✓Adaptation Ability and Firm's Export Performance: A Marketing Perspective of Thai Export Manufacturing Firms

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Most economic, management, marketing, and other literatures covering the question of firm business performance have produced hardly any conclusive solutions and are divorced from each other. The contribution of this paper is development of an integrative export performance model to empirically examine the assumptions in the different literatures using data from export manufacturing firms of Thailand to identify the central issue influencing export performance of firms. It found that a key to long run export success is firm's adaptation ability, especially product adaptation. This finding offers a new perspective by which a firm approaches successful performance outcome. Instead of the ability to pursue strategies that are aligned with environmental and organizational factors as traditionally believed, a firm is supposed to be able to develop successful strategic contexts that encourage emergence of adaptation capability to achieve successful performance outcome. Finally, a comprehensive export performance model is proposed.

1. Background

This section discusses both theoretical and practical issues inspiring this academic investigation prior to discussion of con-

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ceptualization of each relevant construct and their theoretical links in the literature section and of its operationalization in the methodology section.

To begin with the theoretical issue, so far a firm's performance has been approached from a number of perspectives in the literature. In our examination of each stream we did not find a connecting body of research which ran across the streams. Moreover, and probably even more importantly, each relevant theory seems to at the best divorce from each other, e.g. industrial organization theory (e.g. Aldrich 1979; Hofer 1975; Porter 1980), resource-based theory (e.g. Barney 1991; Collis 1991), and strategy literatures (e.g. Eisenhardt 1999, Mintzberg 1987), and at the worst conflict with each other, e.g. industrial organization theory versus resource-based theory. In addition, a few important constructs, i.e. national-level structural export barriers and skill-intensity of export manufacturing industry, have been overlooked and missed from the model developed to explain export performance. Besides, strategic components, specifically export marketing mix strategy, have not been justified precisely in the model. Most export performance models simply include every marketing mix component without sufficiently justifying their existence.

Moreover, amid quite a few theoretical foundations, export performance literature has long been characterized by ignorance of theoretically well-grounded conceptual models in driving hypothesis development and testing (Cavusgil and Zou 1994). There have been consistent calls for an integrative export performance model in the literature, e.g. Zou and Stan (1998), such a model that is inclusive of every related construct in a precise fashion of their theoretical links with export performance and among themselves. Some theories, e.g. Ecological Organization Theory (Thorelli 1967) and Export Marketing Mix Theory (Bilkey 1987), seem to break through the deadlock in the literature; however, their attempts are at the best toward building a comprehensive export performance model.

Furthermore, in examining the relationship between export

performance and its determinants, the literature has been preoccupied with regression oriented analysis method in which inter-relationship between determinants of export performance are ignored when these constructs have been assumed to have direct relationship with export performance (Zou and Stan 1998). Confounding measurement error and ignoring indirect association, this oversimplification has deteriorated empirical investigation and led to inconclusive findings prevailing in the literature. The literature has also overlooked the chronological order of the strategic performance relationship (Kat-sikeas, Leonidou, and Morgan 2000). Assuming concurrent existence of both strategy and its performance consequences has plagued the empirical results of performance determinants relationship exploration.

Whilst the export barriers literature (e.g. Bilkey and Tesar 1977; Leonidou 1995), export marketing and entrepreneurship literatures (e.g. Bilkey 1982; Cavusgil and Zou 1994) have concentrated on the various characteristics of buyers in export markets and within the firm to study export performance, their conceptual models are not exhaustive as they usually depend only on either industrial organization or resourced-based theoretical paradigm. Moreover, and more importantly, they usually exclude national-level structural export barriers since these hurdles are not applicable in their study context, i.e. developed countries.

These limitations in the literature offer us a chance to develop and test an integrative export performance model so that export performance and other relevant bodies of knowledge can be pushed further forward. The following paragraphs discuss the practical issues that justify adopting a less developed country such as Thailand as a study context.

There are three main reasons for pinpointing a less developed country. Firstly less developed countries actively pursue export-led growth and development policy (UNCTAD 2002). Secondly, modern trade theories (e.g. Porter 1990) argue that a key to country export success is the success of its individual exporting firms;

therefore, to be able to understand and predict export performance of less developed countries, it is necessary that we study their firm export performance. Lastly, Porter (1990) further posits that firm's level export success is deeply related to national level structural factors such as government export promotion policy and trade infrastructure. In less developed countries, however, national-level structural factors occurring domestically are major export barriers hindering firms (Michell 1979; and Styles and Ambler 1994). These export barriers are extremely different from those faced by exporters from developed countries; hence are hardly touched by main stream export performance literature. It is very likely that exporting firms from less developed countries have to struggle considerably with their business since they are faced with serious domestic structural export barriers. Thus, it is high time that this crucial theoretical link occurring fundamentally in less developed countries be examined since it is a theme that has not been sufficiently covered at all in the export performance literature.

Thailand is chosen as a context of study since it has recovered from its serious crisis in 1997 basically because of its continuing export growth since then and ever since exports account for major parts of its economy, roughly 65% (Bank of Thailand 2002). Moreover, it has been consistently claimed by the Thai government that Thai export manufacturing industries have already transformed to skill-based manufacturing referring basically to the share of skill based export sales to total export sales. Based on figures released by Bank of Thailand (2002), skill manufacturing products account for around three quarters of total national manufacturing export sales. Therefore, investigating the role of skill-intensity of Thai export manufacturing industry in relation to firm's export performance is very interesting so that we have a better understanding of whether Thai export manufacturing sectors have already transformed to skill-based industries and whether the claim of the Thai government is valid or not (More discussion relevant to skill-intensity in its section).

The research question is thus whether and how the literatures

relevant to export performance connect and if they do connect which links are keys to the relationship between individual initiatives in and around the firm export performance. In this paper, we approach this task from a marketing perspective by commencing with the premise that product or service performance in a well managed firm leads to a firm's performance. We will thus identify and examine the variables in the various literatures and use structural equation modeling (SEM) across the variables to empirically test which links lead to a firm's export performance. We finally propose a comprehensive export performance model illustrating sustained export-led economic development process induced by potential interactions between micro-level export performance and macro-level economic performances to provide meaningful directions for future research

2. Literature Context

The theoretical limitations and practical issues discussed earlier in the background section enable us to propose an integrative business performance model in a context of export manufacturing firms from less developed countries of which their deduced hypothesis to be tested by operationalized structural model are discussed in the following paragraphs.

2.1 Strategic export performance and economic export performance

This study contends that there is a long-run positive relationship between strategic and economic export performance and that this theoretical link provides a new perspective for us to model export performance. Like most performance literature, we recognize existence of both strategic and economic performances but what is unique in our model is their ordering. We posit that strategic export performance intervenes in every relationship between environmental, organizational, and strategic determinants and economic export

performance. Prior to justifying the link, we would like to discuss conceptualization of business performance which is applicable to this study as export business performance or shortly referred to as export performance.

This study conceptualizes export performance as having non-economic and economic components. Both parts are long-term in nature and because the former part is non-economic so we also call it strategic export performance; while we will refer to the latter as economic export performance. The following literatures provide theoretical grounds for our conceptualization. Venkatraman and Ramanujam (1986) conceptualize business performance as comprising operational or non-financial factors and accounting based economic factors. They suggest that adding such value-based measures on accounting based measures improve validity of the business performance measure so it is prevailed in strategy research today. These operational factors are long-term strategic in nature, e.g. market share position, new product introduction, and marketing effectiveness; while those financial factors are traditional short-term economic measures such as sales and profit. Therefore, Venkatraman and Ramanujam's (1986) conceptualization of business performance is consistent with strategic and economic taxonomy of export performance prevailed in export performance literature, e.g. Madsen (1998); and Zou, Taylor, and Osland (1998).

Short-term versus long-term aspects of export performance has long been controversial in the literature. Madsen (1998), for instance, points out the conflicting nature of short-term practical measures, e.g. current profit, and long-term strategic measures, e.g. future sales growth, of export performance. However, Katsikeas *et al.* (2000) argue that the strategy performance relationship is valid only when we recognize the chronological order of the constructs owing to the delaying effect of strategic determinants. They then recommend evaluating current strategy by using anticipated long-term future export performance; the method which we follow in conceptualizing and operationalizing our performance construct

(Initial and final measures are shown in Appendix 1).

There are a number of theoretical and empirical evidences underlying the positive relationship between strategic and economic export performance. In their marketing management text book, Matthews, Buzzell, Levitt, and Frank (1964) conceptualize marketing performance, a business performance induced by pursuing of marketing activities, as achievement of marketing goals or as improved competitive position which is reflected by economic marketing standard such as sales and profit. They further argue that the valid way to measure marketing-led business performance is to and only to evaluate achievement of pre-specified marketing goals, not gauging of economic performance consequence of these goals. Matthews *et al.* (1964) add that it makes no sense for any businesses to consider themselves successful when they experience sales and profit growth but never meet their preset goals. Oppositely, they predict that any business can expect desired economic performance outcome as long as they strive to achieve their marketing goals. Since these goals are long-term strategy in nature, Matthews *et al.*'s (1964) important premises encourage us to posit that there is a positive link between strategic and economic export performance and that this relationship precludes any direct relationship between determinants of export performance and economic export performance.

Ever after Matthews *et al.*'s (1964) pioneering work, many subsequent literatures have emerged to endorse their argument. Thorelli's (1967) ecological organization theory argues for unilateral relationship, i.e. mutual association among variables including strategic and economic performance, within each group of organizational constructs including business performance. Demsetz's (1973) cost efficiency theory predicts that firms, which pursue a high market share as their strategic objective, will be able to gain an economy of scale. On the other hand, in his market power theory, Schroeter (1988) posits that firms gain size advantages from the ability to demand higher benefits from both their customers and suppliers.

Moreover, in conceptualization of business performance,

Venkatraman and Ramanujam (1986) believe that there is a potential for positive association of strategic with economic performance. Buzzell and Gales (1987) and Venkatraman and Prescott (1990b) provide empirical evidences supporting this theoretical link. Based on their exhaustive PIMS (Profit Impact of Marketing Strategies) data base which includes businesses of all kind, Buzzell and Gales (1987) found that there are significant positive links between various marketing strategic components, e.g. relative market share position, and various economic measures of business performance, e.g. return on investment and return on sales. Venkatraman and Prescott (1990b) also used PIMS data base and found that there was a significant positive link between market share and profitability.

H1: Strategic export performance of a firm positively affects its economic export performance.

2.2 Export marketing mix strategy

Based on various export literature, e.g. Chao, Samiee, and Yip (2004), this study argues that in less developed countries context product and price adaptation strategies are by far the dominant export marketing mix strategies. This study conceptualizes adaptation as the degree to which a firm adjusts its marketing mix strategy either in relation to those of its domestic operation or in relation to those of its other export markets. We derive this conceptualization from those of Bartels (1968) who relate firm's international marketing strategy to its domestic markets and Buzzell (1968) who relate firm's international marketing strategy to others of its international markets.

Export literature emphasizing less developed countries i.e. Chao *et al.* (2004), Cuyvers (2004), Julian (2003), Julian and O'Cass (2004), Lee and Griffith (2004), Wortzel and Wortzel (1981), and Zou, Andrus, and Norvell (1997) highlighted the dominant role of product and price adaptation strategies and the inferior role, if any,

of distribution and promotion adaptation strategies. Chao *et al.* (2004) found that it is very likely that countries depending mainly on exports will have few, if any, global brands, e.g. India or Indonesia; while countries depending on global marketing will have many global brands e.g. Japan. They implied that exporting activities are hardly, if at all, related to brand-led direct communication and promotional activities to consumers since export channel activities limit access to consumers.

Moreover, Asian brands have suffered from poor country images e.g. Taiwanese and Korean electronic brands. Lee and Grifith (2004) found empirical support for Chao *et al.*'s (2004) findings. They found that, for Korean electronics exporters, advertisements had no effect on export performance. Cuyvers (2004) recommended that Thai exporters adjust their marketing strategies based on product characteristics so that they can compete either on price or other marketing strategies. However, he implied that distribution and promotional strategies are largely ignored by Thai exporters, and thus require urgent attention.

Julian and O'Cass (2004) found that supports to distribution channels and promotion adaptation have no effect on export performance; while product and price adaptation strategies influence the export performance of Thai export manufacturing firms. Wortzel and Wortzel (1981) found that exporting firms, from less-developed countries with limited experience, inadequate market information, or restricted relationships with export channels, fundamentally pursue a strategy of contract manufacturing through which they perform very limited marketing activities. These exporters have to adapt their product offerings to match importers' orders and compete basically on price.

Cuyvers (2004) provides support for Wortzel and Wortzel (1981) by confirming that most Thai exporters are SMEs and have limited export experience. Wortzel and Wortzel (1981) implied that distribution and promotion strategies are not relevant to exporting firms from less developed countries at least until they are able to

establish relationships with export networks. Zou *et al.* (1997) found that product and price are two major export strategies determining the performance of Colombian exporters. They concluded that adapting products to match foreign markets needs has a positive effect on export intensity, while price adaptation affects export performance negatively.

2.2.1 Product adaptation strategy

This study posits that there is a link between product adaptation strategy and strategic export performance and that this link can be either positive or negative. This link is well grounded on at least five theories, i.e. industrial organization theory (e.g. Venkatraman and Prescott 1990a), resource-based theory (e.g. Barney 1991), ecological organization theory (Thorelli 1967), strategy theory (e.g. Mintzberg 1987), and export marketing mix theory (Bilkey 1987).

Both industrial organization and resource-based theories recognize only subordinate role of strategy in determining performance. They argue that the dependence relationship between strategy and performance is contingent on firm's environmental and organizational factors respectively. Strategy theory's position is directly opposite, refusing strategy dependency on the firm's contextual factors and highlighting the exclusive role of emergent strategy. Ecological organization and export marketing mix theories take on moderate views. The former accepts both dependent and independent role of strategy. The latter recognizes the role of both environmental and organizational factors in association with strategy and performance.

A good number of empirical evidences of strategy-performance relationship prevail in export performance literature. These literatures, e.g. Aulah, Kotabe, and Teegen (2000), Cavusgil and Kirpalani (1993), and Lanzara (1987) regularly found a positive relationship between product adaptation strategy and strategic export performance. Marketing adaptation, especially product adaptation, has a positive impact on strategic export performance (Aulah, Kotabe,

and Teegen 2000). Subsequent product adaptation, after products are brought to market, has a positive association with strategic export performance (Cavusgil and Kirpalani 1993). The success of Italian exports relates mainly with product differentiation and adaptation strategies not any other marketing mix (Lanzara 1987). However, in their meta-analysis of export performance literature from 1987 to 1997, Zou and Stan (1998) found a negative effect of product adaptation strategy on strategic export performance.

H2: Product adaptation strategy of a firm affects its strategic export performance; however, the effect can be positive or negative.

We also postulate that there is a positive link between product and price adaptation strategies. This link is well-grounded in the unilateral relationships identified in ecological organization theory (Thorelli 1967) which argues for the inter-relationship between strategic determinants of business performance. This relationship is further endorsed in export literature such as Cuyvers (2004) who implied that product adaptation of Thai exporters is associated with their ability to adapt the price. In counter-arguing Levitt's (1983) concept of "technology republic", Douglas and Wind (1987) implied that product adaptation has a positive relationship with price adaptation. They contend that global products are rare cases since it is valid only when global marketing infrastructures, e.g. logistics, are standardized and there is a sufficient convergence of national cultures; otherwise, the customized product is still able to demand a relatively high price. Wortzel and Wortzel (1981) found that once exporters from less developed countries are ready to pursue brand-led product marketing strategy, they have more market power leading to flexibility in pursuing pricing strategy. They also found that these exporters' dependence on price competition will decrease when their ability to adapt their product, and later to adapt other marketing programs, increases. Wortzel and Wortzel (1981) thus implied that product adaptation strategy positively influences these

firms' ability to adapt their price.

H3: Product adaptation strategy of a firm positively affects its price adaptation strategy.

2.2.2 Price adaptation

This paper posits that there is a relationship between price adaptation strategy and strategic export performance independent of firm's environmental and organizational factors; yet is contingent on product adaptation strategy. This link can be either positive or negative. This link is well grounded in the ecological organization (Thorelli 1967) and strategy theories (e.g. Eisenhardt 1999). Trilateral relationships of ecological organization theory suggest that the relationship between price adaptation strategy and strategic performance is contingent on product adaptation strategies. Strategy theory emphasizes the dominant role of emergent strategy as a solitary determinant of performance independent of contextual factors. For example Eisenhardt (1999) argues that successful strategy emerges from the decision process through which management develops collective intuition by accelerating constructive conflicts, maintaining decision pace, and avoiding politics.

Myers, Cavusgil, and Diamantopoulos (2002) propose that there is a positive link between degree of price coordination among country markets and export performance. Some export literature implies that the relationship between price adaptation and export performance is contingent only on product adaptation but not on contextual factors. These literature includes Cuyvers (2004), Douglas and Wind (1987), Lanzara (1987), and Wortzel and Wortzel (1981). Douglas and Wind (1987), for instance, argue that globally standardized products are only an exception when distribution and promotion infrastructures are of global standard which practically are not the case especially in less developed countries; therefore customized products adapted to local needs are still able to demand high price.

The empirical evidences relevant to the link between price

adaptation strategy and strategic export performance are mixed. Leonidou, Katsikeas, and Samiee (2002) found a strong positive relationship between price adaptation and strategic export performance. Cavusgil and Kirpalani (1993) found that price adaptation had a positive impact on strategic export performance. However, Shoham (1996) found that price adaptation strategy had a negative effect on strategic export performance.

H4: Price adaptation strategy of a firm affects its strategic export performance however the effect can be positive or negative.

2.3 Barriers to exports

Export barriers have received much attention in export performance literature on the basis that if these are identified and eliminated, firm's export performance will be enhanced (Bilkey 1978). Bauerschmidt, Sullivan, and Gilesspie's (1985) pioneering empirical research disclosed several factors underlying export barriers facing the United States paper industry. They found that the most serious export barriers associated with these manufacturing firms were overseas economic constraints. Further, definition by Miesenbock (1988) revealed two fundamental factors underlying export barriers as those internal and external to the firm. Leonidou (2004), on the other hand, argued that there are two basic dimensions of export barriers; those occurring domestically and the others happening abroad. These dimensions extend his previous work in which export barriers were found to be comprised of internal-domestic, internal-overseas, external-domestic, and external-overseas export barriers (Leonidou 1995).

Based on theoretical foundations from development economics and export literature, e.g. Cuyvers (2004); Stiglitz (2002, and 2003); Walter (1971); and Wortzel and Wortzel (1981), this paper extends the typology of export barrier evident in export literatures, by categorizing export barriers into two groups of domestic and

internal-firm export barriers. Domestic export barriers are external to the firm and, in less-developed countries either occurring domestically or overseas, these are domestic in nature and melted down to national-level structural export barriers when they are a function of government related barriers and poor national trade and upstream infrastructures. Those government related barriers are e.g. poor performance of government in international trade negotiation, poor service of and lack of cooperation among export promotion agencies, and corruption and red tape in government offices. While in developed countries domestic export barriers external to the firm are much less serious when they are basically insufficient and poorly targeted government export promotion services and export market information. Internal-firm export barriers facing firms in less developed countries include those export barriers internal to the firm irrespective of whether they happen domestically or abroad (Wortzel and Wortzel 1981).

A few theoretical grounds underlie the domestic nature of external export barriers facing firms from less developed countries which are as follows. The external export barriers are minimized if and only if national government takes an active role in handling them; therefore they are basically functions of the government's role and policy. Walter (1971) argued that changes in international trade barriers have been biased against less-developed countries. He recommended that the governments of these countries take a more active role in monitoring international trade barriers and negotiating in international trade forums to minimize these barriers. He implied that these international trade barriers are manageable by national governments taking on active and constructive roles. Stiglitz (2002) commented that international threats to any national economy can be minimized by its government independently pursuing the right social and economic strategies without misleading hypocrisies or ideologies. He mentioned Malaysia as being the least exposed to the global financial crisis in 1997 because of its former Prime Minister's prudent economic policies.

This newly identified taxonomy of export barriers leads to development of a new measurement scale for export barriers, suitable for less developed countries from rich primary qualitative data collected from Thai export manufacturing firms (the final and initial measurement items of export barriers are shown in Appendix 1).

2.3.1 Domestic export barriers

This paper argues that there is a negative relationship between domestic export barriers and strategic export performance. This link is well-grounded in both industrial organization theory (e.g. Aldrich 1979; Hofer 1975; Pfeffer and Salansick 1978) and the bilateral relationship in ecological organization theory (Thorelli 1967). Pfeffer and Salansick (1978) argue that an organization depends on the environment for its resources; therefore, its success depends on whether it is able to neutralize its malign environments and opportune its benign external chance. By bilateral relationship, Thorelli (1967) posits that there is a link between environmental factors and business performance.

Based on export barrier literature, exporting firms from less developed countries experience various domestic export barriers which considerably vary in complexity and seriously hinder their export performance. Those simple export barriers include poor government export promotion services (Karafakioglu 1986) and poor supply of updated international market information (Bodur 1986; De Souza, Schmidt, and Colaiacovo 1983); while more complex export barriers include poor trade and public infrastructures, possibly caused by corruption of government officials, and domestic political and economic constraints (Da Silva and Da Rocha 2001). Furthermore, a lack of transparency and disclosure of private infrastructural investment at a sub-national level (Beato and Vives 2000), poor human resources and inactivity or ignorance of their governments participating in international trade negotiation (e.g. Das

1994; and Ratanasithi 2002) contribute to these barriers.

H5: Domestic export barriers negatively affect strategic export performance of a firm.

We also contend that there is a positive relationship between domestic export barriers and product adaptation strategy. This link is well-grounded in the environment-strategy coalignment paradigm (Venkatraman and Prescott 1990a), export marketing mix theory (Bilkey 1987), the bilateral relationship in ecological organization theory (Thorelli 1967) and in the position definition of strategy (Mintzberg 1987). The basic premises of these theories are that strategy has to be co-aligned with environment to induce desirable business performance; therefore, when faced with malignant domestic barriers, firms have to be very adaptive in their pursuit of marketing strategy to be competitive.

Zou *et al.* (1997) found that Colombian exporters, facing domestic export barriers related to less-developed marketing infrastructure, tended to pursue product adaptation strategies since their domestic marketing strategies were not sophisticated enough to be applied or to ensure success in international markets. They suggested that domestic products of Colombian exporters might not have as high quality and wide variety as those demanded in their export markets because of less consumer sophistication and poorer production technology.

H6: Domestic export barriers positively affect product adaptation strategy of a firm.

This paper posits that there is a positive relationship between domestic and internal-firm export barriers. This dependent relationship is well-grounded on industrial organization theory, e.g. Pfeffer and Salancik (1978) who argue that environmental factors influence firm's ability to acquire and possess its resources, bilateral

dependence relationship of ecological organization theory, i.e. Thorelli (1967) who argues that there is a dependent relationship between environmental and organizational factors, and trade and development economics theories (e.g. Porter 1990; Stiglitz 1996; UNCTAD 2002). Trade and development economics literature, e.g. Porter (1990), emphasizes government role in building a firm's international competitive advantage. The failure of national government to provide such major macroeconomic drivers as trade infrastructure and export promotion policies and services will lead to exporting competitive disadvantages for exporting firms, e.g. poor productivity and poor quality control, since these drivers influence their competitiveness. In other words, domestic export barriers, both governmental and infrastructural factors influence internal-firm export barriers. The theoretical and empirical evidence from trade and development economics literature supporting this hypothesized link is addressed below.

To sustain export-led economic development, countries have to change their manufacturing structures from unskilled-intensive to skill-intensive (e.g., Appelbaum and Christerson 1997; Chowdhury and Kirkpatrick 1990; Jones, 2001; Jin 1995; Porter 1990; Stiglitz 1996; UNCTAD 2002; Young and Kim 1995; Zhang and Yuk 1998). In so doing, national governments have a very important role in building up national capital stock, i.e. human capital (Chowdhury and Kirkpatrick 1990; Porter 1990; Stiglitz 1996; UNCTAD 2002; Young and Kim 1995), social capital (Hazleton, and Kennan 2000; Stiglitz 1996), and physical capital stock (Appelbaum and Christensen 1997; Jin 1995; Jones, 2001; Stiglitz 1996; Zhang and Yuk 1998). Education (Stiglitz 1996; Young and Kim 1995) and transparent democracy (Rivera-Batiz 2002; Stiglitz 1996) are national key drivers of such capital formation. Therefore, failure of national governments in promoting good education and clean democracy will lead to poor capital formation and consequently firm's inability to compete successfully internationally.

H7: Domestic export barriers positively affect internal firm export barriers.

2.3.2 Internal export barriers

We postulate that there is a negative relationship between internal-firm export barriers and strategic export performance. This link is well-grounded in trade and development economics theories, (e.g. Porter 1990), resource-based theory, e.g. Collis (1991) which argue for the dependent relationship between firm's resources and its successful performance outcome, and trilateral relationship in ecological organization theory (Thorelli 1967). Trilateral relationship reflects a relationship between internal-firm and domestic export barriers that are associated with strategic export performance.

Trade and development economics literature emphasizes the landmark role of government in providing infrastructure and government-related services necessary for building up an exporting firm's competitiveness (e.g. Porter 1990). When organizational skills in incessant creating and innovating (Porter 1990), in a "creative destruction" process (Schumpeter 1952), are combined with Hunt and Morgan's (1995) capability in acquiring and protecting unique resources firms achieve sustained competitive advantage and superior export performance. If this governmental role is not achieved, a competitive disadvantage will develop within exporting firms which will hinder their export operation and performance.

Trade and development economics literature also emphasizes that critical internal-firm export barriers such as a lack of operating resources, poor new product development, and poor quality control, result in exporting firms' failure in export markets (Hunt and Morgan 1995; UNCTAD 2002). The literatures thus recognized that export barriers internal to firms, varying positively with macro level export barriers, hinder firms from carrying out their export operations and therefore are negatively associated with the strategic export performance of these exporting firms.

H8: Internal firm export barriers negatively affect its strategic export performance.

This paper argues that there is a link between internal-firm export barriers and product adaptation and it can be positive or negative. This link is firmly based on resource-based theory (Barney 1986), export marketing mix theory (Bilkey 1987), the bilateral relationship of ecological organization theory (Thorelli 1967) and the position definition of strategy (Mintzberg 1987). Resource-based theorists conclude that differential endowment of strategic resources among firms is the ultimate determinant of their strategy and performance (Zou and Cavusgil 1996). As Barney (1986) points out, not all resources are strategically related to or offer firm competitive advantage. He adds that it is only those resources which are unique, hard to imitate or diffuse among competing firms, i.e. firm's valuable, rare, and imperfectly imitable organizational culture, which lead to sustained strategic advantage. Bilateral relationship of Thorelli's (1967) ecological organization theory is consistent with this view when it proposes link between a firm's organizational and strategic factors. In his export marketing mix theory, Bilkey (1987) postulates that in order to be successful in its export markets a firm has to adjust its strategic action so that it fits with organizational resources. By having a strategic position, Mintzberg (1987) argues that a firm has to align its strategy with its internal resources.

There are other theoretical and empirical evidences supporting this directionality of relationship as positive and negative. Exporting firms from less developed countries, lacking organizational resources and knowledge and experience of international markets, tend to adapt their product (Aulakh, Kotabe, and Teegen 2000; Zou *et al.* 1997) while their counterparts in developed countries, capable enough to identify opportunities for standardization, tend to start their exports by leveraging on their domestic product offerings (Douglas and Craig 1989; Wind, Douglas, and Perlmutter 1973). Zou *et al.* (1997) found that Columbian exporter's pursuit of export

strategies overlooks adaptation necessary because of internal-firm export barriers of poor monitoring of the performance outcome of their export marketing strategies, and poor judgment regarding the feasibility of adaptation of some strategies.

H9: Internal firm export barriers affect its product adaptation strategy; however, the effect can be positive or negative.

2.4 Skill intensity

Based on trade and development economics, strategic management and export performance literature, this paper posits that the skill-intensity of export manufacturing industry affects the relationship between strategic and economic export performance, between strategic export performance and its determinants, between product and price adaptation strategies, and between domestic and internal-firm export barriers in such a way that these relationships differ significantly between skill- and unskilled-intensive industries.

There are both theoretical and practical grounds underlying this hypothesis. Much of the economic literature identified skill-intensity as a determinant of export performance either explicitly or implicitly. Leontief (1953) paradoxical finding that skill was important has been the path developed in the later literature (Keesing 1966; Porter 1990). Moreover skill-intensity has some role to play in Hunt and Morgan's (1995) resource-advantage model at least in the context of less developed countries where exporting firms in unskilled-intensive industries are faced with disproportionate international trade barriers (Stiglitz 2003; Walter 1971; UNCTAD 2002).

Ricardo (1819) and Ohlin (1967) did not include skill-intensity as they conceptualized the cost per unit of labor as the driving unit of trade. Vernon (1966) argued that product cycle theory reflects the late unskilled-intensive export-led growth stage in less developed countries when the unskilled-intensive industries lost

its price competitiveness without having developed a skill base competitive edge (UNCTAD 2002). Recent literature (e.g. Minford 1989; Wood 1994) thus argues that skill-intensity is a dominant construct for explaining export performance. Based on their imperfect mobility nature, caused by e.g. adherence to country of origin, and immigration restriction, labor factor of production differs in their skill across countries, especially between developed and less developed countries. Therefore, in his book "North-South Trade, Employment, and Inequality: Changing Fortunes in a Skill Driven World", Wood (1994) argues that labor-skill is a dominant factor of production governing inter-industry trade between developed and less developed countries currently. Wood and Mayer's (1998) skill category, basically based on skill/unskilled labor ratio, provides us with theoretical base for grouping our sample industries.

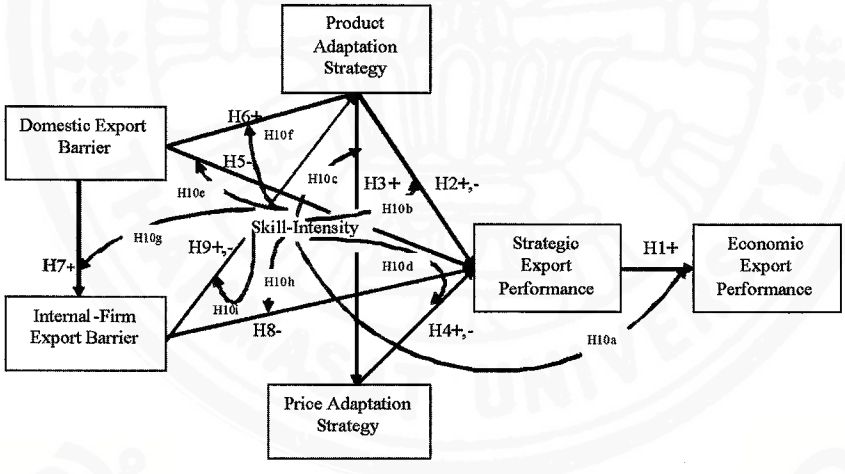
Moreover, skill-intensity is a controversial benchmark of structural transformation in export manufacturing industries of less developed countries. Most of the less developed countries pursuing export-led policy usually claim that their export manufacturing industries have already transformed to skill-based industries; while UNCTAD (2002) strongly disagrees by pointing out that this claim is invalid when most of skill components are imported before assembling and re-exported as finished products. Skill-intensity of export manufacturing industries is an ultimate goal of structural transformation since being skill oriented, an exporter is able to be creative and innovate in its operation especially marketing, leading to product and other marketing mixes differentiation and hence minimizing its vulnerability to price competition (Chowdhury and Kirkpatrick 1990; UNCTAD 2002). This means that skill-intensity of export manufacturing industries intervenes in fundamentals, particularly marketing, activities of the exporting entity and the most appropriate context of study seems to be less developed countries, economy in transition to skill-based industry structures. However skill is defined in the economics literature as the level of expertise existing in an economy and not in a firm. The terms used are

unskilled, semi skilled, and highly skilled which is a very broad classification of skill and may not reflect what is required in an individual firm where the requirements may be for quite specific and defined skills thus the overall effect expected can only be as an intervening construct between the various links proposed previously in the literature review as hypotheses 1 to 9.

H10: Skill intensity alters the relationships between each construct modeled in Thai manufacturers' export performance.

From the above relationships a general model is developed in Figure 1

Figure 1: The Theoretical Model



3. Data Collection

This paper examines the case of Thai manufacturing firms. Our sample was drawn from eight export manufacturing industries, i.e. processed food, garments, textile, jewelry, leather goods and footwear, electrical appliances, and computer and electronics whose recent total exports account for around 75% of the country's

total manufacturing exports (Bank of Thailand 2002). These are considered major export manufacturing industries since they share major parts in national total manufacturing export sales. Moreover, they provide a perfect blend of unskilled- and skill-intensive industries. Skill category is based on Wood and Mayer (1998). Skill-intensive sample size, though relatively small, imposes no limitation on power owing to cautious modeling process which helps to secure effect size (Hair, Anderson, Tatham, and Black 1998, p.11). Our structural model is carefully specified based on theories and it is identified without inadmissible solutions.

Table 1: Interview Subjects and their Description

Interview Subject	**Description of those Involved in Interview** (Figures in parenthesis are numbers of subjects interviewed)
People in charge of export activity	President (1) Managing Director (8) Executive/ Marketing/ Export Director (3) General Manager (1) Executive Vice President/ Vice President, Marketing and Sales (2) Deputy Managing Director (1) Export Manager (7)
Marketing Researchers	Researchers of industry association (6) Researcher of Department of Export Promotion (1)
Outside Experts	President of industry group, The Federation of Thai Industry (1) Vice President of industry group, The Federation of Thai industry (1) Director of industry association (2) General Manager of industry association (3) Senior Trade Officer, Department of Export Promotion (1)

We used qualitative data to supplement our quantitative approach in developing and testing our theoretical model since we

believe in Glaser and Strauss' (1967) argument that the intimate connection between theoretical model and empirical reality permits the development of a testable, relevant, and valid theory. Bartels (1951), Eisenhardt (1989), and Popper (1968) also support this complementary approach. We use qualitative data from people in charge of firms export activity, marketing researchers and outside experts as suggested by Churchill (1979), details as presented in Table 1, to develop a research instrument for quantitative data collection (Summary of final and initial measures for each construct are shown in Appendix 1).

Hypotheses testing method of this study followed Neuman's (1997) method of testing null hypotheses. It is the logic of disconfirming hypotheses associated with Popper's (1968) concept of falsification. In this way, according to Neuman (2003), the logic of disconfirming hypotheses holds that a hypothesis is never proved but it can be disproved. This means that if we fail to reject any null hypotheses, or in other words, we accept them, then we disconfirm the theoretically deduced link and there is no need to interpret the magnitude and direction of the relationship. However, if we can reject any null hypotheses, then we do not have enough evidence to discard the link. This means that such links have to be kept for further examination and interpretation of magnitude and direction of the link can be made. Particularly, based on Table 3, each supported link is the link that its null hypothesis is rejected and its path coefficient is interpreted as to how much influence each independent construct has on each dependent construct and in which direction. Therefore, if we hypothesize uni-direction of either positive or negative, the empirical direction has to be that way to support our hypothesized direction. But if we hypothesize double direction, then the empirical direction can be both ways.

Operationalization of measures was conducted with caution to secure a reasonable response rate and representativeness. The latest directory of exporters provided contact details and positions of three contact persons for each exporting firm. A mailed, self-

administered survey was used for cost efficiency in providing access to geographically dispersed samples in a reasonable period of time (Dillman 1978). We made every effort to maximize response rate. This included an offer of survey results, preliminary notification, cover letters, personalization, anonymity, a deadline, postage, a return envelope, and follow-up letters as suggested by Yu and Cooper (1983). The response rates was 23%, resulting in 303 responding samples from 1,335 total targeted samples. This number is well above what Columbo (2000) suggested as a typical response rate for mail surveys in marketing and advertising research of 20%. Respondents were selected by systematic random sampling from each industry's sampling frame. Following Hayduk (1996; 1987), a minimum return sample size of 70 was required for each industry in order to implement structural equation modeling without adverse effects on model evaluation and hypotheses testing. For model evaluation, we do not depend on only one fit index, for example chi-square statistics, that is sensitive to sample size, but also on other statistics (Anderson and Gerbing 1988; McDonald and Ho 2002) which are: general fit index (GFI), adjusted general fit index (AGFI), root mean square error of approximation (RMSEA), and root mean square residual (RMR), so a returned sample size of 72 is appropriate.

True Characteristics of Export Performance are measured by constraining variance in the data to that which is measured rather than that which may have originated from other sources. This includes consideration of the following sources of variance, i.e. export performance, respondents, the questionnaire, the environment and their interaction based on the work of Finn and Kayande (1997). The random errors arising from possible transient factors and systematic errors are identified so that those random errors are avoided and those systematic errors can be controlled to minimize measurement errors and improve quality of our measures. Those random errors are also recognized so that cautious comparison of research findings with those of other research is alert.

Anderson and Gerbing's (1988) two-step modeling approach was used to fit a confirmatory measurement model to the data prior to structural model testing. Model development and testing results are reported based on McDonald and Ho's (2002) principles and practice in reporting structural equation analysis. Measurement model estimates demonstrate discriminant validity. Where single indicators are used convergent validity is implicit. Where multiple items are used, discriminant validity is demonstrated by confirmatory factor analysis and Cronbach's alpha estimates. Reliabilities of measures are shown in Table 2 below. In testing hypothesis, we endeavor to obtain suitable statistical power for detecting the false null hypotheses (Hair *et al.* 1998, McQuitty 2004). Based on McQuitty (2004), our total and unskilled-intensive sample sizes generate as high as 80% and 70% power respectively.

Table 2: Reliability of Measures

Construct	**Correlation of k-item with error-less true score**	**Alpha For Operational Scale**
Domestic Export Barriers	0.709	0.5032
Internal-Firm Export Barriers	0.861	0.7411
Future Economic Export Performance	0.9736	0.9478
Future Strategic Export Performance	0.9312	0.8672

Measurement model indicators were: Chi-Square (30.162); Degree of freedom (31); Chi-Square /Degree of freedom(0.973); P value of Chi-Square (0.509); RMSEA (0.0); RMR (.073); GFI (.983); AGFI (.964); Bollen and Stine' s (1992) P value(.574).

Structural model indicators were: Chi-Square (32.773); Degree of freedom (37); Chi-Square /Degree of freedom (.886); P value of Chi-Square (.668); RMSEA (0.0); RMR (.079); GFI (.982);

AGFI (.967); Bollen and Stine' s (1992) P value (.706).

4. Findings

As shown in Table 3 and 4 below, within the eight industries and unskilled-intensive industries, four out of the nine hypotheses were accepted, i.e. the links from strategic to economic export performance, the link from product adaptation strategy to strategic export performance, the link from internal-firm barriers to strategic export performance, and the link from domestic to internal-firm export barriers. Following Pearl (2000), we go on with testing the difference between the skill- and unskilled-intensive industries of these nine hypothesized links since it is not necessary that the differences of the links be insignificant even though each link is not significant. We ultimately found that there were two out of the nine hypothesized differences between the two industries that are significantly different, i.e. the link from product adaptation strategy to strategic export performance, and the link from internal-firm barriers to strategic export performance. These findings are discussed in the next section.

Table 3: Results of Testing Nine Hypothesized Links

Hyp	Links	Results Eight industries (Critical Ratio)	Unskilled industries (Critical Ratio)	Skill industries (Critical Ratio)
1	Strategic export performance has an effect on economic export performance	***Supported (11.069)***	***Supported (9.661)***	***Supported (5.351)***
2	Product adaptation strategy has an effect on strategic export performance	***Supported (3.190)***	***Supported (3.339)***	***Not Supported (0.639)***
3	Product adaptation strategy has an effect on price adaptation strategy	Not Supported (1.953)	Not Supported (1.190)	Not Supported (1.860)
4	Price adaptation strategy has an effect on strategic export performance	Not Supported (1.540)	Not Supported (1.806)	Not Supported (0.080)
5	Domestic export barriers has an effect on strategic export performance	Not Supported (1.753)	Not Supported (1.859)	Not Supported (0.496)
6	Domestic export barriers has an effect on product adaptation strategy	Not Supported (1.688)	Not Supported (1.772)	Not Supported (0.414)
7	Domestic export barriers has an effect on internal-firm export barriers	***Supported(4.010)***	***Supported (3.256)***	***Supported (2.317)***
8	Internal-firm export barriers has an effect on strategic export performance	***Supported (-2.402)***	***Supported (-2.251)***	***Not Supported (-0.962)***
9	Internal-firm export barriers has an effect on product adaptation strategy-	Not Supported (-1.431)	Not Supported (-1.764)	Not Supported (0.111)

Table 4: Results of Testing Effect of Skill on Nine Hypothesized Links

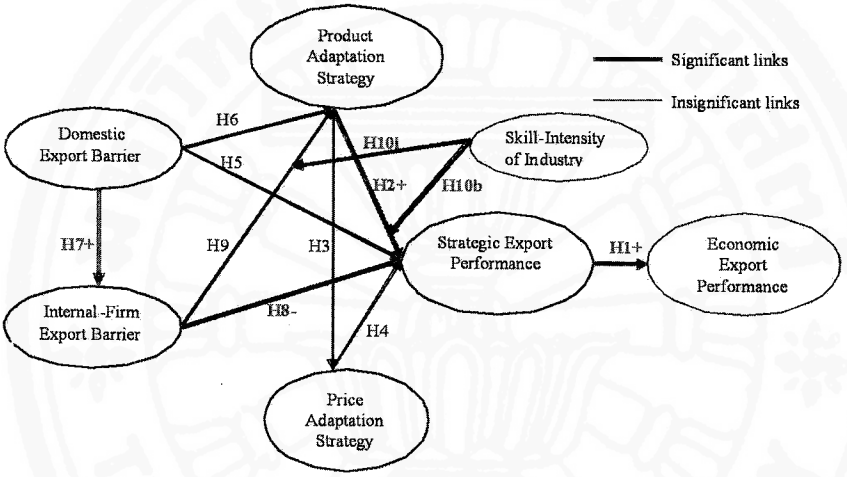
Hyp	Differences between skill- and unskilled-intensive industries	Results (Chi-Square Differential)
10a	Effect of strategic export performance on economic export performance	Not Supported (2.696)
10b	Effect of product adaptation strategy on strategic export performance	***Supported (5.166)***
10c	Effect of product adaptation strategy on price adaptation strategy	Not Supported (1.512)
10d	Effect of price adaptation strategy on strategic export performance	Not Supported (2.574)
10e	Effect of domestic export barriers on strategic export performance	Not Supported (1.504)
10f	Effect of domestic export barriers on product adaptation strategy	Not Supported (1.358)
10g	Effect of domestic export barriers on internal-firm export barriers	Not Supported (0.752)
10h	Effect of internal firm export barriers on strategic export performance	Not Supported (0.002)
10i	Effect of internal-firm export barriers on product adaptation strategy	***Supported (4.367)***

5. Discussion of Findings

As shown in Figure 2 below, the model supported by this research was substantially different from that proposed in the literature. The single most significant relationship is the relationship between product adaptation strategy and strategic export performance. Product adaptation strategy not only has exclusive effect on firm's strategic export performance but also has an effect independent of both firm's environmental and organizational factors. Our finding is thus not consistent with industrial organization theories (e.g. Aldrich 1979), resource-based theories (e.g. Barney 1986), export marketing

mix theory (Bilkey 1987), export performance and export strategy literature (e.g. Cavusgil, Zou, and Naidu 1993; Zou et al. 1997) which recognize only subordinate role of strategy dependent upon a firm's internal and external contextual factors in determining business performance.

Figure 2: Summary of Significant Links Derived from SEM



Our findings however provides empirical support for contemporary strategy theories (e.g. Eisenhardt 1999; Eisenhardt and Sull 2001; Mintzberg 1987) which promote a dominant role of emergent strategic patterns which evolve constantly within business organization and drive business performance. These findings also provide empirical evidence likely to support theoretical arguments regarding the valid time dimension of export performance (e.g. Katsikeas *et al.* 2000). The modeled relationships are between present strategies and expected long run future performance which is theoretically valid; despite being very rare in the literature.

The finding that Thai exporting firms pursue emergent strategic pattern is very interesting. It shows that they are quite advanced in terms of international strategic management when they operate what Mintzberg and McHugh (1985) called "adhocracy" type

organization. However, this situation seems to be at best next to impossible since these exporters lack a highly flexible and actively co-operative knowledge-based business entity operated by high caliber human capital; factors which drive "adhocracy". Thai exporters actually have to struggle to survive, regardless of how harsh those contextual barriers are, by just focusing on meeting tough international product standards which are even more difficult for them to meet when they are very dynamic and disproportionately imposed on them (Walter 1971).

These findings, however, remind exporting firms to recognize that their internal hurdles directly influence their long run export performance. It therefore supports resource-based theory (e.g. Collis 1991). Our findings, on the other hand, do not overlook the role of environmental factors, though they do not exercise their direct effects on strategic export performance, they do indirectly via their influences on firms' resources. They thus provide support for a contention of industrial organization theory (e.g. Pfeffer and Salancik 1978), trade theory (e.g. Porter 1990), and development economics theory (e.g. Stiglitz 1996) that firms depend on their environment for resources. This finding to a certain extent reflects national handicaps of developmental economies in various perspectives. These exporters do not actively adapt any of their product levels to offer higher customer value to their foreign buyers but they are basically passively preoccupied with adapting their product quality to meet with international standards disproportionately imposed on them to guarantee their long term export success.

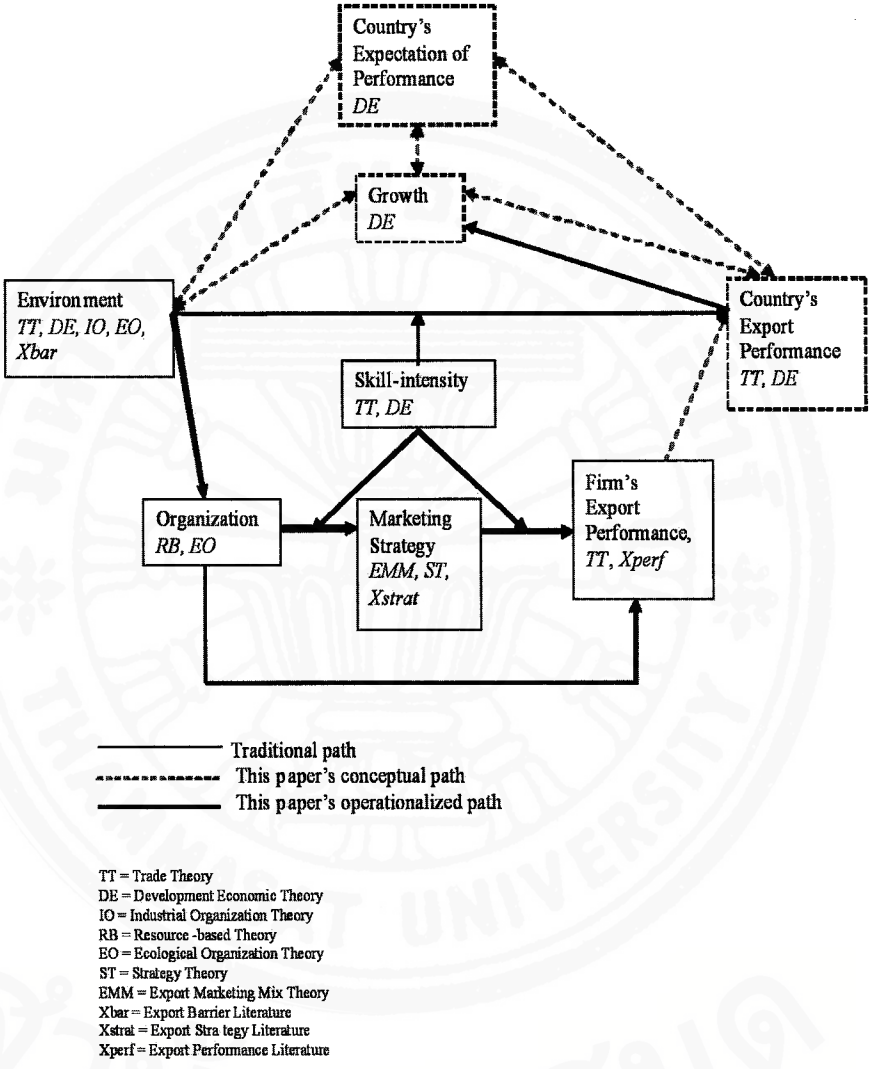
The inactive role of price also reminds these exporters of eroding competitive advantage derived from national endowed labor force. Moreover, irrelevancy of both marketing distribution channel and communication prove that these important marketing tools do not provide them with any advantages owing to poor marketing infrastructures and human capital. Our findings show that not every unilateral, bilateral, and multilateral links as identified by ecological organization theory (Thorelli 1967) is supported. However, the only

unilateral relationship that is supported is a very important one. It is a link between strategic and economic export performance. This finding shows that the only way for achieving long run superior performance is to gear organizational resources toward fulfilling strategic objectives which in turn will lead to superior economic export performance. It also clarifies the inconclusive results prevailtent in export performance literature (e.g. Zou and Stan 1998) of the contextual effects on economic export performance.

These findings clarify theoretical arguments in both trade and development economic literature that skill-intensity of export manufacturing industry intervenes in the relationship between country resources and its export performance. They suggest that skill-intensity of export manufacturing industry actually exercise its effect on firms' micro-level links. However, in this developmental economy context, not everyone of these micro-level links is influenced by skill-intensity but the link between product adaptation to strategic export performance and the link between firm's internal weaknesses to this adaptation ability.

Having discussed our findings, we finally would like to conclude the section with extending our model to the macro-level by proposing a comprehensive export-led economic development model as presented in Figure 3 below. The model illustrates a simplified micro-level relationship of our conceptual model and macro-level relationship motivated by the link between strategic and economic export performance in the micro-level. The next paragraph will explain the mechanism of the model.

Figure 3: A Comprehensive Export-led Economic Development Model



The comprehensive economic development model adds value to both development economics and export performance literature in the following manners. The model refines the relationship between a country's resources and its export performance and extends the macro-level links by treating exporting as a country's strategic move and incorporating the overlooked national strategic objectives apart

from the traditional economic objective of national income growth. Comparing to Figure 2, we want to emphasize the links between groups of variables but not those within each group so we do not show the links between components of export performance and strategic marketing tools while we still have to discriminate the external and internal contextual factors since the environmental factors exercise their roles in both micro- and macro-level.

The comprehensive model shows the important roles of marketing strategy and a firm's resources in determining export performance while environmental factors have only indirect effects on export performance through firm's resources. It also shows that skill-intensity of export manufacturing industry actually exercises its effect on two micro-level links which are those links between marketing strategy and performance and between firm's resources and strategy.

The highlight of the comprehensive economic development model is at the macro-level. Our model help clarify the chronic theoretical controversy and conflicting empirical evidences regarding effects of export-led economic development policy on growth and development. It proposes that any countries aiming for wealth from exporting have to set and strive for achieving other national strategic objectives before they are able to realize the export-led wealth. Learning from experiences of Newly Industrialized Countries' (NICs), i.e. Korea, Taiwan, Hong Kong, and Singapore, as recommended by Stiglitzed (1996, 2002, 2003), these objectives are strong social, human, and physical capitals derived from heavy saving and smart spending of these scarce national funds.

Directing national resources toward these capital formations, countries will then be able to be successful in exporting and achieve sustained economic growth in the long-run. Trying to repeat NICs' success, most developing countries are so preoccupied with wealth derived from exporting that they overlook the prerequisites of what NICs have done to be able to carry out export-led economic development policy; therefore have never achieved sustained growth

and development.

6. Implications for export manufacturing firms

Our findings suggest that Thai export manufacturing firms should consider pursuing a simple strategic management process as follows so that they achieve long run export success. They should set clear strategic objectives which enable them to benefit from external opportunities and at the same time to avoid external threat. These strategic objectives also ought to enable export manufacturing firms to fully utilize their resources and neutralize their weaknesses. More importantly they should realize that in the long-run the only way they can achieve sustained successful economic performance is to fulfill these strategic objectives first. Therefore, they ought to be patient and should consider sacrificing some short-term excellent economic performances for their endured long-term prosperity.

To be able to fulfill these strategic objectives, export manufacturing firms should consider developing their product adaptation capability, especially the product quality, to match with very dynamic export market standards which are disproportionate to firms from less developed countries. They should also recognize that they have already lost price comparative advantage derived from the country's cheap labor pool since labor productivity does not increase, if it does, as fast as wages rate. Moreover export manufacturing firms ought to realize that their relationship with export network has been so weak that it is very difficult for them to manage to adapt their channel and promotional activities. In other words, they should know that they have not yet been able to trigger pursuing pull consumer communication strategy; while they are caught in the position that it is difficult to pursue price push strategy.

Also, to be able to strive for these strategic objectives, export manufacturing firms should consider identifying and eliminating export barriers internal to their organizations. They should recognize that these barriers affect their strategic objectives negatively and

directly. To minimize these internal firm export barriers, export manufacturing firms should also be able to identify and entrepreneurially avoid the effects of export external barriers. They ought to realize that although these barriers do not have direct and negative impacts either on their product adaptation strategy or on their long term export performances, they do deteriorate their internal barriers.

7. Future Research Direction

Future research is encouraged to investigate the new export performance perspective wherein product adaptation is a central construct. Research that measures export performance from an importer's perspective is important to help understand the relationship between strategic export performance and product adaptation that is sensitive to market preferences. Measuring export performance in 2006 to test their relationship with strategic determinants measured in 2003 is also encouraged to address the time-lag effect of strategies implemented. Applying absolute or objective instead of perceptual measures is also an interesting research endeavor. Testing effects of other marketing strategies, e.g. targeting strategy, and other contextual factors as managerial factors, e.g. managerial attitude and commitment on export, organizational factors, e.g. organizational culture, and micro environmental factors, e.g. relationship in export supply chain, on exports performance are fruitful research. Moreover, testing this paper's model in other industries context, cross-culturally in other less-developed-country and developed-country contexts should also be considered imperative.

8. Conclusion

Our findings help lead to a better understanding of export performance and its drivers; thus helping to lead toward conclusive finding in export performance literature. There is now empirical evidence to show that it is not enough to identify non-economic or

strategic export performance but to recognize its influence on economic export performance in the long run. This empirical evidence also shows that strategic export performance intervenes in every effect of contextual and strategic factors on economic export performance without any direct effect of these factors. We find that export marketing strategy is an emergent pattern influencing strategic export performance independent of any contextual factors.

Moreover, our findings show that an environmental factor has only an indirect effect on strategic export performance through an organizational factor which directly affects strategic export performance. The findings also show that the ability to adapt product is a key to long run export success. There is now empirical evidence to show that adaptation is needed but how? When? And for what aspects? Our findings suggest that if something can be done about export barrier internal and external to the firm, long run export performances will be improved. However, more academic work is needed before further prescription, especially relevant to policy, can be made.

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Appendix 1: Pools of Initial Measurement Indicators with their Sources and the Final Measures of Modeled Constructs

(Highlighted indicators are those final scales of each construct)

Measurement Items of Economic Export Performance

Measures	Description	Sources
FSALES	Anticipated trend of export sales of the next five-year	Shoham (1998)
FINTENS	Anticipated trend of export sales intensity (ratio of export sales to total sales) of the next five-year	Shoham (1998)
FPROFIT	Anticipated trend of export profit rate of the next five-year	Shoham (1998)
FSALESAT	Anticipated satisfaction with trend of export sales of the next five-year	Shoham (1998)
FINTSAT	Anticipated satisfaction with trend of export sales intensity (ratio of export sales to total sales) of the next five-year	Shoham (1998)
FPRFSAT	Anticipated satisfaction with trend of profit rate of the next five-year	Shoham (1998)

Measurement Items of Strategic Export Performance

Measures	Description	Sources
FSALES	Anticipated trend of export sales of the next	Shoham (1998)
FSTCOMPO	Anticipated achievement of strong competitive position of the next five-year	Madsen 1998
FCUSSAT	Anticipated achievement of customer satisfaction of the next five-year	Madsen 1998
FCUSLOYA	Anticipated achievement of customer loyalty of the next five-year	Madsen 1998
FBRANDEQ	Anticipated achievement of brand equity of the next five-year	Styles and Ambler 1994
FAWARNES	Anticipated achievement of increase awareness of our product/company, building awareness/ image overseas objectives of the next five-year	Madsen 1998

Measurement Items of Strategic Export Performance (continued)

Measures	Description	Sources
FRESPCOM	Anticipated achievement of respond to competitive pressure of the next five-year	Cavusgil and Zou 1994
FMKTSHAR	Anticipated achievement of improve our company market share position of the next five-year	Cavusgil and Zou 1994
FSTRATEX	Anticipated achievement of expand strategically into foreign market/ strategic export performance of the next five-year	Cavusgil and Zou 1994
FPROFITA	Anticipated achievement of increase the profitability of the company of the next five-year	Cavusgil and Zou 1994
FFOOTHOL	Anticipated achievement of gain a foothold in the export market of the next five-year	Cavusgil and Zou 1994
FEXPKNOW	Anticipated achievement of gain experiential knowledge about market and exporting process of the next five-year	Cavusgil and Zou 1994
FPRDEVEL	Anticipated achievement of product development skills of the next five-year	Madsen 1998
FSALCAPA	Anticipated achievement of international sales capability of the next five-year	Madsen 1998
FDISCOM	Anticipated achievement of new distribution competence of the next five-year	Madsen 1998

Measurement Items of Product Adaptation Strategy

Measures	Description	Sources
PRDINITI	Initial product adaptation.	Cavusgil and Zou 1994
PRDSUBS	Subsequent product adaptation after entry.	Cavusgil and Zou 1994
PRDFUNC	Product function.	Leonidou *et al.* 2002
PRDESIGN	Product design.	Shoham 1999
PRDQUALI	Product quality.	Shoham 1999
PRDWARAN	Product warranties.	Leonidou *et al.* 2002
PRDPOSIT	Product positioning.	Aulakh *et al.* 2000
PRDPACKD	Package design.	Zou *et al.* 1997
PRDBRDNM	Brand name in local language.	Zou *et al.* 1997
PRDNITEM	Number of items in product line.	Shoham 1999

Measurement Items of Price Adaptation Strategy

Measures	Description	Sources
PRCMETH	Pricing method (e.g. market based pricing).	Koh 1991
PRCSTRAT	Pricing strategy (e.g. competitive vs premium price).	Myers et al. 2002
PRICECHR	Price charged	Shoham 1999
PRCURREN	Pricing currency	Shoham 1999
PRCPMTSE	Payment security	Shoham 1999
PRCRDTRM	Credit terms	Shoham 1999
PRCQUOTE	Quotation method	Koh 1991

Measurement Items of Domestic Export Barriers

Measures	Description	Sources
BARVATRF	VAT and tariff imposed on imported raw materials and capital goods.	Qualitative Data
BARTRADF	Poorly organized trade fair by DEP.	
BARRAWMA	Lack of domestic raw materials.	
BARUPSTR	Undeveloped upstream/support industries.	
BARDEP	Poor services/personnel/ and philosophy of DEP.	
BARCORUP	Corruption of government officials	
BARPRSNL	Lack of qualified personnel: skilled labor, English ability, speed of work.	
BARREDTA	Red tape and delayed in import process.	
BARCOOP	Lack of co-operation between government offices.	
BARGVTIN	Government inefficiency in trade negotiation leading to disadvantage with trade counterpart	
BARDLAW	Out of date laws and regulations.	
BARTHIBR	Thailand Brand does not help improve image.	
BARHIWAG	Higher wages.	

Measurement Items of Internal-Firm Export Barriers

Measures	Description	Sources
BARCAPIT	Lack of capital.	Qualitative Data
BARPRICE	Lack of information to quote reasonable price for specific market.	
BARBRAND	Difficulty in convincing customers of buying our brands.	
BARPRDTV	Poor productivity/ production control.	
BARQC	Poor quality control.	
BARCOSTC	Cost control.	
BARR_D	Poor R&D/ raw material and product development.	
BARTECHN	Lack of new technology in production or operation	
BARPRDUC	Poor product i.e. poor product quality, packaging, design, or function, to meet customer's needs or foreign product standard.	
BARCUSTS	Poor customer services system/ communication.	
BARMKTPL	Poor marketing plan.	
BARNEWCU	Difficulty in looking for new customers.	
BARBIZAL	Difficulty in looking for business alliance.	
BARADMIN	Poor internal administration and control.	