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Investigating the role of electronic insurance on decreasing exporting charges risks

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C H R O N I C L E	A B S T R A C T
	Nowadays, the electronic insurance (EI) is one the electronic services, which is used in most countries, and that is one effective factor in developing the exporting products and services. On the other hand, the incurrence industry and very especially EI represent their importance both domestically and internationally. One of the ways for transferring the exporting risks is to transfer the risks to the insurer. This paper examines the characteristics of EI and the effects of decreasing the exporting risk charges. The proposed study designs a questionnaire in the form of Likert scale, the validity of the questionnaire is validated by some the experts' viewpoints and the Cronbach' alpha is measure as 0.794. The results of applying Freedman test have disclosed that facilitating export activities was the most important factor followed by access to target export market information.

1. Introduction

Generally speaking, the electronic insurance (EI) refers to the use of Internet and information technology in production and distribution of the electronic service (ES). ES services are regarded as two traditional and electronic approaches in the developed and developing countries. To the specific term, EI refers on providing the insurance coverage via insurance certificate (Bens et al., 1999). EI also requires to have modern rules and principles for electronic trade (ET) to let the insurer and the insured exchange the information at a secure and proper manner have some sorts of online payment, and validate the urgencies through the electronic signatures. In other words, ET is the process of buying, selling, or exchanging the products, services, and information through computer and internet channels (Dickie, 1999; He et al., 2011; Hashemi et al., 2011). The internet and ET are only as two important wings not only they are pioneers of major changes in business but also they affect the daily life. Barrett and Walsham (1999) developed a model by drawing on and extending Giddens' social theory of transformation that relates changes in modern institutions to shifts in self-identity. They

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showed the value of these ideas for development of electronic trading system in London Insurance Market.

According to HassanZade, A., and Ellahi, Sh. (2006), the implementation of electronic insurance plays essential role on development on export related activities. In addition, to develop EI, it needs to preserve standard rules and regulations, to provide insurance through website, exporters need to access to information export market insurance, etc. Dewit (2001) analyzed the behaviors of the operators against export risks, especially credit risk, and how they handle such risks. The study demonstrated that the export activity was strongly based on traditional markets, with little effort of detecting new market niches. The study detected three classes of exporter's profiles through a hierarchical cluster analysis, disclosing a risk perception among exporters in addition to the implementation of payment instruments with no guarantees to exporters and low adhesion to export credit insurance system.

Schich (1997) investigated the Export Trade of private sector into Ranis-Fei model and made inspection utilizing the sectional data from 1999 based on the characteristics of Chinese labor market segmentation. The study disclosed that the private sector to absorb surplus labor capacity depends on private sector capital accumulation, innovation and creative implementation of labor intensity and bias, and expenditure of labor unemployment insurance funds was important.

Baltensperger and Herger (2009) investigated Australian exporter perceptions of export credit insurance (ECI) value and ECI value drivers to give insight on how Australian (and other) exporters could optimize their ECI implementation. The survey applied a 1,000 firm survey of how Australian ECI users and non-users perceived the value of often-cited attributes of ECI and multiple regression analysis to build a model of ECI value drivers. The study provided the first evidence of perceived ECI value to Australian exporters as well as differences between ECI users and non-users. According to Mah (2006), the object of the insurance of export credits risks, jeopardizing the claims settlement for the argument that foreign debtor could be territorial (political) or commercial risks.

According to Giaglis et al. (2002), electronic markets appeared to recommend that e-commerce transactions could result in decreased expenses for buyers and sellers alike, and would therefore eventually lead to the elimination of intermediaries from electronic value chains. However, a careful analysis of the structure and functions of electronic marketplaces disclosed different results.

Giaglis et al. (2002) provided an analysis of the potential effects of intermediaries in electronic markets and articulated a number of hypotheses for the future of intermediation in such markets. They discussed three main scenarios. First, the disintermediation scenario, in which market dynamics may favor direct buyer–seller transactions. Second, the re-intermediation scenario where traditional intermediaries could be forced to differentiate themselves and re-emerge in the electronic marketplace. Finally, the cyber-mediation scenario where the wholly new markets for intermediaries could be created. The analysis recommended that the likelihood of each scenario dominating a given market depend on the exact functions that intermediaries act in each case.

Fearon and Philip (2008) concentrated on the necessity to develop a measure of information system performance. The technique was presented based on interpreting self-assessed rating data in conjunction with interviews from informants within the insurance industry. The operationalization of the model is based on development work from previous studies and using the disconfirmations of expectations paradigm in a qualitative setting. A number of conceptual issues were discussed on the nature of expectations and problems associated with measuring expectation gaps. The study identified a number of key lessons for managers in expansion of successful electronic trading.

2. The proposed study

To examine the characteristics of EI and its impacts on decreasing the exporting charges, based on the previous studies (Hashemi et al., 2011; Ketabchi, 2003) and the experts' views under the question, a questionnaire has been designed, which includes 13 questions in Likert scale. The reliability of the questionnaire has been calculated by Cronbach's alpha, which is equal to 0.794 and it is well above the minimum acceptable limit. The statistical population of this study includes all experts and of insurance.

$$N = Z_{\alpha/2}^2 \frac{p \times q}{e^2},$$ (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*=42. Fig. 1 shows personal characteristics of the participants.

Fig. 1. Personal characteristics of the participants

As we can observe from the results of Fig. 1, most participants were middle-aged people and more than half of them were female.

There are 13 hypotheses associated with the proposed study of this paper as follows,

1. An increase on information accuracy decreases the exporting charge risks.

2. Any 24-hour availability insurance service for export reduces export risks.

3. Coverage of commercial risks for export reduces the risks, effectively.

4. Insurance issues associated with export performance improvement reduce the effect of export risks.

5. Improvement in export switches insurance companies reduces risks, effectively.

6. Facilitating the process of insurance issues associated with export reduces the risks of export.

7. Accelerating the process of export related insurance reduces export risks.

8. Promoting the role of business insurance could reduce export risks effectively

9. Offering competitive insurance prices for export insurance reduces risks

10. Any reduction on insurance expenses reduces export risks.

11. Any reduction on cost of investigation and search reduces the risks of exports.

12. Any reduction in transaction costs reduces risks of export.

13. Increasing access to export market information reduces the risks of exports, effectively.

Table 1 demonstrates some basic statistics about the frequency of the questions.

Table 1
Basic statistics associated with the survey

Q	rnumbe of sample member	M	SD	min	max	percentile		
						25th	50th (Median)	75th
1	43	4.3488	.75226	3.00	5.00	4.0000	5.0000	5.0000
2	43	4.1860	.90648	2.00	5.00	4.0000	4.0000	5.0000
3	43	3.8140	1.31395	1.00	5.00	3.0000	4.0000	5.0000
4	43	4.2326	.94711	2.00	5.00	4.0000	4.0000	5.0000
5	43	3.4651	1.20216	1.00	5.00	2.0000	3.0000	5.0000
6	43	4.5349	.63053	3.00	5.00	4.0000	5.0000	5.0000
7	43	3.9535	1.02245	1.00	5.00	3.0000	4.0000	5.0000
8	43	4.1860	1.05234	1.00	5.00	4.0000	5.0000	5.0000
9	43	3.6744	1.04017	1.00	5.00	3.0000	4.0000	5.0000
10	43	3.7442	1.00221	2.00	5.00	3.0000	4.0000	5.0000
11	43	3.7674	.99612	2.00	5.00	3.0000	4.0000	5.0000
12	43	3.9070	.89480	2.00	5.00	3.0000	4.0000	5.0000
13	43	4.4186	.73136	2.00	5.00	4.0000	5.0000	5.0000

The proposed study of this paper uses binomial test by dividing the responses into two groups, where the first group includes very high and high scales and the second group includes the other three scales. Therefore, the null hypothesis is $\mu \leq 3$ while the alternative hypothesis is set to $\mu > 3$. Table 2 shows details of testing all hypotheses.

Table 2
The results of testing various hypotheses

Hypothesis		group	N	relative frequency	relative frequency tested	Asymp. Sig. (2-tailed)	(H$_1$) the results
1	Group 1	<= 3	7	.16	.50	.000[a]	accepted
	Group 2	> 3	36	.84			
2	Group 1	<= 3	10	.23	.50	.001[a]	accepted
	Group 2	> 3	33	.77			
3	Group 1	<= 3	17	.40	.50	.222[a]	rejected
	Group 2	> 3	26	.60			
4	Group 1	<= 3	7	.16	.50	.000[a]	accepted
	Group 2	> 3	36	.84			
5	Group 1	<= 3	23	.53	.50	.761[a]	rejected
	Group 2	> 3	20	.47			
6	Group 1	<= 3	3	.07	.50	.000[a]	accepted
	Group 2	> 3	40	.93			
7	Group 1	<= 3	12	.28	.50	.005[a]	accepted
	Group 2	> 3	31	.72			
8	Group 1	<= 3	9	.21	.50	.000[a]	accepted
	Group 2	> 3	34	.79			
9	Group 1	<= 3	20	.47	.50	.761[a]	rejected
	Group 2	> 3	23	.53			
10	Group 1	<= 3	20	.47	.50	.761[a]	rejected
	Group 2	> 3	23	.53			
11	Group 1	<= 3	17	.40	.50	.222[a]	rejected
	Group 2	> 3	26	.60			
12	Group 1	<= 3	11	.26	.50	.002[a]	accepted
	Group 2	> 3	32	.74			
13	Group 1	<= 3	2	.05	.50	.000[a]	accepted
	Group 2	> 3	41	.95			

a. Based on Z Approximation.

According to the results of Table 2, eight hypotheses of the survey are confirmed and five are not. We have performed Freedman test to rank the effects of eight hypotheses and Table 3 shows details of our survey.

Table 3
The summary of Freedman test

Question	1	2	4	6	7	8	12	13
Result	4.83	4.43	4.59	5.27	4.05	4.43	3.56	4.85
Rank	3	5	4	1	6	5	7	2

Chi-Square = 20.854 Sig. = 0.004

Based on the results of Table 3, facilitating export activities is number one important factor followed by access to target export market information.

3. Discussion and conclusion

As we can observe from the results of Table 2, eight hypotheses have been confirmed while five hypotheses have not. In other words, the participants in our survey believed that an increase on information accuracy decreases the exporting charge risks. In addition, any 24-hour availability insurance service for export may reduce export associated risks. However, the coverage of insurance did not have any impact on reducing risks associated with export. Our participants believed that any improvement on productivity of insurance service helps us reduce existing risk associated with export activities. In our survey, any facilitation, acceleration and promotion on business insurance could reduce risks associated with export but offering competitive plans or cost reduction plans would not reduce the risk of insurance. Any attempt to reduce the cost of transaction could reduce the risk of export. Finally, it is important to get information on market destination in order to reduce risks associated with export activities. The results of applying Freedman test have also disclosed that facilitating export activities was the most important factor followed by access to target export market information.

Acknowledgement

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