The 4th International Workshop of Innovation and Technologies (IWIT 2022)
October 26-28, 2022, Leuven, Belgium

Exporters' risk perceptions during covid times: a study with Colombian and Brazilian SMEs

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Abstract

The present study aims to provide an initial highlight on risk perceptions of exporting SMEs from Latin America during the covid-19 pandemic. A sample of Colombian and Brazilian companies was analyzed using 24 scenarios based on 8 risk types: contamination risk, exchange rate risk, trade risks, logistics and operations risks, risk of policy and regulation changes, credit risk, supplier-related risks, buyer-related risks and employee-related risks. Results show significant differences between countries as well as a highly distinction between 2020 and 2021 perceptions of threat, impact, loss, and likelihood.

Keywords: Risk management; Risk perception; Exporters; SMEs

1. Introduction

Risk perception is a key factor in decision-making and can be even more critical to managers than formal risk measures or available explicit data [14], [20]. Especially in SMEs, risk perceptions may result in the main source of decision since data and resources tend to be limited [1], [12].

In Latin America, the SMEs correspond to almost the totality of active business [8] therefore representing the foundation of the market and a productive environment to study organizations of these sizes. Besides the survival

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challenges traditional to SMEs' nature, Latin American companies face an additional one when it comes to international operations: start and maintain exports [3], [15], [16]. Due to the relevance of this difficulty, exporting SMEs are even more likely to close or at least suspend international participation, converting into domestic business, which represents a significant concern to local economies [9].

The covid-19 has affected markets significantly and the amplitude of its consequences are still being understood by both academics and practitioners [2]. Understanding its impacts and the changes created are not only relevant to map current and recent past scenarios, but also supports the comprehension of current context variables as well as provides insights for future similar or comparable events.

Based on this perspective, the present study aims to analyze the risk perception of exporting SMEs in Latin America during the years of 2020 and 2021. This is a preliminary study with the intention to highlight relevant aspects of this discussion. In this paper, the results presented correspond to the sample of Colombian and Brazilian companies with the purpose of future expansion of data to represent the variations and specificities of each country of the region.

2. Theoretical background

The literature regarding risk perception in SMEs during the pandemic and reporting related data from 2020 and 2021 is, to our knowledge, still very limited. Between the few papers that address the topic, no direct correspondence to this approach was found. Nevertheless, it is suitable to highlight some relevant connections. Grondys et al. [13] presented an overview of economic, financial, and operational risk perceptions in Polish SMEs during the first year of the pandemic but do not focus on export operations *per se*.

Therefore, aspects relevant to this type of operation were not specifically covered. Also, since risk perception metrics were not presented in detail, any direct replication of the study would not be feasible. Still, this reference was used as a source to develop this study's data collection tool. Abu Hatab's work [1] adapted risk measurements to understand risk perceptions, applying the risk matrix's dimensions (e.g. severity, likelihood and immediacy) to provide a quantitative overview.

In this paper, we understand risk perception as different than risk estimates, as it is, in some contexts, not possible to base decisions on previous data and also that managers might trust their interpretation of risk (perception) more than information itself [12], [18]. Therefore, this article represents a different approach towards risk perception. Another important ponderation is related to context as Abu Hatab et al. [1] focuses on agri-food related events in the the Egyptian market.

Ključnikov et al. [12] present an analysis of the risk perception of exporting SMEs in Visegrad countries, however the context in Latin America is very distinct and the economic as well as the regulatory environment differences would already justify further studies in different regions. Also, the comparative analysis between the countries focuses on legislative differences, tax differences and linguistic differences, understanding the risk as more of a barrier than an event. Additionally, although the article presents data from 2022, no covid-related analysis was presented. Based on this scenario, the present paper is considered as an exploratory approach to the topic.

3. Methodology

Considering the limited literature referring to risk perception of exporters during the covid-19 pandemic and, more specifically, on the context of Latin America, this study was proposed as an exploratory and preliminary research, focusing on the variables presented on Table 1.

Table 1. Research variables

Type of risk	No. of Scenarios	References
Contamination risk	3	[2], [19]
Exchange rate risk and loss of currency value risk	2	[6], [17]
Trade risks	2	[4], [5]
Logistics and operations risks	4	[7], [11]
Risk of policy and regulation changes	4	[2]
Credit risk	3	[10], [17]
Supplier-related risks	2	[16]
Buyer-related risks	2	[16]
Employee-related risks	2	[16]

The risk types were extracted from the literature, as shown in Table 1 and transformed into specific scenarios. Previous literature supports this approach, as the use of specific events can be source of risk perception analysis as a possible or current situation [14], [20]. Although Munim et al. [16] did not focus on risk management but presented management responses applied by export-oriented firms, the items were also converted into scenarios, following previous literature parameters [14], [20]. Based on the risk types, specific scenarios were proposed in order to specify different approaches towards the same category. Due to its complexity, logistics and regulations were the risk types with most proposed situations. The survey was structured by presenting each risk type's event followed by the instruction based on Sitkin and Weingart's original scale [20]: "Considering the aforementioned example, how would you characterize this situation?". The items followed the original paper: (1) 1 = significant opportunity to 7 = significant threat; (2) 1 = potential for loss to 7 = potential for gain (reverse scored); (3) 1 = positive situation to 7 = negative situation. The fourth item was based on the likelihood of occurrence, also following the original study, being the possible responses: (4) 1 = very unlikely to 7 = very likely (reverse-scored). As the risk perception scale of the original study responses from 1 to 7, it was maintained for this data collection. The managers were asked to respond the questions considering their perceptions in 2020 and 2021 as two different sets of questions. In order to reduce the interference of one year's response in another, the individuals were asked to provide a short description of the correspondent year at the beginning of the survey, before answering the specific questions. Although this is not a longitudinal study, the intent of this analysis is to measure current risk perceptions of 2020 and 2021 scenarios since the development of the pandemic during these two different years might affect the managers responses significantly. Also, this research intends to provide highlights on the topic from an ex-post-facto approach, since studies from this period were not, to our understanding, published from this perspective regarding the Latin American context. The lack of studies, which limits possible comparisons and leaves a gap of understanding of the phenomena, also provides us an opportunity to design the study under this approach.

The data collection tool was written in 2 versions - in Spanish and Portuguese - by a bilingual researcher and cross-translated by one native-speaker of each respective country to avoid any loss in terms of meaning and content. Survey was sent online to general managers and CEOs. The companies contact information from each country were extracted from previous database of the participant universities, resulting in an initial amount of 237 SMEs (128 brazilian and 109 colombian organizations), resulting in 87 valid responses (48 from Brazil and 39 from Colombia). Considering the number of responses obtained, descriptive statistics were the prior form of data analysis. Student's T-test confirmed that samples were significantly different ($p > 0,05$) which first confirms that, for this sample, overall risk perception is different in each country but also requires data to be analyzed separately.

4. Results and discussions

Regarding the risk perception of threats, Table 2 presents the changes in behavior in both samples during the analyzed period, which can lead to infer that priorities in terms of mitigation and response might also be different, since the change in perception tends to affect decision-making [14].

Table 2. Ranking of risk perception regarding critical threats

	Brazil		Colombia	
	2020	2021	2020	2021
1	Buyer-related risks	Risk of policy and regulation changes	Contamination risk	Contamination risk
2	Risk of policy and regulation changes	Buyer-related risks	Buyer-related risks	Risk of policy and regulation changes
3	Contamination risk	Employee-related risks	Supplier-related risks	Buyer-related risks
4	Supplier-related risks	Credit risk	Logistics and operations risks	Exchange rate risk and loss of currency value risk
5	Employee-related risks	Exchange rate risk and loss of currency value risk	Exchange rate risk and loss of currency value risk	Employee-related risks
6	Exchange rate risk and loss of currency value risk	Contamination risk	Risk of policy and regulation changes	Credit risk
7	Credit risk	Logistics and operations risks	Trade risks	Logistics and operations risks
8	Trade risks	Trade risks	Employee-related risks	Supplier-related risks
9	Logistics and operations risks	Supplier-related risks	Credit risk	Trade risks

Table 3 presents the analysis of the critical aspects mentioned as potential source of loss and potential negative outcomes, considering an integration of 2020 and 2021's results.

Table 3. Perception of potential loss or negative outcome – top 3 ranking

	Brazil		Colombia	
	Potential loss	Potential negative outcome	Potential loss	Potential negative outcome
1	Credit risk	Supplier-related risks	Supplier-related risks	Buyer-related risks
2	Risk of policy and regulation changes	Buyer-related risks	Risk of policy and regulation changes	Employee-related risks
3	Employee-related risks	Exchange rate risk and loss of currency value risk	Credit risk	Logistics and operations risks

The likelihood analysis considered the mean of each group of respondents as a continuous scale (as 1 being "very unlikely" and 7 being "very likely") as presented in Table 4.

Table 4. Likelihood perception

Risk type	Brazil		Colombia	
(Integrated results)	2020	2021	2020	2021
Contamination risk	5,27	3,62	6,44	2,33
Exchange rate risk and loss of currency value risk	4,46	4,12	4,94	4,37
Trade risks	4,56	4,25	5,24	4,7
Logistics and operations risks	4,95	3,94	5,73	3,89
Risk of policy and regulation changes	5,46	4,94	6,22	5,49
Credit risk	5,96	5,4	5,36	4,91
Supplier-related risks	4,92	2,89	5,82	3,27
Buyer-related risks	5,89	4,65	5,96	4,42
Employee-related risks	4,3	3,5	5,17	4,44

Despite the waves of contamination extending to 2021, SMEs risk perception regarding the likelihood of contamination of both people and products decreases significantly, which may be related to the reduction of

government safety measures. Exchange risks appear to have low variation on the same period, which raises the possibility that this specific risk perception not being affected in the same intensity or exclusively by covid-19. The same is visible in brazilian results for trade and credit risks. It is relevant to notice that, opposite to SMEs perceptions, economic reports show explicit and significant exchange rate variation in both countries during this period [8]. The lower concern of brazilian companies regarding employee risk is a result that might be related to local-specific employment issues that might require further analysis and data collection. Deepen understanding of law and regulation in Colombia may also support the high level of risk perception regarding this topic, although recent elections are also a topic to consider as a potential related event. Colombian SMEs evidenced a noticeable higher employee-related risk perception than contamination, which leads to infer that health is not the key issue in company-employees relationship at the moment. Buyer-related risks present the most similarity between the two groups and higher risk perception in 2020 is consistent with the higher level of market uncertainty of this period [8].

It is noticeable that the likelihood results do not correspond entirely to the perception of loss, negative outcome and threat, which not only reinforces the dimensions of the initial scale, but also highlight the importance of deepening the understanding of risk perception in exporting SMEs. Based on these results, the decision to prioritize mitigations focused on likelihood, for example, might not be the best approach, since loss and threat point to a different direction.

5. Conclusions

As previously mentioned, this is a preliminary study that intends to contribute with the discussion of exporters' risk perceptions, mapping specific behaviors towards risk in order to provide initial data on the so far most critical period of covid-19 at the same time that provides highlights for further expansion in the discussion on Latin American contexts as well as the comparison among different risk events. Considering the limited number of SMEs on this sample, it is relevant to notice that differences related to sector, size and region were not part of the analysis and might lead to important and groundbreaking findings. At the same time, larger samples are required to provide more country representativeness to results as well as confirm tendencies. Therefore, additional studies are critical to understand the risk perception scenario in Latin American's exporting SMEs. Moreover, complementary variables may be adapted to amplify comparison potential with studies as Ključnikov, A. et al [12].

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