
Influence of Firm Resource and Firm Capabilities on Export Performance:

In the Perspective of Thai Gem and Jewelry Exporter

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Abstract

The purpose of this study is to analyze the direct effect of firm resources (FR) and firm capabilities (FC) on export performance (EP) in manufacturing companies of the gem and jewelry industry in Thailand. The research method was a quantitative method. The population are export firms of the gem and jewelry industry in Thailand. The instrument for data collection was questionnaire developed from reviewing of the literature and adjusted specifically to Thai' exporters. A structural equation modeling (SEM) approach was used to analyze the empirical data and test the conceptual model. The results clarify that firm resources have a positive direct effect on exports performance. On the contrary, firm capabilities has no direct effect on export performance. This finding contribute to export firms concerning to their development of resources to create better performance of their operation.

Keywords: export performance, international business, resource-based view, resources, capabilities

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1. Introduction

The issue of international business is well discussed in the competitiveness and export performance literature. A hundreds study and many and different explanatory conceptual model and theoretical that have been advanced in the literature of (Aaby and Slater 1989; Zou and Stan 1998). Recent developments in the study of the resource-based view (RBV) of the firm have expanded the scope and nature of resources that a firm may acquire or develop in pursuit of sustainable competitive advantage (Barney, 1991; 2007; Chrisholm & Nielsen, 2009; Locket, Thompson, & Morgenstern, 2009; Wernerfelt, 1984; Newbert, 2007; Roxas & Chadee, 2011).

The study presented in this paper is driven by two key question (1) Does the firm resources influence on export performance? (2) Does the firm capability influence on export performance? This paper presents a causal model for export performance based on the RBV theoretical. Using a structural equation modeling approach to test the conceptual framework on empirical data form the sample of Thai gem and jewelry exporter perspective.

2. Purpose of the Study

to analyzing the direct effect of firm resource (FR) and firm capabilities (FC) on export performance (EP) in manufacturing companies of the gems and jewelry industry in Thailand.

3. Literature Reviews

In the international business study, the literature review indicates several variables used to explain export performance. Aaby and Slater (1989) considered them into four sets of variables: firm characteristics, firm competences, export strategy and external environment determines the export success. Zou and Stan (1998) grouped the explanatory variables into two set of characteristics: internal and external variables determinants of export performance. Leonidou, et al. 2002) propose (a simplified model based on three sets of variables: assess, export marketing

Various factors have been identified in the literature that impact on export performance. This paper employ the resource-based view of the firm (RBV) perspective to develop the theoretical framework in identifying advantage generating resources and capabilities as key drivers to the starting point of export process, export marketing strategy and export performance. This paper will focus on the resource-based view of the firm (RBV) perspective to develop the theoretical framework in identifying advantage-generating resources and capabilities as critical determinants of the export performance. The Resource Based View (RBV) was based on the concept of corporate resources mentioned by Penrose (1959) on economist point of view to generate the production opportunities.

In 1991, Jay Barney has published the article “Firm Resources and Sustained Competitive Advantage” Published in Journal of Management. This article has becoming recognized as a key theory of competitive advantage which has been continually extended and challenge the theory by other scholars. Barney (1991) suggest the four essential characteristics of strategic resources (1) they must be valued by creating opportunities and solving

threats in the environment, (2) they must be rare or hard to find, (3) they must not be Inimitable or difficult to imitate, (4) they must be non-substitutable (Barney, 1991).

In 2002, Fahy has published the resource-based model of sustainable competitive advantage in a global environment, it is extended to the country-specific resources of both country-of-origin and host country. Fahy (2002) analyze three generic groupings of firm's resources: (1) Tangible assets - plant and equipment, land, other capital goods and stocks, debtors and bank deposits. (2) Intangible assets - trademarks, patents, trade secrets, network and reputation. (3) Capabilities - skills, team work, organizational culture and relationships between management and workforce.

Firm Resource

In order to identify the key indicators of firm resource a number of studies had attempted to identify the particular skill sets. Makadok (2001) has mentioned that the value of the resources and capabilities explain the variation in the business performance. Most of the studies suggest that the competitive advantage and export performance come from the ability to respond to the external environment, developing and actuate an export strategy (Hitt et al., 1997; Zou et al., 2003; Gabrielsson et al., 2012). Sahut et al., (2013) has suggested that the resources to gain competitiveness in the global context must comprising experience, information systems, firm size, material resources, financial resources, connection relationship with customer, pricing, distributions, communication and the capability for product development (Sahut et al., 2013)

A number of study have establish lists of firm resources that enable firms to strengthen their strategies. For this study a firm resources will be consisted by four variables: physical resources, human resources, organizational resources and financial resources (Barney, 1991; Haber & Reichel, 2007; Morgan, R. & Hunt, 1999). Physical resources are involve to the firm's technology and production capacity. Human resources are comprising with intangible assets such as management experience and commitment. Organizational resources are consisted the planning, coordination processes and systems within the firm. Financial resources represent the capital available for a firm to develop export markets.

Table 1 Summary of Firm Resource literature

Author	Firm Resources			
	Physical	Human	Organizational	Financial
Zaiem and Zghidi, 2011	✓	✓		
Carneiro et al., 2011			✓	
Torrens et al., 2014			✓	
Freeman and Styles, 2014		✓	✓	
Majlesara et al., 2014		✓	✓	
Rock and Ahmed, 2014	✓	✓	✓	✓
Boso, 2016				✓

Author	Firm Resources			
	Physical	Human	Organizational	Financial
Pinho, 2016			✓	✓
Özdemira et al., 2017		✓		✓
Viet et al., 2017	✓	✓	✓	

The measures used to capture a firm's resources include physical resources (technology and production capacity), human resources (experience and commitment), organizational resources (planning and coordination) and lastly financial resources (available capital). Commitment proved to be the most popular predictor variable with ten studies adopting this measure.

Firm Capabilities

Capabilities are the firm's most important resource in a global environment (Fahy, 2002, p .127). A number of studies confirm that the development of firm capabilities is more important than firm resources (Doole, Grimes & Demack, 2006; Ibeh, 2003; Morgan, Kaleka & Katsikeas, 2004; Rock & Ahmed, 2013). In order to determine the factors influencing export performance. A number of previous studies had attempted to identify key factors that contributed to successful of international marketing context. Export performers possessed were consistent with information, relationship and product development capabilities (Piercy et al. 1998).

Table 2 Summary of Firm Capability literature

Literature	Capability		
	Information	Relationships	Product Development
Maure, 2009		✓	✓
Omotayo, 2009			✓
Sohail, 2009			✓
Ural, 2009	✓	✓	
Solberg and Olsson, 2009			✓
Boeche and Cruz, 2010			✓
Ling and Lim, 2010		✓	
Solberg and Olsson, 2010		✓	
Elwan and Ogunyemi, 2012	✓		
Freeman and Styles, 2014	✓	✓	✓

Table 2 are review of ten studies that explored on firm capabilities approach. Information capability was reported in tree studies, relationship capability in five studies and product development capability in six studies.

Export Performance Measurement

There has been several of research published in the past four decades on the area of determinants of export performance according to Aaby and Slater (1989), Bilkey (1978), Chetty and Hamilton, (1993), Madsen (1987) as well as Cavusgil and Kirpalani (1993), there still remain criticize for a conclusions that can indicate firms in their export performance. An overview of the relevant literature indicate that measurement of export performance can be classified into two categories, objective measurement and subjective measurements.

Conceptual framework

From the literature review of firm resource, firm capabilities and export performance measurement the hypothesis and conceptual framework of this study is present as follow.

H1: There is a positive relationship between firm resources and export performance.

H2: There is a positive relationship between firm capabilities and export performance.

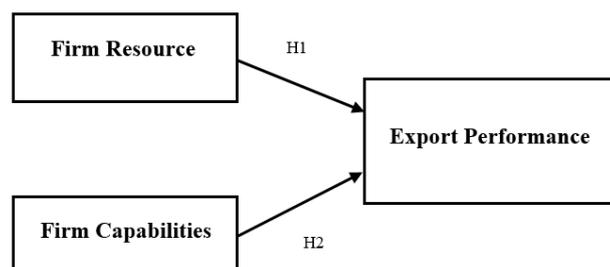


Figure 1 Conceptual framework

4. Research Methodology

Data Collection

The general population of the study was the entire member of Thai Gem and Jewelry Industry, selected from a list of 1,395 exporters. A sample of 323 exporters was obtained, resulting in a response rate of 23%. The sample size was calculated according to the rule of thumb by Bentler & Chou (1987) suggested the ratio of “sample size” and the “number of free parameters” should be 5:1 under the normal and elliptical theory. The free parameter from the conceptual model is 31, the final list of the sample was at least 155 from gem and jewelry exporters in Thailand.

Structural Equation Modeling

Structural Equation Modeling (SEM) is the techniques statistical tools that will be used for analyze the data to explain the relationships between variables of this study. SEM is a multivariate technique that specifies variables as latent (unobservable) constructs and represents a set of hypotheses as a network of causal paths between constructs (Blunch 2008; Styles 1996). The criteria for assessing goodness-of-fit are Chi-square test (χ^2), Comparative Fit Index (CFI) must be higher than 0.90, Goodness of Fit Index (GFI) must be equal or above 0.90, Normative Fit Index (NFI) must be higher that 0.90, Adjusted Goodness of Fit Index (AGFI) must be equal or above 0.80 and Root Mean square Error of Approximation (RMSEA) must be less than 0.10 (Hair ex al, 2010).

5. Research Result

Structural Model

The Structural model was to examine the direct relationship between firm resource, firm capabilities, and export performance as shown in figure 2.

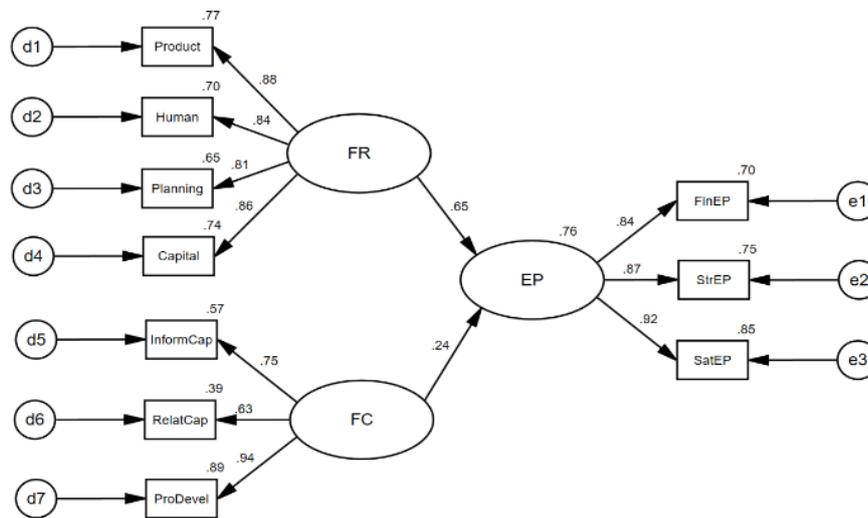


Figure 2 Structural model

Table 3 Model fit analysis

Model Fit Criteria	Value	Acceptable level
Chi-Square	193.914	-
Degree of freedom	33	-
Chi-Square/ df	5.876	< 2
p-value	0.000	$p < 0.05$
GFI	0.894	≥ 0.90
AGFI	0.823	≥ 0.80
RMSEA	0.123	< 0.10
NFI	0.929	> 0.90
CFI	0.940	> 0.90

Table 3, the overall goodness of fit indices indicated that the model did not meet the criteria of model fit as some of the indicators were still unfavorable to the acceptable level. As The results of the assessment in table 1: Chi-Square = 193.914, df = 33, Chi-Square/Degree of freedom = 5.876, p -value = .000, GFI = 0.894, AGFI = 0.823, RMSEA = 0.123, NFI = 0.929, CFI = 0.940. Therefore the model need to be adjusted according to the modification Indices.

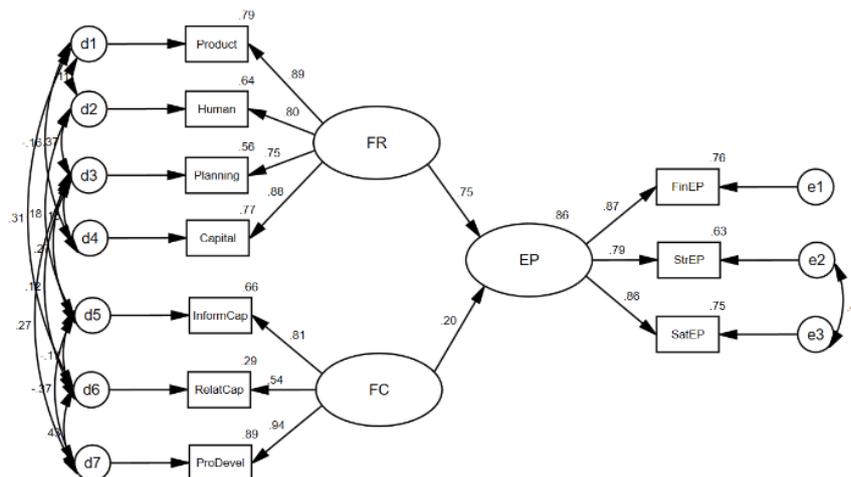


Figure 3 Structural model with modification indices

Figure 3, shows the direct effects structural testing model between firm's resources (FR) and firm's capabilities (FC) on export performance (EP). The model were adjusted follow modification indices, the covariance between residual error; d3 - d2, d6 - d5, d1 - d6, e2 - e3, d3 - d5, d2 - d1, d2 - d5, d7 - d6, d7 - d5, d4 - d3, d3 - d7, d3 - d6 and d4 - d1 are added.

Table 4 Model fit analysis for modified model

Model Fit Criteria	Value	Acceptable level
Chi-Square	50.289	-
Degree of freedom	20	-
Chi-Square/ df	2.514	< 2
<i>p</i> -value	0.000	$p < 0.05$
GFI	0.971	≥ 0.90
AGFI	0.920	≥ 0.80
RMSEA	0.069	< 0.10
NFI	0.982	> 0.90
CFI	0.989	> 0.90

The criteria after modification were met and suggested model fit, as followed: Chi-Square = 50.289 which has statistical significance less than 0.05. $df = 20$, Chi-Square/Degree of freedom = 2.514, p -value = 0.000, GFI = 0.971, AGFI = 0.920, RMSEA = 0.069, NFI = 0.982, CFI = 0.989. Therefore, the structural model satisfactorily fits to the data. The summary and the comparison with acceptable level for each value, as shown in table 4.

Table 5 Hypothesis testing of model

			Estimate	S.E.	β	C.R.	<i>p</i> -value
FR	→	EP	0.700	0.098	0.749	7.126	***
FC	→	EP	0.182	0.088	0.198	2.070	*

*** p -value < 0.001 (statistical significance at 0.001 level)
 ** p -value < 0.01 (statistical significance at 0.01 level)
 * p -value < 0.05 (statistical significance at 0.05 level)

Table 5, hypothesis testing of model one, the results shows the direct effect of firm resources (FR) and firm capabilities (FC) on export performance (EP). The result of data analyzing found that firm resources (FR) have a positive relationship on export performance (EP) at $\beta = 0.749$ with statistical significance below 0.001 and firm capabilities (FC) have a positive relationship on export performance (EP) at $\beta = 0.198$ with statistical significance below 0.05.

6. Discussion and Conclusion

According to the research question, the result of the research question had answered follow the hypotheses testing.

Research question one: Does the firm resources influence on export performance? As the hypothesis H1 were supported, it not surprising for this finding, the finding was extent confirmed the important of resource of the

firm, it consistent to the existing literature. Huang, Soutar & Brown (2002) and Leonidou (2004) which suggested that the possession of resources that rival firms are unable to acquire and deploy of such assets allows the exporter to identify the idiosyncrasies in export markets, develop appropriate strategies, and execute these strategies efficiently and effectively. Hence, the resources devoted to the development of export operations can and do significantly affect the level of a firm's export performance (Srivastava, Fayey & Christensen 2001).

Research question two: Does the firm capability influence on export performance? The hypothesis H2 were not supported, the results indicate that firm capability has on direct effect on export performance. The non significance of firm capabilities on export performance among the firms surveyed is however, inconsistent with existing literature. Notwithstanding, this finding was supported the study of Porter (1991) which discussed that despite the need for firms to adopt and secure capabilities to enhance the business success, failure in designing and implementing with adequate combination of these capabilities can ,cause firm a poor performance. Therefore, from the result of hypotheses testing, it can be conclude that firm capability alone would not generate the successful of export performance in the perspective of Thai gem and jewelry exporter. In order to achieve the exporting objectives in the international context, Thai gem and jewelry may need to develop firm resource and capabilities with the strategy according to the context of the export market.

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