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Revisiting the moderation effect of network on the export barrier –export performance in the Cameroon context

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Abstract

The performance of small and medium size enterprises (SMEs) is an important determinant of economic development, especially in developing countries like Cameroon. However, due to financial constraints, SMEs in Cameroon do face significant challenges to exporting, which affect their export performance. Many SMEs develop relationships with financial institutions to benefit from loans to overcome export barriers. However, there is no evidence as to whether such benefits help them overcome the limitations of their financial constraints to improve their export performance. Using data from the World Bank Enterprise Survey 2016 in Cameroon, we examine the moderation effect of loans as a benefit of networks on the relationship between financial constraints and export performance for SMEs in Cameroon using regression analysis. Our results show that financial constraints negatively affect export performance. The moderation effect was significant but negative which means the benefit of network (loans) was not enough to offset the negative effect of financial constraints on export performance. Studies on export barriers and export performance for SMEs in Cameroon are scarce and our research provides some policy and managerial implications to help SME exporting in Cameroon.

1. Introduction

While extant research has focused more on the cost-effect relationship or estimation of effect (e.g., the effect of X on Y), Gelman and Imbens (2013); Gelman (2011) argued that the question of "what causes Y?" is statistically important as well. This is because reverse causal inference motivates studies on the estimation of effects; it is used for model testing and the development of hypotheses (Gelman and Imbens, 2013). We adopt Gelman and Imbens (2013); Gelman (2011) to test the hypotheses of Sinkovics et al., (2018) on the negative effect of internal barriers on firm export performance and whether or not the benefit from networks could mitigate the negative effects of the internal barriers on firm export performance. Our analysis is based on the World Bank Enterprise Survey (WBES) data for Cameroon.

Exporting is considered one of the most common means of internationalisation for Small and medium size enterprises (SMEs) (Kahiya and Dean, 2014; Sinkovics et al., 2018; Samiee and Chirapanda, 2019; Altintas et al., 2017; Ojala and Tyrväinen, 2007; Suarez-Ortega, 2003; Rahman et al., 2017; Manolopoulosa et al., 2018; Leonidou, 2004; Julian and Ahmed 2005; Arteaga-Ortiz and Fernández-Ortiz, 2010).Through exporting, SMEs could benefit from better-performing markets to improve their performance. Such improved performance accelerates economic development, especially for less developing economies where SMEs contribution cannot be overemphasised (Rahmanet al., 2017; Olawale and Garwe, 2010; Milanzi, 2012). The case of Cameroon is not different (Njinyah, 2018). Statistics from the World Bank show fluctuating contributions of exporting as a percentage of GDP from the 1960s to the 2000s. However, between 2012 -2017, the contribution of export as a percentage of GDP has been on a decline (World Bank, 2018). This includes 26.11% in 2012, 25.56% in 2013, 24.93% in 2014, 22.25% in 2015, 19.23% in 2016, and 18.58% in 2017. Moreover, this decline in the contribution of exporting to GDP seems to correlate with the unfavourable business climate, which has seen the country ranked 147th in 2005, 152nd in 2006, and again 164 in 2008 for ease of doing business (World Bank, 2018).

A general characteristic of SMEs in Africa is their resource scarcity (Tesfom et al., 2006; Milanzi, 2012; Njinyah, 2018;Rahman et al., 2017; Olawale and Garwe, 2010; Ojala and Tyrväinen, 2007). Evidence from the World Bank Enterprise Survey (WBES, 2016) in Cameroon ranks a lack of access to finance as the most significant obstacle hindering the activities of SMEs in Cameroon. Lack of access to finance as an obstacle is also greatest inSouth Africa (Olawale and Garwe, 2010) and Tanzania (Milanzi, 2012).Lack of access to

finance is a home institutional constraint or barrier to exporting (Manolopoulosa et al., 2018). Lack of finance as an export barrier limits the exporting activities of SMEs, and this negatively affects their performance (Sinkovics et al., 2018; Rahman et al., 2017; Samiee and Chirapanda, 2019;Altintas et al., 2017; Suarez-Ortega, 2003; Milanzi, 2012; Julian and Ahmed 2005). Overcoming such a barrier is, therefore, key to improving performance.

Research suggests SMEs can overcome the negative effects of lack of access to finance on their performance through the benefit of networking (see Samiee and Chirapanda, 2019; Kohtamaki et al., 2013; Sinkovic et al., 2018). Networks are relationships that firms participate in, which provide resources for their business activities (Dodd and Petra, 2002). The moderating effect of a network is, therefore, based on the benefit that firms get from such networks. Evidence from Sinkovics et al., (2018) suggest networks moderates the effect of internal barriers on export performance. The non-significance of the moderation effect of the external barriers was due to managers' perception of the insignificance of the external barriers (Sinkovics et al., 2018). However, as suggested by Sinkovics et al. (2018), their study was restricted to firms within the UK and suggested the testing of their hypotheses in different contexts with the inclusion of different variables, which may offer interesting findings. Our research aim is, therefore, to use data from the World Bank Enterprise Survey (WBES) on Cameroon to test the moderation effect of network and lack of finance on firm export performance (percentage of sales from export) in Cameroon as a response to Sinkovics et al., (2018).

Many reasons motivate our research. First, the African context is characterised by unpredictable institutional spheres, different from those in advanced economies, which could have an adverse effect on firms (Krammer et al., 2017; Milanzi, 2012; Rahman et al., 2017;Milanzi, 2012).Second, contextual differences suggest findings of such studies could not be applied to less developed economies (Altintas et al., 2017; Uner et al., 2018; Rahman et al., 2017;Milanzi, 2012) and therefore the need to revisit the export barrier – firm performance link inevitable (Kahiya, 2018). Third, testing such hypotheses in developing economies could help us understand the behaviour of firms in such contexts in relation to export barriers, network benefits, and their performance (Sharma et al., 2018; Rahman et al., 2017). Our knowledge about less-developing contexts is, therefore, limited (Krammer et al., 2017). Exporting firms in our research were limited to those with percentage sales from direct and indirect export.

Based on the above, our research contributes to Sinkovics et al. (2018) by achieving the following. First, we have used internationally acceptable data that is available for

verification to test the moderation effect of network and export barriers on firm export performance using new sets of variables. Our result was, however, contrary to Sinkovics et al. (2018) in that the benefit of the network significantly did not mitigate the negative effect of lack of access to finance on firm export performance. This raises further questions as to the application of the extended resource base view in Cameroon given that the benefit of networking was not enough to offset the negative effect of financial constraints. What this means is that the extended resource-based view can be applicable in such context provided the external resources firms get is of high value to offset their limitations. Second, the testing of existing hypotheses in a different context and using different variables have been encouraged and is acceptable as applied in Uner et al. (2018). Using different variables against those that have been explored could provide new insight into our understanding of existing relationships in a context where our knowledge about such studies is very limited (Krammer et al., 2017; Manolopoulosa et al., 2018).

The rest of the paper is structured as follows; a review of literature on export barriers and network and export performance. Thisis followed by the research design based on data from the WBES in Cameroon, data analysis, discussion, and direction for future research.

2. Literature review

2.1. Export barriers and export performance

The resource base view (RBV) focuses on resources being valuable, rare, inimitable, and non-substitutable to achieve competitive advantage (Penrose, 1995). Resources are relevant because they determine (direct and indirect) the firm's competitive advantage and help improve performance (Singh, 2009; Penrose, 1995). The performance difference between firms can therefore be attributed to their level of resources or a unique combination of resources that provides value compared to their competitors. The RBV is widely used in existing studies to understand performance differences in firms but with its limitations. The limitation of the RBV is that it only explains performance differences based on internal resource endowment and does not take into account the external environment in which the firm operates. The external environment in which the firm operates offers an opportunity for networking and the benefit from this network can be used to compensate or complement the internal resources. An important resource that has posed a challenge for many firms in Africa is financial resources (Samiee and Chirapanda Bello and Oloua, 2012; Njinyah, 2018). The lack of financial resources presents a barrier to firms' activities; it discourages investment in R&D, limits expansion strategy and makes it difficult for the firm to capitalise on new

markets. The lack of finance will therefore have a negative effect on the firm's export performance and hence, justifies why the RBV can be used to explore export barriers and their effect on the firm's performance (Kahiya, 2018).

An export barrier could either be attitudinal, structural, or operational, that hinders a firm's ability to initiate, develop, or sustain export operations and could be internal or external (Leonidou, 2004; Arteaga-Ortiz and Fernández-Ortiz, 2010; Silva and da Rocha, 2001; Uner et al., 2013; Tesform et al., 2006; Sinkocivs et al., 2018; Rahman et al., 2017; Milanzi, 2012; Julian and Ahmed 2005).The export barrier under consideration in this research is the lack of finance. Lack of finance was ranked first among all other factors limiting firms' business activities in Cameroon by WBES (2016). Lack of finance is also confirmed as a barrier to export barriers affecting firms in less developed economies (Singh, 2009; Olawale and Garwe, 2010; Milanzi, 2012) and Cameroon in particular (Bello and Oloua, 2012; Njinyah, 2018). The difficulties of accessing finance just as any other barriers will negatively affect firms' export performance as it discourages firms from engaging and committing resources to exporting (Tesfom and Lutz, 2006; Sinckovic et al., 2018; Uner et al., 2018; Julian and Ahmed 2005; Arteaga-Ortiz and Fernández-Ortiz, 2010).

The effect of the lack of access to finance on export performance is based on the manager's perception as to whether it presents an obstacle to the firm's business activities. Therefore, managers indicating that access to finance presents an obstacle to their business activities will have a negative attitude towards exporting, their commitment to export will decrease, and this will negatively affect their performance (Silva and Rocha, 2001; Uner et al., 2018;Milanzi, 2012; Leonidou, 2004; Julian and Ahmed 2005; Arteaga-Ortiz and Fernández-Ortiz, 2010). Lack of finance, therefore, makes it difficult for firms to execute their strategy, and the export development process is negatively affected and, therefore, performance (Kim, 2019). The financial constraint also deteriorates firms' investment and lack of such investment in exporting means limits competition and negative affects export performance (Kazmi et al., 2020). The financial constraint also negatively affects export performance because due to the sunk cost involved in exporting and the time lag between exporting and receiving revenue, many SMEs turn to limit their operations which makes them less competitive in foreign markets (Saeed and Vincent, 2011; Konte and Ndubuisi, 2021; Máñez and Vicente-Chirivella, 2021). This negative relationship between export barrier on export performance is evident in existing literature (e.g., Sinkovics et al., 2018; Suarez-Ortega 2003;Altintas et al., 2007; Leonidou 2004; Tesfom et al., 2006). In Cameroon, the

government has failed to create an enabling environment to support firms (Ngoasong and Kimbuh, 2016), leading to high-interest rates and huge collateral for loans. Again, WBES (2016) in Cameroon suggests that more than three-quarters of firms in Cameroon do not even have access to finance from financial institutions. Indeed, more than 68% say they do not know much about such finance and that such institutions are not very reliable in their context.

H1: There is a negative relationship between financial obstacles and firms' export performance.

2.2. *The network perspective*

Entrepreneurial networks (EN) can be defined as patterns of relationships between individuals, groups, and organizations (Dubini and Aldrich, 1991; Hohenthal et al. 2014; Hoang and Antoncic, 2003). A key aspect of EN is that of resource dependency which explains the need for firms to be dependent on other actors for resources to pursue their business activities (Van and Boone, 2006).

Networks are systems of interrelated actors such as suppliers, consumers, the government and private institutions (Hohenthal et al., 2014). The Network theory posits that for firms to flourish, they have to be able to gain access to external resources, controlled by other firms or individuals (Idris and Saridakis, 2018). Given the fact that SMEs are resource constrained which limits their exporting activities (Idris and Saridakis, 2018), developing such relationships, therefore, helps overcome export barriers by gaining access to resources for their export activities and improves their performances (Ghauri et al., 2014; Singh, 2009).

Important actors within the business environment in Cameroon are the financial institutions (Njinyah, 2018). Developing a relationship with financial institutions help firms build trust and with the availability of collateral, they can request financial assistance such as loans. Many reasons exist as to why firms develop networks to share and obtain resources (e.g., finance), obtain support (e.g., advice), and market information that is controlled by others (Idris and Saridakis, 2018). In an economy like Cameroon, characterised by resource scarcity (Njinyah, 2018), as firms grow, there is a need to develop networks to gain access to resources that are external or controlled by other firms or individuals (Florin et al., 2003; Idris and Saridakis, 2018). Such resources can facilitate export activities by overcoming the negative effects of a lack of finance as an export barrier and improving their performance (Ghauri et al., 2003; Singh, 2009). While networks directly influence export performance, their moderation effect on internal barriers to export performance is also evident in Sinkovics et al., (2018).

While lack of financial resources may be used to explain variations in firm export performance, it does not provide a complete view from the RBV perspective because firms can explore resources that are external to compensate for resource deficiency (Lewis et al., 2010). This interaction between the firm and its external environment to obtain resources from other actors to sustain their competitive advantage provides support for the extended research base view of the firm. Through access to finance as a result of networking with financial institutions, firms can have the necessary resources to invest in R&D and better initiate export activities and improve their export performance. The benefit of the network in this study is the gain of accessing finance via loans. The higher the level of loans from financial institutions, the less the financial obstacles faced by the firm and the combined effect will be a positive increase in export performance because the firm can now pursue export activities more effectively and efficiently. On the other hand, fewer loans from financial institutions will make it difficult for firms to overcome financial constraints and therefore have a negative effect on export performance.

H2: The relationship between financial obstacles and export performance is moderated by the benefit of networking such that the higher the benefit, the less the financial obstacles and the greater the level of export performance.

3. Research Methodology

3.1. Research context and data

The research context is Cameroon, a context that is underexplored and characterised by resource scarcity (Ngoasong 2007). Africa is a fast-growing continent, with an average growth rate of 5percent, with that of Cameroon standing at 3.9percent due to an increase in its population/market (World Bank, 2014). Moreover, the richness and complexity of Cameroon institutions present risks and opportunities for SMEs to either navigate or exploit. Small firms within this context are less transparent (Moro et al. 2015), and with very little information available about their transactions, they find it difficult to potentially benefit from financial institutions in terms of gaining access to loans, and this could affect their performance. Deteriorating ease of doing business in Cameroon (St-Pierre et al., 2015) and Africa, in general, demonstrate how this context could influence our perception of existing hypotheses (George et al., 2016). There are also initiatives taken by the Cameroon government to encourage exporting such as the creation of an industrial free trade zone, the organisation of trade fairs and the development of export promotion programs (Njinyah, 2018). Given the

fact that most of the firms in Cameroon are SMEs, it is important to understand their export performance to be able to influence policy-making.

The data used for this research is obtained from the World Bank Enterprise Survey 2016 (WBES 2016). WBES 2016 data represents the most comprehensive dataset in developing economies and Cameroon, especially. This data, which is obtained from a credible source, eliminates the difficulties of researching the least developed countries. Indeed, Anosike (2008) suggests that the lack of empirical research in Africa could be due to difficulties associated with obtaining reliable data. The WBES data is collected from enterprises across emerging economies using the same methodology (Cumming et al. 2014). Using a random stratified sample, the WBES collects data on a variety of firm variables from manufacturing, service, and other firms, to understand the investment climate in emerging economies. Due to the quality of the WBES data, it is increasingly used in business research (e,g, Cumming et al. 2014; Tajeddin and Carney 2018; Islam et al. 2018; Krammer et al., 2017).

3.2. Measurement of variables

3.2.1. Independent variables

Section 2.1 above describes network as a form of the interrelationship between different actors (Dubini and Aldrich, 1991; Hohenthal et al. 2014; Hoang and Antoncic, 2003). However, it is the benefit that firms get from these networks that matters to them in sustaining their competitiveness. We highlighted in section 2.2 that the network studies in this research are that of the relationship between the firms and the financial institutions that are the main source of support for small businesses in Cameroon. The benefit firms get from this relationship is their access to loans or overdrafts which help them pursue their business activities. In line with this reasoning, we have used access to loans/credit as a resource that could be obtained through networks with financial institutions. The WBES asked respondents, " does the firm has a line of credit from financial institutions?". A response of "1" suggest Yes they do, and "0" suggests No they do not. However, to test the robustness of our analysis, we added other measures of network, such as whether the firm has an overdraft and whether material inputs and supplies used for its production are imported directly. In our measure of lack of finance, we used the question "how much of an obstacle is access to finance to your business?" with a response of "1," suggesting it is an obstacle and "0," suggesting it is not an obstacle.

3.2.2. *Dependent variable*

Export performance is our dependent variable, which was obtained by adding the percentage of sales obtained from direct and indirect exporting. The firms were, therefore, asked the following questions; 1) what percentage of sales is from direct exporting?, 2) what percentage of sales if from indirect exporting?. All sales figures were logged normalise to make the variables compared with others.

3.2.3. *Control variable*

We have control over several variables that could affect performance. We have taken into consideration some firm characteristics that may influence performance. We have therefore controlled for the size of the firm (Singh, 2009; Manolopoulosa et al., 2018) based on the number of employees (micro = < 5 employees; small = ≥ 5 and ≤19; medium = ≥ 20 and ≤ 99 and large = ≥ 100 employees). Respondents had to respond with "1" = small, "2" = medium and "3" = large. We also control for managers' experience based on the number of years of managerial experience. We control for the gender of the manager. The WBES uses the question; the gender of the manager is female with "1" = yes and "0" = no. We control for formal training provided to employees with "1" = yes and "0" = no. Investment in research and development (Rahman et al., 2017) with "1" = yes and "0" = no. Introduction of new products and services with "1" = yes new product/service was introduced and "0" = no. Table 1 below presents a description of the variables.

Table 1: Description of variables

Variables	Description	Source
Export performance	Log of the percentage of sales from direct and indirect exporting	WBES
Lack of finance	A dummy variable whether lack of finance is an obstacle to the firm's business activities with "1" = yes and "0" = no.	WBES
Access to loans	A dummy variable whether the firm has a line of credit or loan from a financial institution with "1" = yes and "0" = no	WBES
Overdraft	A dummy variable whether the firm has a. overdraft from a financial institution with "1" = yes and "0" = no	WBES
Imported materials	A dummy variable whether the firm has used materials directly imported in its production with "1" = yes and "0" = no.	WBES
Managers experience	A continuous variable on how many years of experience do the managers have in the sector. This was logged normalise.	WBES
Training of employees	A dummy variable that indicates whether training is being provided to employees with "1" = yes and "0" = no	WBES
Sector	Categorical variables on which sector of the economy does the firm operates with "1" = manufacture, "2" = retail and "3" = others.	WBES
Product innovation	A dummy variable that indicates whether the firm has introduced a new product in the past three years with "1" = yes and "0" = no.	WBES
Process innovation	A dummy variable that indicates whether the firm has introduced new processes in the past three years with "1" = yes and "0" = no.	WBES
Research and development	A dummy variable that indicates whether the firm has introduced R&D in the past three years with "1" = yes and "0" = no.	WBES
Firm size	A categorical variable explaining the size of the firm with "1" = small firms, "2" = medium firms and "3" = large firms	WBES
Region	A categorical variable explaining the region where the firm is situated with "1" = littoral and "2" = West region.	WBES
Quality certification	A dummy variable whether the firm has an internationally recognised quality certification with "1" = yes and "0" = no	WBES
Website	A dummy variable whether the firm has a website with "1" = yes and "0" = no.	

3.3. Model estimation and analyses

$$Y_i = \beta_0 + \beta_1 A_i + \beta_2 N_i + \beta_3 A N_i + \beta_4 S_i + \beta_5 X_i + \beta_6 F_i + \beta_7 E_i + \beta_8 N_i + \beta_9 G_i + \beta_{10} W_i \text{\texteuro}_i$$

Where Y_i is the dependent variable (annual sales) for an individual observation (with i belonging to the firm). β_0 is the overall intercept, which is the mean of the intercepts of each model. β_{1-9} are the slopes of respective variables. A is access to finance as an obstacle to the firm's business activities. N is the network. AN is the interaction term between access to

finance as an obstacle and network. *S* is the size of the firms. *X* is the sector. *F* is formal training for full-time workers. *E* is the expenditure on R&D. *N* is the introduction of a new product/service. *G* is an internationally recognised quality certification, W is the firm has its website, and ϵ_{ij} is the standard error term.

Table 2 illustrates the correlation statistics between our variables (dependent, independent, and control variables) with the upper and lower figures representing the correlation coefficients and probability levels, respectively. There is often the likelihood of the existence of multicollinearity with cross-sectional data. But because of the robustness in the data collection process used by the World Bank, it was unlikely this will be the case. The WBES uses a range of questions (more than 60 questions) to collect data from different countries. It is therefore difficult for respondents to recall previous answers, and this minimises the occurrence of multicollinearity (Chang, Van Witteloostuijn, and Eden 2010). The WBES also guarantee respondents anonymity in their participation, and it is unlikely that participants could have understood our conceptualisation before completing the question (Podsakoff et al., 2003). Finally, the WBES uses a standardised methodology that is consistent, and the data collectors are local inhabitants who understand the local language and are well trained on how to collect the data.

However, we have used some techniques to confirm the above. First, we have examined the correlation coefficients of our independent variables (see table 2), and it suggests none of them had coefficients above 0.50 and therefore are all within acceptable levels (Manolopoulosa et al., 2018). Second, we used the variance inflation test to examine the variance inflation factor (VIF) for each model. The test score suggests that, on average, the was no score above four, and no individual variable had a score above 2. Given that these indicators are within the acceptable threshold (Tabachnick and Fidell 2001), we, therefore, conclude that common method bias and multicollinearity was not a concern, and therefore our data is fit for purpose. Moreover, cross-sectional data have been widely used in high impact research, with valid results and contribution to literature (e.g., Eiriz et al., 2018; Islam et al., 2018).

4. Result of the analysis

A series of hierarchical ordinary least squares regressions were conducted. The starting point was to regress export performance against the control variables. In the next

stage, we then added the dependent variables to the model. The last stage involves the addition of the moderation variables to the equation. Our result presents some interesting non-hypothesised relationships between our control variables and export performance. Table 3 model 1 shows that providing training to employees, firm size, the region where the firm is located, quality certification, and having a website are important determinants of firm export performance in Cameroon.

Table 3 model 2 suggests that lack of finance had a significant negative effect on firm performance (β = -0.551, P < 0.1). Our analysis of the direct effect of network (access to loan) on firm performance (table 3 model 3) was also positive and significant (β = 1.144, P < 0.01). We included another network variable in a separate model to test their direct effect for robustness check, as shown in table 3, models 4 and 5. This includes whether the firm has an overdraft and whether materials and suppliers used for its production are imported. The analysis suggests significant positive effects for both variables as shown in table 3 model 4(β = 1.088, P < 0.01) and in table 3 model 5 (β = 1.023, P < 0.01).

Table 4shows the moderation effect of the benefit of network and lack of finance on firm export performance. The result shows that the interaction effect of access to loans and lack of finance on firm performance (see table 4 model 3) was significant (β = -2.023, P < 0.01). When we test the robustness of this model with other network variables, we got some interesting results. First, the availability of overdraft was able to reduce the effect of lack of finance even though it was not significant (β = -0387, P < ns), as shown in table 4, model 4. Second, we test on international network (the use of imported materials), and the result suggests a positive non significant effect (β = 0.0621, P < ns).

5. Conclusion

The aim of our research was to examine the moderation effect of the benefit of network on the relationship between lack of finance and export performance in Cameroon. To test our hypotheses, we used data from the WBES which was analysed using regression analysis.

Our result found support for hypothesis H1 in which financial constraints had a negative effect on export performance in Cameroon. This negative effect of the export barrier is also confirmed in existing studies (e.g., Uner et al., 2018; Arteaga-Ortiz and Fernández-Ortiz, 2010; Sinkovics et al., 2018; Kim, 2019; Konte and Ndubuisi, 2021; Máñez and

Vicente-Chirivella, 2021; Kazmi et al., 2020). However, this negative effect is not strange as the firms used in our analysis are SMEs which are characterised as generally suffering from limited financial resources (Konte and Ndubuisi, 2021). Exporting is costly and requires a significant number of resources for firms to achieve success in foreign markets (Kazmi et al., 2020). Such success will depend on the level of available resources which SMEs do not have. There is also the aspect of market imperfection in foreign markets and dealing with this requires significant investment which is unattainable by small firms. Since they cannot compete due to their financial constraints, their export performances will be negatively affected since large firms with significant financial resources will leverage on that to capitalise on market opportunities (Saeed and Vincent, 2011). As a result of financial constraints, SMEs are forced into rationing and such rationing reduces the firm's export and therefore export performance. The financial constraint also implies a decision to also limit the efficiency in resource allocation and the ease of entry into new markets and this reduces other avenues for growth and results in a negative effect on export performance (Máñez & Vicente-Chirivella, 2021). These negative results can also be explained by the fact that firms are expected to pay a large sunk cost upfront for exporting (Babatunde, 2018). While SMEs may not have much money to pay upfront, the time lag between the production and then receipt of sales also reduces their export activities and therefore their export performance (Kim, 2019).

Our results did not support our hypothesis H2 about the moderation effect of the benefit of network on the relationship between financial constraint and export performance. Even though there are significant benefits from networking and in our case accessing finance from financial institutions, such a benefit was not enough to offset the negative effects of financial constraints on export performance. There are a couple of reasons to explain this result. While networking is very important for firms to benefit from resources that are external to the firms, the level of resources obtained from these networks could be dependent on some conditions. In Cameroon, firms are required to present collateral to obtain loans and many SMEs do not have sufficient collateral to guarantee substantial loans from financial institutions. In addition to collaterals, there is the aspect of information asymmetry in which these SMEs do not have a system in which financial institutions can monitor their transactions and such information to determine their creditworthiness. This, therefore, could make the number of loans obtained from financial institutions to be relatively low compared to what they could have originally requested. This small loan is not enough to help the SMEs offset their financial constraints, overcome barriers to exporting and increase their export performance.

We contribute to the literature on export barriers and export performance in Cameroon. By exploring how the benefit of the network moderates the negative effect of financial constraints on export performance in Cameroon, we show that the application of the external resource-based view of the firm can only have a significant effect on a firm's export performance if the external resource is of a significant amount to compensate for resource deficiency. While studies such as Sinkociv et al. (2018) have shown a positive effect of the application of the extended resource base view on export performance, their study was based on SMEs in the UK which are better with respect to collaterals and information asymmetry and have much better access high financial assistance. But context matters very much in international business and exploring existing relationships in a different context could yield interesting results (Gelman and Imbens, 2013; Gelman, 2011) just as in the case of our research.

We contribute by responding to calls for more studies on the export barrier –export performance relationship (Kahiya, 2018) and the need for more empirical studies from emerging markets (Sinkovics et al., 2018; Leonidou 2004; Krammer et al., 2017; Milanzi, 2012; Rahman et al., 2017; Altintas et al., 2017; Uner et al., 2018; Manolopoulosa et al., 2018). By testing existing results in another context, which is institutionally different, we contribute to whether or not studies from developed economies could be applied in developing economies. The testing of existing studies in another context is evident in Uner et al. (2018). Our robustness test of using different variables to capture the benefit of network was in line with Gelman and Imbens (2013). Moreover, Gelman (2011) employed a reverse causal inference to test existing models by looking at other variables that could influence export performance and the study did not yield different results.

Our research provides implications for policy makers and businesses in Cameroon. A general characteristic of SMEs is their resource deficiency, and it was evident in our examination of the relationship between financial constraints and export performance for SMEs in Cameroon. Our literature discusses how such constraints affect the ability of SMEs to invest and expand their export activities and therefore negatively affect their performance. There is therefore a need for governments to improve financing for exporting activities for SMEs to help them overcome export barriers (Máñez and Vicente-Chirivella, 2021; Kazmi et al., 2020). One possible way may be to subsidise export activities for SMEs and the use of trade agreements to eradicate tariffs in foreign markets. It is also worthwhile to help firms with some insurance schemes to cover sunk costs involved in exporting. Another measure could be putting in place an insurance policy in which financial institutions could grant

exporting SMEs substantial amounts of loans to enable exporting to be effective and efficient rather than loans that will not help them achieve the desired outcome from their exporting. From a managerial perspective, firms maybe looking for alternative sources of finance from different networks rather than from financial institutions especially given the fact that they do not have enough collateral to seek substantial loans. We recommend SMEs to network with multinational enterprises operating within domestic markets that could help finance their exporting under their ownership on much better terms compared to financial institutions and this will reduce their cost of exporting and improve their export performance.

Based on the above, our research has some limitations. We have examined internal barriers to exporting and not external barriers and future research could incorporate more forms of barriers (internal and external) to explore which ones have a stronger effect on export performance. Our research is based on a one-country study and while care should be taken in the application of the findings in a different context. Hence, we encourage future studies to explore these relationships using cross-sectional data within a comparative remit.

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Table 2. Descriptive and correlation statistics

	1	2	3	4	5	6	7
Annual Sales (1)	1.00						
_	0.00						
Lack of finance (2)	-0.22***	1.0000					
_	(0.00)	0.000					
Access to loans (3)	0.30***	-0.06	1.00				
_	(0.00)	(0.48)	0.00				
Overdraft (4)	0.23***	-0.05	0.27***	1.00			
_	(0.00)	(0.50)	(0.00)	0.00			
Use imported materials (5)	0.31***	-0.16**	0.20**	0.19**	1.00		
_	(0.00)	(0.04)	(0.01)	(0.02)	0.00		
Managers years of experience (6)	0.27***	0.04	0.01	0.17**	0.10	1.00	
_	(0.00)	(0.61)	(0.90)	(0.03)	(0.21)	0.00	
Training of employees (7)	0.13	-0.04	0.05	0.02	0.00	0.03	1.00
_	(0.10)	(0.57)	(0.52)	(0.80)	(0.93)	(0.72)	0.00
Industry sector (8)	-0.10	-0.02	-0.14*	-0.02	-0.12	-0.04	0.04
_	(0.22)	(0.74)	(0.09)	(0.75)	(0.15)	(0.61)	(0.61)
Product innovation (9)	0.01	-0.02	0.13	0.15**	0.12	0.08	0.07
_	(0.86)	(0.74)	(0.12)	(0.07)	(0.14)	(0.30)	(0.37)
Process innovation (10)	0.16**	-0.11	0.22***	0.17**	0.04	-0.02	0.16**
_	(0.04)	(0.17)	(0.00)	(0.03)	(0.63)	(0.81)	(0.05)
Research and Development (11)	0.18**	-0.01	0.17**	0.24***	0.14*	-0.01	0.15*
_	(0.03)	(0.85)	(0.04)	(0.00)	(0.08)	(0.89)	(0.06)
Firm size(12)	0.48***	-0.02	0.08	-0.04	0.05	0.17**	0.13
_	(0.00)	(0.76)	(0.31)	(0.59)	(0.49)	(0.03)	(0.12)
Region where form is located (13)	0.31***	-0.07	0.25***	0.27***	0.06	0.18**	-0.07
_	(0.00)	(0.40)	(0.00)	(0.00)	(0.46)	(0.03)	(0.39)
Qualitycertification (14)	0.21**	-0.00	0.02	0.03	0.10	0.19**	0.19**
_	(0.01)	(0.92)	(0.76)	(0.64)	(0.19)	(0.02)	(0.02)
Website (15)	0.35***	-0.08	0.07	-0.01	0.07	0.20**	0.09
_	(0.00)	(0.31)	(0.35)	(0.88)	(0.37)	(0.01)	(0.24)
_							
N	906	916	887	885	345	868	669
Mean	18.28	0.89	0.30	0.48	0.42	2.64	0.33
SD	2.39	0.31	0.45	0.49	0.49	0.69	0.47
MIM	13.12	0	0	0	0	0	0
Max	25.40	1	1	1	1	3.87	1

Continuation of table 2……

	8	9	10	11	12	13	14	15
Industry sector (8)	1.00							
_	0.00							
Product innovation (9)	-0.06	1.00						
_	(0.45)	0.00						
Process innovation (10)	-0.02	0.37***	1.00					
_	(0.80)	(0.00)	0.00					
Research and Development (11)	-0.16**	0.09	0.21**	1.00				
_	(0.05)	(0.25)	(0.01)	0.00				
Firm size(12)	-0.21**	-0.06	0.05	0.17**	1.00			
_	(0.01)	(0.41)	(0.49)	(0.03)	0.00			
Region where form is located (13)	0.04	0.02	0.14*	0.11	0.08	1.00		
_	(0.58)	(0.78)	(0.09)	(0.16)	(0.30)	0.00		
Qualitycertification (14)	-0.06	0.12	0.09	0.14*	0.08	-0.12	1.00	
_	(0.45)	(0.14)	(0.27)	(0.08)	(0.29)	(0.13)	0.00	
Website (15)	-0.03	-0.06	0.01	0.08	0.28**	0.07	0.17**	1
_	(0.65)	(0.44)	(0.87)	(0.31)	(0.00)	(0.37)	(0.04)	0
_								
N	931	528	520	524	707	931	845	875
Mean	1.96	0.40	0.21	0.12	1.73	2.02	0.15	0.26
SD	0.85	0.49	0.41	0.33	0.78	0.69	0.35	0.43
MIM	1	0	0	0	1	1	0	0
Max	3	1	1	1	3	4	1	1

Table 3. Regression for direct effect on annual sales 2016

VARIABLES	(1) Annual Sales	(2) Annual Sales	(3) Annual Sales	(4) Annual Sales	(5) Annual Sales
Control variables					
Managers years of experience	0.238	0.227	0.231	0.129	0.379
	(0.157)	(0.162)	(0.172)	(0.166)	(0.243)
Training of employees	0.476**	0.453*	0.401*	0.383*	0.470*
	(0.228)	(0.235)	(0.231)	(0.226)	(0.263)
Retail sector	-0.075	-0.058	-0.094	0.034	0.282
	(0.296)	(0.298)	(0.301)	(0.294)	(0.393)
Other sectors	-0.341	-0.316	-0.240	-0.348	0.157
	(0.262)	(0.267)	(0.261)	(0.259)	(0.346)
Product innovation	0.133	0.114	0.123	-0.025	-0.090
	(0.240)	(0.247)	(0.244)	(0.239)	(0.302)
Process innovation	0.499	0.469	0.222	0.468	0.671
	(0.365)	(0.368)	(0.387)	(0.379)	(0.459)
Research and Development	0.157	0.178	0.027	-0.106	0.058
	(0.371)	(0.373)	(0.392)	(0.370)	(0.480)
Medium firms	0.697**	0.686**	0.548*	0.711**	0.658*
	(0.304)	(0.311)	(0.311)	(0.303)	(0.379)
Large firms	2.315***	2.308***	2.094***	2.258***	1.875***
	(0.371)	(0.368)	(0.357)	(0.374)	(0.444)
Littoral region	1.581***	1.557***	1.577***	1.558***	1.921***
	(0.260)	(0.265)	(0.252)	(0.260)	(0.341)
West region	1.098***	1.141***	1.089***	0.965***	1.195***
	(0.275)	(0.281)	(0.283)	(0.285)	(0.405)
Quality certification	1.511**	1.554**	1.553**	1.498**	1.060
	(0.649)	(0.686)	(0.757)	(0.663)	(0.698)
Website	0.731***	0.717**	0.714**	0.867***	0.676*
	(0.280)	(0.279)	(0.286)	(0.284)	(0.349)
independent variables					
Lack of finance		-0.551*			
		(0.301)			
Access to loans			1.144***		
			(0.360)		
Overdraft				1.088***	
				(0.230)	
Use imported materials					1.023***
					(0.284)
Constant	14.850***	15.372***	14.778***	14.827***	14.032***
	(0.450)	(0.485)	(0.497)	(0.475)	(0.691)
Observations	269	261	250	247	158
Mean VIF	1.13	1.31	1.33	1.33	1.33
R-squared	0.460	0.467	0.491	0.510	0.532
r2	0.460	0.467	0.491	0.510	0.532
r2_a	0.433	0.436	0.461	0.480	0.486

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 4. Regression results for the interaction effect of network for 2016

VARIABLES	(1) Annual Sales	(2) Annual Sales	(3) Annual Sales	(4) Annual Sales	(5) Annual Sales
Control Variables					
Manager's years of experience	0.238	0.227	0.208	0.125	0.441
	(0.157)	(0.162)	(0.175)	(0.173)	(0.279)
Training of employees	0.476**	0.453*	0.452*	0.385*	0.554**
	(0.228)	(0.235)	(0.231)	(0.230)	(0.273)
Retail sector	-0.075	-0.058	-0.172	0.016	0.253
	(0.296)	(0.298)	(0.297)	(0.301)	(0.390)
Other sectors	-0.341	-0.316	-0.212	-0.327	0.223
	(0.262)	(0.267)	(0.258)	(0.260)	(0.353)
Product innovation	0.133	0.114	0.154	-0.023	-0.065
	(0.240)	(0.247)	(0.243)	(0.240)	(0.307)
Process innovation	0.499	0.469	0.161	0.433	0.520
	(0.365)	(0.368)	(0.382)	(0.384)	(0.460)
Research and Development	0.157	0.178	0.123	-0.049	0.091
	(0.371)	(0.373)	(0.387)	(0.377)	(0.485)
Medium firms	0.697**	0.686**	0.514	0.672**	0.593
	(0.304)	(0.311)	(0.312)	(0.313)	(0.400)
Large firms	2.315***	2.308***	1.979***	2.221***	1.815***
	(0.371)	(0.368)	(0.353)	(0.386)	(0.435)
Littoral region	1.581***	1.557***	1.526***	1.524***	1.911***
	(0.260)	(0.265)	(0.255)	(0.271)	(0.370)
West region	1.098***	1.141***	1.015***	0.984***	1.220***
	(0.275)	(0.281)	(0.273)	(0.283)	(0.408)
Qualitycertification	1.511**	1.554**	1.446*	1.451**	1.025
	(0.649)	(0.686)	(0.742)	(0.657)	(0.737)
Website	0.731***	0.717**	0.738**	0.856***	0.625*
	(0.280)	(0.279)	(0.284)	(0.284)	(0.349)
Independent and Moderation effects					
Lack of finance		-0.551*	-0.153	-0.416	-1.578
		(0.301)	(0.294)	(0.396)	-1.094
Access to loans			2.819***		
			(0.592)		
Lack of finance*Access to loans			-2.023***		
			(0.687)		
Overdraft				1.404**	
				(0.564)	
Lack of finance *Overdraft				-0.387	
				(0.633)	
Use imported materials					1.476**
					(0.611)
Lack of finance *Use of imported materials					0.621
					(0.683)
Constant	14.850***	15.372***	15.041***	15.240***	14.159***
	(0.450)	(0.485)	(0.569)	(0.532)	(0.894)
Observations	269	261	245	242	152
Mean VIF	1.33	1.31	2	2.12	2.31

R-squared	0.460	0.467	0.515	0.519	0.544
r2	0.460	0.467	0.515	0.519	0.544
r2_a	0.433	0.436	0.481	0.485	0.490

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1