



25-28 June 2016 Hotel Danubius Health Spa Resort Margitsziget****, Budapest, Hungary

Creative Construction Conference 2016

Success Factors of Export Financing under the Buyer's Credit Scheme

Jan Pícha*, Aleš Tomek, Renáta Schneiderová Heralová

Department of Construction Management and Economics, Faculty of Civil Engineering, Czech Technical University in Prague, Thákurova 7, Praha 6, 166 29, Czech Republic

Abstract

Buyer's credit is a very useful mode of exporting in international construction especially in relation to extensive infrastructure projects. Large projects usually require substantial amounts of liquidity provided by banks. Importers seldom have enough own resources to cover the entire capital expenditures, while only few exporters have the capacity to provide credits to their buyers. The concept usually requires the participation of financial institutions on the exporter's as well as the importer's side. Many contractors still fail in their exporting attempts at the very beginning, due to the shortage of experience in this matter. Based on the literature review, foregoing research and exploratory interviews with trade finance specialists, the list of seven factors contributing to a successful project execution under the buyer's credit scheme was compiled. This research analyses and compares the perceptions of Czech and German export finance practitioners. Research findings were derived from their empirical evaluation collected through structured questionnaires. For the purposes of this research, quantitative methodology was adopted. The main objective of this study is to prioritize these factors, increase their understanding and provide a route map to exporters considering the application of this advanced financing scheme. The authors argue that there are only minor differences between the perceptions of Czech and German exporters.

Keywords: buyer's credit, export financing, international construction, success factors.

1. Introduction

Many construction companies are searching for new possibilities of their expansion. The domestic market sometimes does not offer a sufficient scope of projects enabling them to sustain their growth. In many cases, the only remaining option is to penetrate new foreign developing territories with a promising revenue potential. Developing markets also represent substantial risks of various kinds such as political risks, currency risks, performance risks or territorial risks. These conditions are compensated by significantly higher profit margins, compared to projects in well-developed economies. Such a profit potential becomes the main motivation for foreign contractors to enter these markets. The buyer's credit scheme has become a widely applied tool for entering developing markets, where investors do not have a chance to reach the financing of their projects locally. Despite the increasing number of projects executed under this concept, there are still many projects failing. The statistical background provided by the Berne Union [2] or ECAs (Export Credit Agencies) across the world demonstrate solid volumes of credit insurance claims being paid. On the other hand, an extensive number of projects were successfully delivered and export credits were paid back as scheduled, which can be deemed as a firm reference base for future projects which are supposed to be ECA-covered. The purpose of this study is to examine the key factors leading to the successful project execution under the buyer's credit export financing scheme through comparing the perceptions and attitudes of Czech and German practitioners gained via a questionnaire survey.

* Jan Pícha. Tel.: +420 734 236 456; fax: +420 224 355 439
E-mail address: jan.picha@fsv.cvut.cz

As a result of the recent global economic crisis, many exporters and bankers have found themselves seeking state support for their international transactions. Such support exists in the form of export credit insurance and guarantees provided by national export credit agencies (ECAs) to support national exports [11]. The role of credit insurers has rapidly grown since mid-to-late 2008 when the crucial importance of trade finance and credit insurance to support international trade flows became apparent in the deteriorating global economic environment [8].

2. Previous research on success factors of export financing

There are several studies associated to construction exports and project success factors. Gale and Luo [5] conducted quantitative research on the factors affecting construction joint ventures in China. The perceptions of Chinese and foreign executives were compared. Success factors were prioritized according to the perceptions of both groups of respondents. The study concluded that there were no significant differences in the perceptions of both examined groups. One recent study [10] identified exporter's eight key success factors of project delivery under the export financing concept in construction. The qualitative approach was selected. The factors were gained through case study analysis and supplementary interviews. The authors also highlighted the crucial role of export and credit agencies in these structured export transactions. Another study proved that bringing project construction together with secured project financing results is the key success factor in developing markets which enables export-oriented firms to succeed in highly competitive international bids [9]. Recently, there were several studies conducted on the factors associated with success in exporting [4,6,12]. These empirical studies are bringing valuable findings about the exports of goods in the manufacturing segment and the improvements of models that investigate selected determinants of export performance. Babakhani and Haji [1] in their study prioritized important factors on boosting exports; the factors were gathered by using a brainstorming discussion. Among other findings, the important role of the government was discussed in terms of setting suitable regulations and providing subsidized credits and tax exemptions.

3. Methodology

The first qualitative part of this research was developed based on an extensive review of academic literature and the reviews of several case studies related to export financing under the buyer's credit scheme. In this study, the authors applied the outcomes of their former research on export finance [9,10]. A number of supplementary interviews with managers of construction firms and export finance specialists were conducted.

As a result, seven factors leading to successful project execution under the buyer's credit scheme were compiled. The identified success factors (variables) are:

1. Strategic character and political support of the whole project
2. Positive country risk classification based on OECD Consensus
3. Exporter's experience with export financing
4. Exporter's long-lasting track record and stability
5. High credibility of the foreign investor
6. Significant share of technologies and deliveries from domestic suppliers
7. Knowledge of the foreign market environment gained through smaller projects

3.1. Questionnaire design

The questionnaire was designed to prioritize the formerly identified critical success factors of export financing under the buyer's credit scheme for two groups of respondents based on their empirical evaluation. The parallel task was to compare and analyze the perceptions of these two groups. In order to prioritize the selected success factors and increase our level of understanding, the Likert [7] scale from one to five was applied. Each statement was structured in the following form "*...contributes to successful project execution under the buyer's credit scheme*". The statements were based on the expectation that Czech and German experts may have different opinions on the topic in view of their different perception, land specifics and cultural background in relation to export in the construction sector. Five ordered response levels are used, although many psychometricians advocate using seven or nine levels; see an empirical study [3]. For the purposes of this research, the respondents were asked to specify the level of their agreement with each statement on the symmetric agree-disagree scale ranging between 1 and 5, whereas 1 stands for strong disagreement with the statement and 5 stands for strong agreement with the statement. In order to increase our level of understanding, the respondents were enabled to write down their comments and reasoning to their evaluation, which became an additional and valuable source of qualitative data.

3.2. Data collection

The essential point of this research was the dutiful selection of its respondents. The main precondition for the respondent selection was their qualification and experience, leading to proper understanding of the topic, in order to make sure only qualified answers would be collected. The targeted group of the respondents consisted of top managers from renewed construction companies focused on exporting, structured export trade finance specialists, representatives of national ECAs and development banks. For each group, 50 respondents were addressed with an anonymous research questionnaire.

3.3. Data analysis and hypothesis testing

Data analysis was undertaken in MS-Excel for Windows. The hypotheses were calculated by using the two-tailed t -test. The two-tailed t -test is an alternative way of computing the statistical significance of a parameter inferred from a data set, in terms of the test statistics. At first, means, standard deviations and variances for both groups were calculated; hereafter all 7 variables were ranked in the descending order of importance. The two-tailed t -test was executed in order to find out whether there are any statistically significant differences between the two different sets of observations (Czech and German respondents). By the application of the t -test, a deeper analysis of the two datasets was made and the differences between each of the seven variables were better examined. The significance level of 0.05 was selected for the test. The t -value was determined according to the results of the F -test, which was calculated beforehand.

For $F \leq F_{0,975}$ where $H_0: \sigma_1^2 = \sigma_2^2$, the following formula was applied:

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2} \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}} \quad (1)$$

For $F > F_{0,975}$ where $H_0: \sigma_1^2 \neq \sigma_2^2$, the following formula was applied:

$$t = \frac{|\bar{x}_1 - \bar{x}_2|}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}} \quad (2)$$

4. Results

Out of 50 questionnaires sent to Czech or German respondents, a total of 39 or 36 fully filled in questionnaires returned. The response rate thus equals the excellent 78% and 72% respectively. Such a high response rate can be attributed to the active personal involvement of the researchers as well as to close professional connections to some of them. Several respondents asked additional questions to make sure they fully understood the topic. Many respondents also took advantage of the possibility of writing comments on single statements and their evaluation. This frequently helped the authors to better understand the reasoning of some respondents, which simultaneously had a positive impact on the overall level of understanding of their perceptions. Table 1 summarizes the main findings in terms of ranking all success factors. The results of the t -test are demonstrated in Table 2.

Table 1. Comparison of two groups' means and rank orders

Variable	Mean		S.D.		Rank	
	CZ	DE	CZ	DE	CZ	DE
Strategic character and political support of the whole project	4.21	3.61	0.69	1.01	4	5
Positive country risk classification based on OECD Consensus	3.85	3.58	1.12	1.01	6	6
Exporter's experience with export financing	4.41	4.17	0.49	0.69	2	1
Exporter's long-lasting track record and stability	4.26	4.00	0.63	1.00	3	2
High credibility of the foreign investor	4.46	3.94	0.59	0.62	1	3
Significant share of technologies and deliveries from domestic suppliers	3.13	3.22	1.24	0.79	7	7
Knowledge of foreign market environment gained through smaller projects	3.92	3.67	1.16	0.75	5	4

CZ, Czech respondents; DE German respondents; Scale: 1 = Strongly disagree, 2 = Disagree, 3 = Partially agree, 4 = Agree, 5 = Strongly agree

Table 2. Results of the *t*-test for two groups (two-tailed)

7 individual items	Degree of freedom	<i>t</i> -Value	Two -tail sig. (<i>P</i>)	Null hypotheses
Strategic character and political support of the whole project	73	3.00	0.005	Rejected
Positive country risk classification based on OECD Consensus	73	1.06	0.298	Accepted
Exporter's experience with export financing	73	1.78	0.089	Accepted
Exporter's long-lasting track record and stability	73	1.34	0.199	Accepted
High credibility of the foreign investor	73	3.69	0.001	Rejected
Significant share of technologies and deliveries from domestic suppliers	73	-0.39	0.698	Accepted
Knowledge of foreign market environment gained through smaller projects	73	1.13	0.263	Accepted

$P < 0.05$

4.1. Perception of key success factors

The statistical results suggest that the perceptions of Czech and German specialists are very similar in many aspects. The factors No. 3, 4 and 5 were identically ranked among the top three success factors, even though in a different rank-order. In other words, the Czech and German specialists appear to feel strongly that the *exporter's experience with export financing, the long-lasting track record, stability and high credibility of the foreign investor* are the most crucial success factors. Their standard deviations (SDs) corresponded to the shape of the distribution of variables around the mean values. The final ranking of the remaining four factors shows that there is a general correlation in the ranked order. The Czech similarly as the German experts viewed a *positive country risk classification based on the OECD Consensus* as well as the *significant share of technologies and deliveries from domestic suppliers* as the sixth or seventh most important success factor. In terms of mean values, differences were observed between the mean values of the Czech and German respondents for the two factors: *strategic character and political support of the whole project* (4.21 and 3.61) and *high credibility of the foreign investor* (4.46 and 3.94). The differences in these means were found as statistically significant on the 0.05 level.

4.2. Strategic character and political support of the whole project

Political support as well as the involvement of the government on either a local or national level may accelerate the bureaucratic procedures during the project planning phase or the construction itself. A few respondents pointed out that projects with a strategic background are more likely to be granted insurance from ECA. For this factor, the study identified a significant difference in the groups' perceptions. The Czech practitioners expressed a high level of agreement (mean 4.21), while the German respondents remained more conservative with the overall mean

score of 3.61. They frequently stated that strategic character and political support may play a vital role predominantly in public projects in developing countries, while the factor's significance decreases with projects in the private sector.

4.3. Positive country risk classification based on OECD Consensus

Regular country evaluations by OECD are directly linked to the country's eligibility for subsidized export credits, including minimal interest rates to be charged. Compared to other examined factors, the country risk classification reached relatively low scoring from both groups (means 3.85 and 3.58 respectively), even sample SDs appeared to be the same. A number of respondents expressed their opinion that risk classification is critical in the initial project phase when stakeholders consider their participation in the project. It was also commented that a positive country rating is associated with trust and a stable economic environment which are the necessary preconditions for a successful completion of every project. Contrary to these statements, it was also stressed that many buyer's credit-based projects were successfully completed even in poorly ranked developing countries.

4.4. Exporter's experience with export financing

Exporter's former experience with the export financing scheme was highly evaluated by both groups. It was top ranked by the group of German respondents with the mean score reaching 4.17 points. Interestingly, the Czech respondents granted it even a higher score of 4.41, which is the second most important success factor of project execution under the buyer's credit scheme from their prospective results. According to the result of the *t*-test, the evaluations by both groups do not show any statistical difference. There is clear evidence that exporters' familiarity with the entire financing scheme as well as their understanding of all associated duties and risks lead to project success. ECAs deem former experience with the scheme crucial when considering the credit insurance of large credit volumes associated with extensive projects.

4.5. Exporter's long-lasting track record and stability

Exporter's long term stability minimizes the performance risk, which is a frequent cause of project failures, regardless of the way they are financed. Both the Czech and German respondents pointed out that stability and long-lasting track record are deemed as crucial success factors for project completion from the view of the foreign investor, ECA and the financing bank. Very similar mean scores can be observed. This factor was ranked as the second most important success factor by the German respondents and as the third most important factor from the Czech perspective (score 4.00 and 4.26 respectively). The companies without a strong base and sufficient reserves may find themselves in a difficult situation caused by the failure of their single project, which may consequently have a negative impact on their overall stability.

4.6. High credibility of the foreign investor

Investor's credibility remains a necessary precondition for the application of the buyer's credit scheme. Some managers pointed out that investor's credibility plays a vital role before the export credit and ECA cover are granted. Others highlighted the necessity of the investor's stable profile during the entire project. Both groups of the respondents expressed a high level of agreement with the statement. With the mean value of 4.46, the Czech managers consider it the most important success factor, whereas the German respondents evaluated foreign investor's credibility as the third most important factor (mean of 3.94). Standard deviations of 0.59 and 0.62 show a very low level of dispersion.

4.7. Significant share of technologies and deliveries from domestic suppliers

Every project applying for credit insurance provided by ECA has to fulfill the minimal share of supplies from the exporter's country of origin, which is one of the necessary preconditions set by the OECD Consensus. This factor was poorly ranked by both the Czech and German specialists, earning the score of 3.13 and 3.22. A very low level of agreement was thus expressed with this factor. Low scores were later on explained by the problems which may arise during cross-border supplies in terms of market protection mechanisms. These may account for the necessity of import permissions and additional taxes on imported goods, which may cause additional difficulties and increase the project cost. A significant share of deliveries from the exporter's country of origin remains a necessary precondition in terms of the subsidized ECA cover, but its overall impact on the project delivery remains questionable.

4.8. Knowledge of the foreign market environment gained through smaller projects

Smaller pilot projects enable the exporter to get familiar with the conditions and specifics of the selected export market. The factor was ranked in the top fifth or fourth position with means of 3.92 and 3.67. It was frequently commented that the connection to local officials and supply chains significantly facilitated daily operations during the planning and construction phase. Several respondents argued that companies can learn from relevant experience gained through executed pilot projects. It helps to avoid unnecessary pitfalls in the future thanks to valuable lessons learned in the past. Small pilot projects were also strongly recommended for testing new concepts of operation. Small-sized projects also better limit potential losses from activities undertaken in unexplored new territories.

5. Conclusion

The study reveals that in general there is no significant difference between Czech and German export finance practitioners. The factors were prioritized according to their evaluation. This empirical research proved that the success is closely associated with exporter's experience in export financing, exporter's long-lasting track record and stability and high credibility of the foreign investor. These three factors were top ranked by the experts representing the Czech Republic and Germany, the two highly-developed export-oriented economies. Relevant experience and the possession of export know-how thus remains the best qualification for project delivery under the buyer's credit scheme. In order to increase their qualification, construction firms may gain their first experience through project-based joint ventures or via entry into small pilot projects. The findings also imply that both groups have significantly different views on projects' strategic character and their political support as well as high credibility of foreign investors. Despite the findings of this study, the area of success factors in export financing under the buyer's credit scheme still remains a field which deserves further attention and continuing academic research.

References

- [1] Babakhani M., Haji H. A. A., An empirical study to determine the critical success factors of export industry, *Management Science Letters* 1 (2011) 23-28.
- [2] Berne Union, Statistics 2010-2014.
- [3] Dawes, John (2008). "Do Data Characteristics Change According to the Number of Scale Points Used? An experiment using 5-point, 7-point and 10-point scales". *International Journal of Market Research* 50 (1): 61–77.
- [4] Farokhian S., Sadeghi T., Esmaili H. R. (2010), The Effective Factors on Increasing the Export from the Iranian Exporters' Standpoints, *Asian Journal of Business Management Studies* 1 (2): 26-29.
- [5] Gale A., Luo J., Factors affecting construction joint ventures in China, *International Journal of Project Management*, Volume 22, Issue 1, January 2004, Pages 33–42.
- [6] Holzmüller H. H., Stöttinger B., Structural Modeling of Success Factors in Exporting: Cross-Validation and Further Development of an Export Performance Model, *Journal of International Marketing*, Vol. 4, No. 2 (1996), pp. 29-55.
- [7] Likert, R. (1932). A Technique for the Measurement of Attitudes. *Archives of Psychology*, 140, 1–55.
- [8] Morel, F. Trade finance during the great trade collapse, Library of Congress, p.337.
- [9] Picha, J., Tomek. A. (2013). Case study: Export financing as a key driver in international expansion for engineering firms. *Journal of American Business Review*, Vol. 1, (2), 105–110.
- [10] Picha J., Tomek A., Ryšavá L. (2014). Export financing in international construction: Case study of Siemens power division in Oman, *Procedia Engineering*, Volume 78, Elsevier, 1877-7058.
- [11] Salcic, Z., Export Credit Insurance and Guarantees: A Practitioner's Guide, Palgrave Macmillan, 2014.
- [12] Tookey D. A. (2007). Factors Associated with success in exporting, *Journal of Management studies*, Vol. 1, Issue 1, 48-66.