MITIGATING THE RISK OF DOCUMENTARY DISCREPANCY IN PROCESS OF ESTONIAN EXPORT LETTERS OF CREDIT TRANSACTION

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Abstract. The main subject of this paper is to study relations between metrics which affects payment risk under documentary letters of credit (DLC) from the exporters perspective in Estonia. This will result in reducing the risk of documentary discrepancy in presentation of documents to banks, decrease relevant costs to rectification of discrepancies which are nothing but a loss to exporter and improving the flow of international trade. For this purpose, the author takes an empirical approach in his strive to find answer to following questions: What are different types of discrepancy in Estonian export landscape? How relevant are deferent attributes of the DLC to attributes types of discrepancy? What measures should be in place to prevent risk of documentary discrepancy in DLC operation? (In Estonian export trade).

Keywords: Documentary Letters of Credit, Process Management, Discrepancy, Attributes of DLC, Export, Estonia

INTRODUCTION

Regardless of being importer or exporter, the payment problem is one of the riskiest aspects of doing business with other countries. As a result, and in the course of time, the trader's society has developed different types of payment method applicable to international business (Chuah, 2009). Such payment methods can be listed from the exporter's perspective and from least risky to riskiest ones as following: Open Account, bill of exchange or Documentary Collection, Documentary Letters of Credit (DLC) and prepayment (Alavi, 2016a; Debattista, 2007).

Among all above mentioned methods, the DLC are known as the most favorable method of payment for initiating transaction between importer and exporter in different countries with no solid information about each other's financial standing and trade background (Bergami, 2014). By shifting the payment risk from the importer to irrevocable promise of payment by the bank, the DLC will guarantee receiving of payment for shipped goods by the exporter under the condition that the payment will take place after presentation of hundred percent compliant documents stipulated in the credit by the exporter (Alavi 2016b). Apart from their application in international trade finance, documentary letters of credit are popular instruments used for the purpose of credit enhancement within the framework of international project finance and technology transfer projects (Hofmann, 2007; Alavi and Hąbek 2016)

The definition and types of discrepancy in the documents tendered as well as different options for the bank in response to discrepant tender by the exporter are regulated by the International Chamber of Commerce (ICC) under the Unified Custom and Practices for Documentary Letters of Credit (UCP). Currently, the UCP 600 is in force since 2007 (UCP 600). The UCP 600 provides that documents presented under DLC operation should be in

full compliance with terms and conditions of the credit otherwise bank is obliged to reject the presentation as a whole. (UCP 600 article 15). According to the ICC, the world-wide documentary discrepancy rates against the DLC are between 60% to 70%. These figures appear to be consistent with studies in the USA citing discrepancy rates of 73% and the UK, with 50% to 60% (SITPRO Ltd, 2003). The cost of discrepancies is not well researched and, therefore, difficult to establish, but in a study by SITPRO Ltd it was estimated "that in 2000 the UK lost £ 113 million through non-compliant documents being presented under Letters of Credit" (SITPRO Ltd. 2003). Where discrepancies cannot be resolved, the result may be financial loss to the exporter as a result of the issuing bank rejecting the documents. This is a significant issue from the risk management point of view (Alavi, 2016c).

In practice, the initial point for raising the problem of documentary discrepancy in the international DLC transaction is the lack of exporter's control over production of all documents (Hwaidi, 2014). Some documents are produced internally by the exporter's staff while some others are produced by the third parties (e.g. insurance, certificate of inspection and transport document) (Mehta, 1999). As a result, the application of a proper risk management programmer which covers internal and external sources of risk seems not only useful but also necessary in reducing the cost of discrepancy for the exporters (Bergami, 2011).

Estonia together with Latvia and Lithuania forms three Baltic States in the north east of the Baltic Sea. Its main export items amounting to 13.4 Billion USD in 2015 are electronics, wood, automotive, fabricated buildings, and scrap metal. (OECD website). At the same time, main imports of the country during the same period included: electronics, refined petroleum, cars and amounting for 15.3 Billion USD. The negative trade balance of 1.9 Billion USD is a good motivation for Estonian government to promote export business. In this regard different promotional activities of Estonian Chamber of Commerce and Industries including trade missions and export academy can be mentioned (KODA.ee, Estonian Chamber of Commerce and Industries). However, small size of the Estonian economy creates respective limitations on the way to form a high export profile. Among existing limits main ones can be mentioned as: small size of companies, lack of access to sufficient human and financial resources, limited number of banks active in international trade finance and limited number of industries active in export business.

The absence of empirical study to analyses the level of discrepancies and imposed losses resulting from it on Estonian exporting firms was the main idea behind the choice of current research topic. Data on most occurred types of documentary discrepancy, reasons behind occurrence of them and application of suitable risk management model to mitigate such risks can help Estonian exporters to reduce their latent losses substantially.

In this paper, author uses the analogy of process management in export DLC transaction by finding answer the questions of: This paper is divided into six main parts: After introductory part, complex operation of documentary letters of credit would be explained, section three will discuss attributes of Estonian exporters and section four discusses the research design. Section five will study result of analyzing data collected from Estonian exporters. Final section is devoted to conclusions.

RESEARCH DESIGN

The data have been collected by conducting exporters' survey questioners. The exporters' survey aimed at measuring the correlation between the variables describing documentary discrepancies, and two groups of variables controllable by the exporters (Level of export sales to total sales and Characteristics of DLC,). In total 1200 questionnaires were distributed in accordance to the data in the Estonian Export Directory (www.estonianexport.ee). Data collected from the interviews with bank officers show that in total 100 to 150 Estonian exporting companies use DLC as a method of payment in conducting their international transactions. At the end of September 2016, 41 responses

were collected, which is 27.3 percent of the total population. As a result, the collected data are sufficient for this research, despite of comprising a small proportion of distributed questionnaires (3.41%). Among collected data one response was not valid, therefore, only 26% of the total population were responding which can be considered representative. Data analysis took place by using the Spearman Correlation Rank method. The data were analyzed using the SPSS Statistics 24. Statistical significance of the results was estimated on the 95% confidence level.

RESULTS AND DISCUSSION

There is no global method for categorization of the firm's size. Among existing methods based on their level of annual turnover, number of employees and other criterions, this paper follows the European Union method of categorization of firms based on the European Union Recommendation 2003/61/EC.

Accordingly, main criteria for categorization of firms is the annual turnover and /or number of employees (Lindner 2005). Number of employees is chosen as a criterion since it shows more relevance to main objectives of current study and proves itself as a more valid indicator in determination of size of exporting Estonian firms.

According to the EU criteria, respondents to the exporter survey can be categorized as following

It is clearly visible that majority of respondents are among Miro firms. Taking the runner up position, Small Enterprises follow that micro firms with just a nominal difference. Increasing the size of the firm has strong impact of the number of exporting firms as medium enterprises show 30% drop in number by only 5 of exporting companies and there was no large respondent with more than 250 employees among respondents (Table 1).

Table 1
Firm Size in Estonian Export Market

Firms Size	Number of Employee	Percentage
Micro Enterprise	18	45%
Small Enterprise	17	42.5%
Medium Enterprise	5	12.5%
Large Enterprise	0	0%
Total	40	100%

Survey data indicates that majority of Estonian exporting firms are new exporters with less than 5 years of experience in export business. Majority of new exporters are Micro firms. Data shows the attraction of entering non EU market for them. Data also indicates that increasing the size of firm has direct relations with export market experience as in contrary to micro firms, majority of medium size respondents have more than 5 years of export experience (Table 2). As we will see later in the course of study, experience in export market affects the rate of discrepancy in documentary letters of credit.

Table 2
Export Experience based on Firm Size in Estonian Export Market

Period of export Activity		Size				Total
		Micro	Small	Medium	Large	
New Exporters (less than 5 years)	Count	15	12	1	0	28
	Percentage	37.5	30	2.5	0	70
Established Exporter (More than 5 years)	Count	3	5	4	0	12
	Percentage	7.5	12.5	10	0	30
Total	Count	18	17	5	0	40
	Percentage	45	42.5	12.5	0	100

The comparison of official sources of main export sectors in Estonia (www.tradewithestonia.com) with results of survey administered among Estonian exporters shows that firms would be divided into six main industry groups plus the IT sector (Table 3).

Table 3
Industry grouping in Estonian export market

Number	Industry grouping
1	Food &Equipment
2	Chemicals and Heath
3	Building and Construction
4	Machinery /Automotive/ Metal
5	Forestry / Mining/ Drilling
6	IT
7	Others

According to Table 4, the proportion of industries are as following:

Table 4
Proportion of industries to size of firms in Estonian Export Market

Cluster		Size				Total
		Micro	Small	Medium	Large	
1	Count	2	1	0	0	3
	%	5	2.5	0	0	7.5
2	Count	1	2	0	0	3
	%	2.5	5	0	0	7.5
3	Count	0	3	1	0	4
	%	0	7.5	2.5	0	10
4	Count	1	6	3	0	10
	%	2.5	15	7.5	0	25
5	Count	6	5	1	0	12
	%	15	12.5	4	0	30
6	Count	8	3	0	0	11
	%	20	7.5	0	0	27.5
7	Count	0	2	0	0	2
	%	0	5	0	0	5
Total	Count	18	17	5	0	40
	%	45	42.5	12.5	0	100

Interestingly, among the micro firms, information technology is ranked first, followed with timber industry and food producers. Among small enterprises, machinery producers are the biggest proportion followed by timber industry and IT firms. Machinery producers take the first rank in medium size Estonian exporters group as well. They consist 3 out of 5 medium size exporters in this group. It could be clearly extracted from the data that number of employees has direct relation with moving towards heavy industry.

Main types of documentary discrepancies and discrepancy factors were defined based on survey responses in groups including: Errors in Bill of Exchange, Commercial Invoice, Packing List, Transport Documents, Inspection Corticated, Movement Certificate. factors for discrepancy where identified as: Late Shipment, Missed Consignment, Late Presentation, Missing Documents, Incorrect Shipment, and others (Table 5).

Accordingly, biggest rate of discrepancy belongs to commercial invoice, followed by packing list and Transport Document.

Since growing the amount of export will have direct effect of increasing the use of documentary letters of credit, it is logical to study correlation between amount of export and possible discrepancy in exporters presentation to the bank.

Application of Spearman Rank Coefficient on responses proves the positive meaningful correlation between increasing the size of export sales with discrepancy in commercial invoice. Outcome is in accordance with principles of ERM by showing the increase in exposure to a particular risk will increase the possibility for its occurrence (Table 6).

Table 5
Type and frequency of discrepancies in Estonian Export DLCs

Number	Type of Discrepancy	Frequency
1	Bill of Exchange	22
2	Commercial Invoice	36
3	Packing List	32
4	Transport Document	30
5	Inspection Certificate	24
6	Certificate of Origin	25
7	Government Certificate	8
8	Late Shipment	19
9	Missed Consignment	12
10	Delivery Schedule	16
11	Presentation after Expiry of DLC	26
12	Missing Documents	21
13	Incorrect of Partial Shipment	14
14	Total	285

Table 6
Correlation between Percentage of Export Sales and occurrence of discrepancy in exporter's presentation

Percentage of Export to Total Sales	B of E	CI	PL	TD	ID	IC	CO	GC	LS	MC	LP	MD	IS
Correlation	.065	.563	.116	.279	.010	-.031	-.212	-.207	.193	.230	.355[*]	.162	.072
Sig. (2 tailed)	.721	.001	.528	.122	.957	.865	.244	.255	.290	.222	.050	.377	.694
N	33	31	32	32	32	32	32	32	32	30	31	32	32

High number of discrepancies faced by Estonian exporters can be a concern as 82% of respondents to survey commented positively on having rejection problem due to documentary discrepancy. The same problem was confirmed by trade finance officers of banks as well available documents in public sphere (ICC Bangkok, 2002). Magnitude of discrepancy is immaterial as any single documentary discrepancy will result in rejection of presentation by bank. According to the data collected from survey, highest level of discrepancy is evidenced in commercial invoice (about 90%) followed by packing list (about 85%) and Transport Document (70%) (Table 5). Surprisingly, number of discrepancies in internal documents are higher than externally produced documents.

The correlation between types of documentary discrepancy and attributes of the export DLC in Estonia is summarized in Table 7. Different types of documentary discrepancies are categorized as: Errors in Bill of Exchange, Commercial Invoice, Packing List, Transport Document, Insurance Document, Inspection Certificate, Certificate of Origin and Government Certificate. Meanwhile, Table 8 provides correlation between attributes of export DLC in Estonia with different discrepancy factors including: Late Shipment, missed consignment in a predetermined delivery schedule, Documents presented after Letter of Credit expiry, Missing documents, Incorrect shipment/partial shipment. Studying the existing correlation between types of documentary discrepancy and attributes of the DLC defined by Estonian exporters shows that detailed knowledge of UCP 600 has nothing to do with different types of discrepancy. Result is in accordance with findings of the

research as detailed knowledge from UCP 600 was not considered an important attribute of the credit by exporters.

In contrary, understanding of the letter of credit process was ranked the most important attribute of the DLC transaction by respondents shows negative correlation with discrepancy in transport document and late presentations. The correlation indicates importance of the attribute in reducing transport document's discrepancy as a third party issued document which is not under the control of exporter as well as reducing late presentations after expiry of the credit resulting in dishonor of the presentation by bank (Table 7).

Prior experience with letter of credit transaction as another important attribute of the credit shows positive correlation with discrepancy in bill of exchange and negative correlation with discrepancy in transport document as well as certificate of origin (Table 7). Result can be explained as increasing the number of letter of credits used in export business will increase the exposure of Estonian international business activists with risk of discrepancy and this is visible in positive correlation of discrepancies in bill of lading. However, prior experience with DLC operation shows negative correlation with discrepancy in Transport Document and Certificate of Origin (Table 7). As both documents are issued by third parties, result of study indicates that gaining experience in DLC operation will help exporters in reducing discrepancy in externally issued documents by providing issuers with proper instructions. This is in accordance with findings of research as number of discrepancies in externally produced documents are less than internally issued documents.

Table 7
Attributes of DLC and their correlation with documentary discrepancy

Attributes of DLC	Correlation	B of E	CI	PL	TD	ID	IC	CO	GC
Detailed Knowledge of UCP 600	CC Sig. (2-tailed) N	.292 .094 34	.257 .155 32	.212 .236 33	.076 .672 33	-.108 .551 33	.214 .232 33	-.200 .266 33	-.031 .864 33
Understanding of Letter of Credit Process	CC Sig. (2-tailed) N	.244 .165 34	.044 .809 32	.259 .146 33	-.051 .038 33	-.001 .998 33	.161 .372 33	-.046 .798 33	-.035 .846 33
Prior Experience in Letter of Credit Transactions	CC Sig. (2-tailed) N	.412* .016 34	.233 .200 32	.216 .227 33	-.048 .040 33	-.117 .516 33	.308 .081 33	-.140 .038 33	.040 .827 33
Formal Relevant Education	CC Sig. (2-tailed) N	.021 .908 34	-.128 .485 32	-.220 .218 33	-.115 .525 33	.057 .752 33	.010 .956 33	.401* .021 33	.207 .247 33
The Applicant –Beneficiary Relationship	CC Sig. (2-tailed) N	.193 .274 34	. -.337 .059 32	-.036 .843 33	.240 .178 33	.334 .058 33	.004 .984 33	.183 .307 33	-.017 .925 33
The Country of Export	CC Sig. (2-tailed) N	-.201 .262 33	.033 .858 31	-.050 .787 32	-.006 .973 32	-.031 .867 32	.119 .515 32	.208 .253 32	.175 .339 32
Prior History	CC Sig. (2-tailed) N	-.211 .239 33	.105 .574 31	-.145 .427 32	.002 .991 32	-.110 .548 32	-.255 .160 32	-.224 .218 32	-.196 .283 32
The supply demand market forces	CC Sig. (2-tailed) N	-.129 .474 33	.185 .319 31	-.163 .374 32	. .079 .666 32	. .006 .973 32	-.136 .458 32	-.219 .227 32	-.130 .479 32
The Relationship with Presenting Bank	CC Sig. (2-tailed) N	-.052 .776 33	. .224 .225 31	.249 .169 32	.125 .496 32	-.082 .657 32	-.155 .398 32	-.346 .052 32	-.090 .625 32
Common Industry Practices	CC Sig. (2-tailed) N	-.118 .507 34	.096 .601 32	.207 .248 33	.198 .269 33	.152 .398 33	.179 .318 33	.335 .057 33	.325 .065 33

The relationship between seller and buyer as other important attribute of DLC operation does not show correlation with discrepancy in any document. Result can be explained with practical custom of international trade where majority of discrepancies are waived by buyer. Country of export, supply and demand market forces and common industry practices as low importance attributes of the DLC operation do not show any correlation with documentary discrepancy in internally or externally produced documents. Formal education in the area of documentary letters of credit show positive correlation with discrepancy in certificate of origin (Table 7). Reason is not known but it can be relevant to external nature of the certificate of origin as it is not produced by documentary staff in exporter's organization. Prior trading history shows negative correlation with late presentation while relations with bank has positive correlation with the same discrepancy factor (Table 8). Also data in Table 8 indicates that detailed knowledge from the UCP 600 has negative correlation with missing documents. This can be another reason for not considering the knowledge from the UCP 600 by Estonian exporters.

Table 8
Correlation between attributes of the export DLC and discrepancy factors

Attributes of DLC	Correlation	LS	MC	LP	MD	IS
Detailed Knowledge of UCP 600	CC	-.077	.151	.028	-.345*	.131
	Sig. (2-tailed)	.669	.417	.879	.050	.466
	N	33	31	32	33	33
Understanding of Letter of Credit Process	CC	.188	.162	-.308	-.066	.086
	Sig. (2-tailed)	.296	.385	.047	.717	.634
	N	33	31	32	33	33
Prior Experience in Letter of Credit Transactions	CC	.169	.097	.071	.042	.289
	Sig. (2-tailed)	.346	.602	.698	.816	.103
	N	33	31	32	33	33
Formal Relevant Education	CC	.046	-.135	-.169	-.127	-.040
	Sig. (2-tailed)	.799	.469	.355	.482	.825
	N	33	31	32	33	33
The Applicant –Beneficiary Relationship	CC	-.082	.188	-.279	.155	.132
	Sig. (2-tailed)	.650	.312	.122	.390	.463
	N	33	31	32	33	33
The Country of Export	CC	.211	.146	.225	-.183	-.147
	Sig. (2-tailed)	.247	.441	.224	.315	.422
	N	32	30	31	32	32
Prior History	CC	-.013	-.198	-.380*	-.274	-.010
	Sig. (2-tailed)	.942	.295	.035	.129	.955
	N	32	30	31	32	32
The supply demand market forces	CC	-.074	.014	.209	-.297	-.124
	Sig. (2-tailed)	.688	.942	.259	.099	.500
	N	32	30	31	32	32
The Relationship with Presenting Bank	CC	.180	.317	.381*	-.025	.279
	Sig. (2-tailed)	.324	.083	.035	.892	.122
	N	32	31	31	32	32
Common Industry Practices	CC	.095	.105	.120	.102	-.004
	Sig. (2-tailed)	.599	.575	.514	.571	.984
	N	33	31	32	33	33

CONCLUSION

Choice of the method of payment is a way to reduce such risk. Documentary Letters of Credit can be good method for mitigating the risk of payment at it will be shift from importer to a bank with stronger credit standing. However, documentary credits are conditional guarantee of payment which depend payment to exporter completely on presentation of compliant documents to the bank within the expiry date of the credit. At the same time, they have a completed process of operation which needs a high level of expertise to operate

smoothly. Study of the export letter of credit discrepancies in Estonia shows that majority of the discrepancies are relevant to interlay produced documents. This can be solved by implementation proper process management techniques within the Estonian exporter's organization. Since existence of documentary discrepancy in DLC transaction can result in rejection of presentation by bank and impose costs of rectification on exporter or in worst scenario end of in bad debt due to documentary rejection, it is necessary for Estonian exporters to look for implementing methods to reduce problems on the way to produce compliant documents. Such solutions can be implementation of Enterprise Risk Management methods, use of process management and process engineering method to create a high accuracy procedure on the way to documentary production including: examination of the accuracy of documents and also proper communication with external parties who are involved in production of third party documents stipulated in the credit. Also Constant training of staff and employing experience documentary staff will reduce the risk of producing discrepant documents. Such efforts will reduce the amount of loss at micro and macro level in Estonian export environment substantially.

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