0.57	0.60	0.45	1.08						
PEL2	0.55	0.57	0.44	0.59	1.16					
PEL3	0.63	0.66	0.50	0.68	0.66	1.24				
PEL6	0.53	0.55	0.42	0.57	0.55	0.63	1.24			
PEL7	0.41	0.43	0.33	0.44	0.43	0.49	0.41	2.05		
ROA	0.02	0.03	0.02	0.02	0.02	0.02	0.02	0.01	0.01	
ROS	0.04	0.04	0.03	0.03	0.03	0.04	0.03	0.02	0.02	0.03

Appendix 10: Variance / Covariance Matrix for Q5b Analysis (completely standardized solution)

	COI1	COI4	COI7	IC3	IC4	IC5	SF2	SF3	SF4	PEL1	PEL2	PEL3	ROA	ROS
COI1	1.49													
COI4	0.74	1.50												
COI7	0.77	0.73	1.91											
IC3	-0.28	-0.26	-0.27	2.33										
IC4	-0.34	-0.32	-0.34	1.02	1.84									
IC5	-0.28	-0.26	-0.27	0.83	1.02	1.75								
SF2	-0.30	-0.28	-0.29	0.42	0.51	0.42	2.03							
SF3	-0.39	-0.37	-0.39	0.55	0.67	0.55	1.27	1.79						
SF4	-0.23	-0.21	-0.22	0.31	0.38	0.31	0.73	0.96	1.78					
PEL1	-0.41	-0.39	-0.41	0.13	0.16	0.13	0.32	0.41	0.24	1.08				
PEL2	-0.37	-0.35	-0.36	0.11	0.14	0.11	0.28	0.37	0.21	0.57	1.16			
PEL3	-0.45	-0.43	-0.44	0.14	0.17	0.14	0.34	0.45	0.26	0.70	0.62	1.24		
ROA	-0.02	-0.02	-0.02	0.01	0.01	0.01	0.01	0.01	0.00	0.02	0.01	0.02	0.01	
ROS	-0.04	-0.04	-0.04	0.02	0.03	0.02	0.01	0.01	0.01	0.03	0.03	0.04	0.01	0.03

Appendix 11: Variance / Covariance Matrix for Q5c Analysis (completely standardized solution)

	PQ2	PQ3	TME1	TME3	FUT2	FUT1	PEL1	PEL2	PEL3	ROA	ROS
PQ2	1.45										
PQ3	0.97	1.15									
TME1	0.32	0.36	1.35								
TME3	0.36	0.40	0.73	1.06							
FUT2	0.27	0.30	0.54	0.61	0.94						
FUT1	0.28	0.30	0.55	0.63	1.24	1.42					
PEL1	0.39	0.44	0.44	0.50	0.50	0.49	1.07				
PEL2	0.36	0.40	0.40	0.45	0.46	0.44	0.60	1.18			
PEL3	0.40	0.45	0.45	0.51	0.51	0.50	0.67	0.61	1.20		
ROA	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	
ROS	0.02	0.03	0.02	0.03	0.03	0.02	0.03	0.03	0.03	0.02	0.03

Appendix 12: Variance / Covariance Matrix for Q6 Analysis (completely standardized solution)

	COI1	COI4	COI7	COI	PQ2	PQ3	PQ	PEL1	PEL2	PEL3	PEL	PERF4	PERF5	PERF
COI1	1.51													
COI4	0.77	1.41												
COI7	0.79	0.69	2.07											
COI	0.89	0.77	0.79	0.89										
PQ2	0.41	0.36	0.37	0.41	1.57									
PQ3	0.43	0.38	0.39	0.43	1.09	1.28								
PQ	0.41	0.36	0.37	0.41	1.04	1.09	1.04							
PEL1	0.50	0.43	0.44	0.50	0.50	0.53	0.50	1.15						
PEL2	0.38	0.33	0.34	0.38	0.39	0.40	0.39	0.60	1.04					
PEL3	0.49	0.42	0.43	0.49	0.50	0.52	0.50	0.77	0.59	1.22				
PEL	0.50	0.43	0.44	0.50	0.50	0.53	0.50	0.79	0.60	0.77	0.79			
PERF4	0.44	0.38	0.39	0.44	0.65	0.68	0.65	0.41	0.32	0.41	0.41	1.94		
PERF5	0.47	0.41	0.42	0.47	0.70	0.73	0.70	0.45	0.34	0.44	0.45	1.46	1.89	
PERF	0.44	0.38	0.39	0.44	0.65	0.68	0.65	0.41	0.32	0.41	0.41	1.35	1.46	1.35

Appendix 13

Financial Variables Identified in the Business Failure Prediction Literature or Recommended by Practitioners

#	Financial ratio / Variable	Previous prediction studies that used relevant variable
X1	Accounts Receivable / Current Assets	Not previously used empirically
X2	Accounts receivable / Sales	Beaver (1967), Gombola et al (1987), Nam and Jinn (2000)
X3	A/R - average collection period (days)	Not previously used empirically
X4	Accounts Payable / Sales	Bilderbeek (1979), Nam and Jinn (2000)
X5	Trade Creditor Days	Not previously used empirically
X6	Cash Flow / Total Assets	El Hennawy and Morris (1983)
X7	Cash Flow / Current Liabilities	Beaver (1967)
X8	Cash Flow / Borrowings	Fulmer et al. (1984)
X9	Cash Flow / Total Debt	Beaver (1967), Deakin (1972), Blum (1974)
X10	Cash Flow / Sales	Fernandez (1988)
X11	Net Operating Cashflow / Interest Paid	Not previously used empirically
X12	Cost of Goods Sold / Sales	Not previously used empirically
X13	Current Assets / Current Liabilities (aka Current ratio)	Beaver (1967), Deakin (1972), Altman, Haldeman et al. (1977), Deakin (1977), Altman and Lavallee (1981), Gombola et al. (1987), Bidin (1988), Gloubos and Grammatikos (1988), Shumway (1999), Zmijewski (1984)
X14	Current Assets / Total Assets	Beaver (1967), Deakin (1972, 1977), El Hennawy and Morris (1983), Lo (1986), Gombola et al. (1987)
X15	Current Assets / Total Liabilities	Taffler and Tisshaw (1977)
X16	Current Assets / Net Sales	Deakin (1972)
X17	(C. Assets - Stock – C. Liabs) / EBIT	Bidin (1988)
X18	Current Liabilities / Current Assets	Ohlson (1980)
X19	Current Liabilities / Total Assets	Takahashi et al. (1979)
X20	Current Liabilities / Equity	Edmister (1972)
X21	Current Taxation / Pre-Tax Profit	Not previously used empirically
X22	Total Liabilities / Total Assets *(known as Debt Ratio)*	Beaver (1967), Deakin (1972), Ohlson (1980), Altman and Lavallee (1981), Zmijewski (1984), Gloubos and Grammatikos (1988), Shumway (1999), Nam and Jinn (2000)
X23	Debt-to-Equity *(known as Gearing ratio)*	Ta and Seah (1981)
X24	EBIT / Total Assets	Altman (1968), Altman, Haldeman et al. (1977), Altman, Baidya et al. (1979), Theodossiou (1993), Shumway (1999)
X25	EBIT / Fixed Assets	Not previously used empirically
X26	EBIT / Sales	Ko (1982), Theodossiou et al. (1996)

X27	EBIT/ Total Interest	Altman, Haldeman et al. (1977), Nam and Jinn (2000)
X28	NPBT / Total Revenue	Not previously used empirically
X29	Net Profit AT / Sales (Net Profit margin or Return on Sales)	Not previously used empirically
X30	Profit before Tax / Current Liabilities	Baetge, et.al. (1988)
X31	Earnings after interest & tax / P.U. Capital	Bidin (1988)
X32	Earnings Per Share	Not previously used empirically
X33	Equity / Fixed Assets	Not previously used empirically
X34	Shareholders' Equity (Net Worth) / Total Assets	Not previously used empirically
X35	Equity / Net Sales	Edmister (1972)
X36	Book Value of Equity / Total Liabilities	Altman (1968), Altman, Haldeman et al (1977), Altman, Baidya et al. (1979), Ko (1982), Altman, Kim and Eom (1995)
X37	(Total Equity – Share capital) / Total Assets	Altman, Baidya et al. (1979)
X38	Retained Earnings / Total Assets	Altman (1968), Altman, Haldeman et al. (1977), Bilderbeek (1979), Shumway (1999)
X39	Fixed Assets / Total Assets	Theodossiou (1993)
X40	Sales / Fixed assets (also known as *Fixed Asset Turnover)*	Not previously used empirically
X41	(Funds generated from ops - Net change in Working Capital) / Total Debt	Not previously used empirically
X42	Gross Profit / Current Liabilities	Gloubos and Grammatikos (1988)
X43	Gross Profit / Total Assets	Gloubos and Grammatikos (1988)
X44	Gross Profit / Sales (Gross Profit Margin)	Not previously used empirically
X45	(Immediate Assets - Current Liabilities) / Operating costs excluding depreciation.	Not previously used empirically
X46	Interest Expense / Average Debt	Not previously used empirically
X47	Interest Expense / Sales	Takahashi et al. (1979), Nam and Jinn (2000)
X48	Interest payment / Profit before int & tax	TA and Seah (1981)
X49	Inventory / Total Liabilities	Not previously used empirically
X50	Inventory / Net Sales	Beaver (1967), Edmister (1972), Theodossiou (1993), Theodossiou et al. (1996
X52	Inventory Turnover #1 (cogs/invent)	Taffler (1980)
X53	Inventory Turnover #2 (Sales/invent)	Weibel (1973)
X54	Inventory turnover two years prior / Inventory turnover three years prior	Not previously used empirically
X55	Inventory turnover one year prior / Inventory turnover two years prior	Not previously used empirically
X56	Long Term Debt / Total Assets	Beaver (1967)
X58	Long Term Debt / Equity	El Hennawy and Morris (1983)

X59	LT Debt / (Equity + LT Debt)	Not previously used empirically
X60	Net Expenditure PP&E / Sales	Not previously used empirically
X61	Net Expenditure PP&E / Total Assets	Not previously used empirically
X62	Net Income / Fixed Assets	Not previously used empirically
X63	Net Profit AT / Total Assets *(also known as Return on Assets (ROA)*	Beaver (1967), Deakin (1972, 1977), Takahashi et al. (1979), Ohlson (1980), Zmijewski (1984), Lo (1986), Gombola et al. (1987), Persons (1999), Shumway (1999), Nam and Jinn (2000)
X64	NPAT / Current Liabilities	Not previously used empirically
X65	Net Profit AT / Total Debt	Altman and Lavallee (1981), Bidin (1988)
X66	Net Profit AT / BV of Equity	Van Frederikslust (1978), Bilderbeek (1979)
X67	Profit before Tax / Equity	TA and Seah (1981)
X68	Return on Equity	Not previously used empirically
X69	Change in net Income	Ohlson (1980)
X70	Quick Assets / Inventory	Blum (1974)
X71	Quick Assets / Net Sales	Deakin (1972)
X72	Quick Assets / Total Assets	Deakin (1972), El Hennawy and Morris (1983)
X73	Quick Assets / Current Liabilities	Beaver (1967), Deakin (1972), El Hennawy and Morris (1983)
X74	Retained Earnings / Issued Capital	Not previously used empirically
X75	Sales / Debts	Pascale (1988)
X76	Sales / Total Assets	Altman (1968), Altman, Baidya et al (1979), Bilderbeek (1979), Altman and Lavallee (1981), Gombola et al. (1987), Shumway (1999), Nam and Jinn (2000)
X77	Net Revenue / Total Assets	Not previously used empirically
X78	Sales / Working Capital	Bidin (1988)
X79	Change in Sales (Sales Growth)	Not previously used empirically
X80	Selling, Distribution & Administration expenses / Sales	Not previously used empirically
X81	Total Assets / Total equity	Not previously used empirically
X83	Working Capital / Total Assets	Beaver (1967), Altman (1968), Deakin (1972), Altman, Baidya et al. (1979), Ohlson (1980), Bhatia (1988), Gloubos and Grammatikos (1988), Theodossiou (1993), Shumway (1999)
X84	Working Capital / Total Debt	Ko (1982)
X85	Working Capital / Equity	Not previously used empirically
X86	Working Capital / Net Sales	Deakin (1972), Edmister (1972)
X87	Change in Working Capital	Not previously used empirically
X88	Natural Log (Sales / Total Assets)	Altman, Kim and Eom (1995)
X89	Natural Log of Total Assets (Firm size)	Ohlson (1980), Altman, Kim and Eom (1995)

Appendix 14

Glossary of Research Constructs and Methodologies

Antecedent
A latent construct that is taken to cause or influence another latent construct.

Business Failure
Termination of ongoing business operations.

Common Method Variance
Variation in scores caused by a common method of data collection. For example, because dependent and independent measures are self-reported by the same source, any common defect contaminates both measures (Podsakoff and Organ, 1986).

Discriminant Analysis
Multivariate statistical technique aimed at maximizing the distance (separation) between two or more predefined groups on the basis of a linear combination (discriminant function) of a set of known variables (discriminating variables).

Future Orientation
Extent to which a firm emphasizes future customers and competitors relative to current customers and competitors (Chandy and Tellis 1998).

Imitative Capability
Willingness and readiness of a firm to imitate the products or processes from other industries, competitors, suppliers, and customers in order to achieve a competitive advantage (Olavarrieta Soto 1997).

Interdepartmental Conflict
Tension among departments arising from the incompatibility of actual or desired responses and goals (Raven and Kruglanski 1970; Gaski 1984).

Logistic Regression
Statistical technique for making predictions when the dependent variable is dichotomous, and independent variables are continuous and/or discrete. Like discriminant analysis, this technique pinpoints which measures or variables make groups of respondents different from each other. The technique also can be used to predict how future respondents will be grouped.

Market Orientation
Organization-wide generation of market intelligence pertaining to current and future customer needs, dissemination of the intelligence across departments, and organization-wide responsiveness to it (Kohli and Jaworski 1990, p. 6).

Objective Business Performance
Performance measured by reference to financial accounting data. Data can be provided either by management or obtained from an external source.

Product Quality
Measure of the overall excellence of an organization's products and services with respect to customer perceptions and competitive comparisons.

Subjective Business Performance
Performance measured by Likert-scale responses taken from a senior executive that measures performance on a relative basis, e.g. relative to competitors or relative to firm performance in previous years.

Strategic Flexibility
Ability of firms to reposition themselves in a market, change game plans, or dismantle current strategies (Harrigan 1985).

Structural Equation Modeling
Statistical modeling technique that investigates structural and associative linear relationships in a set of constructs**.** The technique combines an econometric focus on prediction with a psychometric perspective on measurement, using multiple observed variables as indicators of latent, unobserved concepts.

Top Management Emphasis on Market Orientation
Extent to which top management reinforce the importance of market orientation (Jaworski and Kohli 1993).