

Examining the role of export competitive advantages on export performance

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ABSTRACT

This paper investigates the role of export competitive advantage on export performance in food industry. The proposed study designs a questionnaire in Likert scale and distributes it among 280 randomly selected experts in food industry and Cronbach alpha has been calculated as 0.827. The study has applied factor analysis to find important factors influencing export performance. Kaiser-Meyer-Olkin Measure of Sampling Adequacy and Bartlett's Test of Sphericity have been performed to validate the results and they both validated the questionnaire. The results of the survey have determined six effective groups including product development, e-commerce, marketing planning, organizational performance, competitiveness and supply chain management.

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1. Introduction

During the past few years, many developing countries have boosted their economy by empowering their export activities such as China, South Korea, etc. However, there are normally various critical success factors for development of exports and there are many studies for finding important factors influencing exports (Hennig-Thurau, 2004; Singh & Koshy, 2011; Fuentes-Fuentes et al., 2011; Idris & Zairi, 2006; Ndubisi, 2012). Monreal-Pérez et al. (2012) investigated the impact of innovation on a firm's export activities while discussing potential endogeneity concerns and reported that innovation could induce companies to increase their export activities. Ross and Pike (1997) provided some evidence from Canadian industries on export credit risks and the trade credit offer and Serra et al. (2012) determined different organizational and managerial factors contributing to the propensity to export in a declining sector. They performed a survey on firms' resources and capabilities, as well as decision-makers' aims and subjective characteristics among Portuguese and UK firms in the textile and clothing industry and reported that, for Portugal, the size of firm and the educational level of managers were important key determinants of export propensity. As to the UK, age and perception of expenditures were the essential factors. Bloemer et al. (2012) explored the effects of trust,

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commitment, relation-oriented competencies as well as entrepreneurial competencies on export performance on exporting organizations located in the Netherlands. Aydemir and Gerni (2011) measured service quality of export credit agency in Turkey by using SERVQUAL (Parasuraman, 1990, 2000; Parasuraman et al., 1994). Mah (2006) presented some evidences on the effect of export insurance subsidy on export supply from Japan.

Ellis et al. (2011) stated that in exchange situations, the advantages of long-distance trade may outweigh the expenses of knowledge acquisition and reported some support for this proposition in their study by constructing a link between the export intensity of Chinese exporters and their acquisition of marketing know-how. They also showed some evidence that the marketing knowledge of transition economy firms maintained a positive effect on overall performance. Rienstra-Munnicha, and Turvey (2002) studied the relationship between exports, credit risk and credit guarantees in Canadian industries. Wang and Barrett (2002) gave a new empirical look at the longstanding question of the effect of exchange rate volatility on international trade flows by investigating the case of Taiwan's exports to the United States. Dewit (2001) performed a survey on the public provision of export insurance where the objective was insurance against the risk of default faced by firms exporting to risky markets, these insurance programs were often embedded in more global policy aims of the exporting country's government. The study tried to understand how premium rating of official export insurance was changed by strategic export promotion and the pursuit of other political objectives. Abraham and Dewit (2000) described that export promotion could not necessarily imply trade distortions and that most export destinations did not contribute from insurance premium subsidies. Kim et al. (2012) studied the relationships among various quality management (QM) practices and studied which QM practices directly or indirectly influence on five types of innovation including radical product, radical process, incremental product, incremental process, and administrative innovation. They reported that a set of QM practices through process management maintained a positive relationship with all of five types of innovation. Mokhtari et al. (2012) gave a decision support framework for risk management on sea ports and terminals based on fuzzy set theory and evidential reasoning approach.

2. The proposed study

This paper investigates the role of export competitive advantage on export performance in food industry. The sample size is calculated as follows,

$$N = Z_{\alpha/2}^2 \frac{p \times q}{e^2}, \quad (1)$$

where N is the sample size, $p = 1 - q$ represents the probability, $z_{\alpha/2}$ is CDF of normal distribution and finally ε is the error term. For our study we assume $p = 0.5$, $z_{\alpha/2} = 1.96$ and $e = 0.05$, the number of sample size is calculated as $N = 278$. The proposed study designs a questionnaire in Likert scale and distributes it among 280 randomly selected experts in food industry and Cronbach alpha has been calculated as 0.827. The study has applied factor analysis to find important factors influencing export performance. The proposed study of this paper uses factor analysis to group different factors influencing on export performance in food industry. Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy and Bartlett's Test of Sphericity have been performed to validate the results are summarized in Table 1 as follow,

Table 1
The summary of KMO and Bartlett's test

	Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.714
	Approx. Chi-Square	1.955E3
Bartlett's Test of Sphericity	Df	325
	Sig.	.000

As we can observe from the results of Table 1, KMO and approximated Chi-Square tests are within acceptable limits. Table 2 shows some basic statistics associated with the questionnaire of the survey.

Table 2
The results of some basic statistics

Variable	Number	Range	Min	Max	Skewness		Kurtosis	
					Value	Std. Dev.	Value	Std. Dev.
Industry growth rate	280	3.00	2.00	5.00	-.558	.146	.870	.290
Management support	280	3.00	2.00	5.00	-.762	.146	.058	.290
Innovative technologies	280	3.00	2.00	5.00	-.629	.146	-.434	.290
New product development	280	3.00	2.00	5.00	.309	.146	-.228	.290
Commercialization of ideas	280	4.00	1.00	5.00	-.189	.146	.081	.290
Innovation	280	4.00	1.00	5.00	-.480	.146	-.122	.290
Technical feasibility	280	4.00	1.00	5.00	-.358	.146	.485	.290
Financial Feasibility	280	4.00	1.00	5.00	-.127	.146	-.009	.290
International competitiveness	280	4.00	1.00	5.00	-.532	.146	.562	.290
State support	280	4.00	1.00	5.00	-.544	.146	.146	.290
Logistics	280	4.00	1.00	5.00	-.516	.146	1.101	.290
Internet Marketing	280	4.00	1.00	5.00	-.923	.146	.456	.290
Internal rivals	280	4.00	1.00	5.00	.085	.146	-.416	.290
Customs Tariff	280	3.00	2.00	5.00	-.211	.146	.126	.290
Strategic Integration	280	3.00	2.00	5.00	.200	.146	-.324	.290
Due to globalization.	280	4.00	1.00	5.00	-.396	.146	-.521	.290
Pricing Strategy	280	3.00	2.00	5.00	-.006	.146	-.760	.290
Intangible resources	280	3.00	2.00	5.00	.019	.146	-.505	.290
Type of Industry	280	4.00	1.00	5.00	-.922	.146	.488	.290
Tangible assets	280	4.00	1.00	5.00	-.293	.146	-.283	.290
Customer contact channels	280	3.00	2.00	5.00	-.213	.146	-.527	.290
Investment rates in the industry	280	4.00	1.00	5.00	.141	.146	-.572	.290
Outsourcing	280	3.00	2.00	5.00	-.373	.146	-.712	.290
Suppliers of raw materials	280	4.00	1.00	5.00	-.700	.146	.760	.290
The market share	280	3.00	2.00	5.00	-.439	.146	-.349	.290
Advertising strategy	280	4.00	1.00	5.00	-.251	.146	-.226	.290
Market segmentation	280	3.00	2.00	5.00	-.480	.146	-.375	.290
Organizational capabilities	280	4.00	1.00	5.00	-.005	.146	-.197	.290
Valid N (listwise)	280							

Note that factor analysis is sensitive to skewness of the data and the results of Table 2 confirm that all data are within acceptable levels. Table 2 demonstrates the summary of communalities associated with the data. As we can observe from the results of our investigation, all data are well above 0.50, which validates the quality of the data.

Table 2
The summary of communalities

	Initial	Extraction
Industry growth rate	1.000	.550
Management support	1.000	.730
Innovative technologies	1.000	.565
New product development	1.000	.628
Commercialization of ideas	1.000	.704
Innovation	1.000	.564
Technical feasibility	1.000	.620
Financial Feasibility	1.000	.643
International competitiveness	1.000	.737
State support	1.000	.631
Logistics	1.000	.693
Internet Marketing	1.000	.603
Internal rivals	1.000	.773
Customs Tariff	1.000	.597
Strategic Integration	1.000	.571
Due to globalization.	1.000	.678
Pricing Strategy	1.000	.674
Intangible resources	1.000	.696
Type of Industry	1.000	.525
Customer contact channels	1.000	.620
Investment rates in the industry	1.000	.603
Outsourcing	1.000	.725
Suppliers of raw materials	1.000	.636
The market share	1.000	.675
Advertising strategy	1.000	.604
Market segmentation	1.000	.599

Table 3 shows details of total variance explained before rotation has been accomplished.

Table 3
The summary of total variance explained before rotation

item	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.259	20.226	20.226	5.259	20.226	20.226	2.228	8.571	8.571
2	2.186	8.407	28.633	2.186	8.407	28.633	2.217	8.529	17.100
3	1.738	6.684	35.317	1.738	6.684	35.317	2.146	8.252	25.352
4	1.473	5.667	40.984	1.473	5.667	40.984	2.020	7.769	33.120
5	1.422	5.471	46.454	1.422	5.471	46.454	1.771	6.813	39.933
6	1.314	5.054	51.509	1.314	5.054	51.509	1.734	6.669	46.603
7	1.163	4.473	55.981	1.163	4.473	55.981	1.571	6.043	52.645
8	1.087	4.182	60.163	1.087	4.182	60.163	1.550	5.963	58.609
9	1.001	3.852	64.014	1.001	3.852	64.014	1.406	5.406	64.014
10	.886	3.409	67.424						
11	.869	3.341	70.765						
12	.813	3.126	73.891						
13	.783	3.010	76.901						
14	.723	2.779	79.680						
15	.688	2.644	82.324						
16	.597	2.296	84.620						
17	.574	2.208	86.828						
18	.539	2.074	88.902						
19	.503	1.936	90.838						
20	.461	1.773	92.611						
21	.394	1.517	94.128						
22	.374	1.438	95.567						
23	.349	1.342	96.908						
24	.295	1.135	98.044						
25	.281	1.080	99.124						
26	.228	.876	100.000						

In addition, Scree plot is used to extract efficient numbers of factors and the results are shown in Fig. 1 as follows,

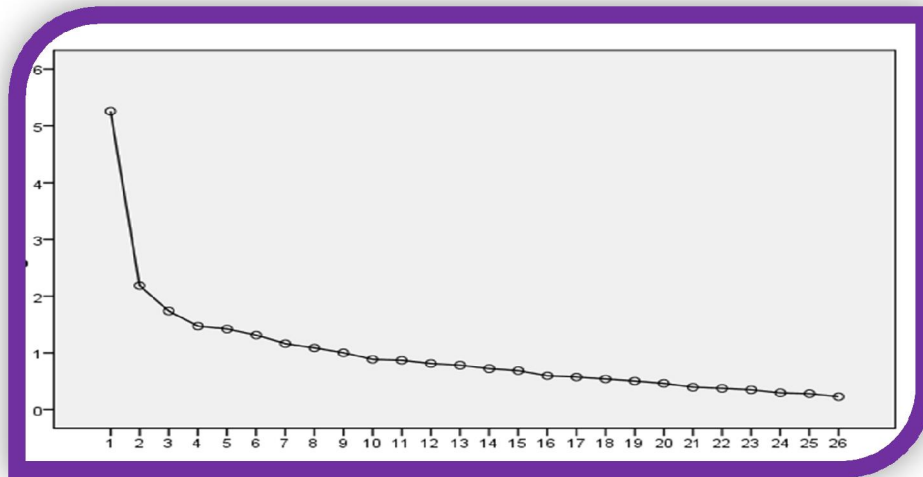


Fig. 1. The results of Scree plot

The results of Fig. 1 demonstrates that six factors plays essential role for the development of export in food industry and next section presents details of these components.

3. The results

In this section, we present details of factor analysis when rotation has been executed. Table 4 shows details of our findings.

Table 4
The summary of factor analysis after rotation has accomplished

	1	2	3	4	5	6	7	8	9
Intangible resources	.772								
Pricing Strategy	.675								
Advertising strategy	.552								
Due to globalization	.511							-.478	
Technical feasibility	.458	.375							
Internet Marketing		.751							
Innovative technologies		.678							
Customer contact channels		.475							
Market segmentation			.730						
The market share			.616						.444
Type of Industry			.606						
Industry growth rate		.447	.451						
Investment rates in the industry		.380	.426	.345					
New product development				.746					
Commercialization of ideas				.680				.351	
Innovation				.617					
Logistics					.708				.374
Suppliers of raw materials					.646			.374	
Strategic Integration				.436	.528				
International competitiveness						.795			
Customs Tariff						.702			
International competitiveness						.470	.460		.400
Management support							.801		
State support							.603		
Outsourcing								.798	
Financial Feasibility									.719

The results of Table 4 have determined six effective groups including product development, e-commerce, marketing planning, organizational performance, competitiveness and supply chain management.

4. Discussion and conclusion

In this paper, we have presented an empirical investigation to study the impacts of different factors on development of export in food industry. The proposed study has determined six factors, which play essential role on development of export in food industry. The first factor, product development, consists of five factors including intangible resources, pricing strategy, advertising strategy, due to globalization and technical feasibility with the relative importance rate of 0.94. The second factor, e-commerce, consists of four factors including technical feasibility, internet Marketing, innovative technologies and customer contact channels with the relative importance rate of 0.89. The third factor, marketing planning, consists of four factors including market segmentation, the market share, type of industry, industry growth rate and investment rates in the industry with the relative importance rate of 0.88. The fourth factor, organizational performance, consists of suppliers of raw materials, strategic integration and international competitiveness with the relative importance rate of 0.86. Competitiveness is the next factor, which includes three factors including international competitiveness, customs tariff and international competitiveness with the relative importance rate of 0.85. Finally, supply chain is the last important factor, which includes three factors including management support, state support and outsourcing with the relative importance rate of 0.78.

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