ECONOMIC RESEARCH FORUM
منتدى البحوث الاقتصادية
2015

working paper series

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Working Paper No. 903

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April 2015

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First published in 2015 by
The Economic Research Forum (ERF)
21 Al-Sad Al-Aaly Street
Dokki, Giza
Egypt
www.erf.org.eg

Abstract

Limited resources and barriers to entry are critically higher for small and medium enterprises (SMEs) than for large companies. One of the reasons explaining why the resources of SMEs are scarce is their limited access to financial services. This, in turn, reduces their likelihood of exporting. With this in mind, using the census of SMEs done by the Central Bank of Egypt and the Egyptian Banking Institute (EBI), we try to examine the impact of access to finance on SMEs' export performance. We measure the latter by the extensive margin that means the probability of becoming an exporter and the probability of serving several markets. We found a significant and positive impact on the probability of exporting and that of exporting to more than one destination from dealing with banks and having banking facilities. Thus, wider and more efficient financial services are likely to increase the number of exporters and boost exports diversification.

JEL Classifications: D2, G21, P42.

Keywords: SMEs, Access to Finance, Exports, Egypt.

ملخص

محدودية الموارد وموانع الدخول هي ظواهر تواجهها المؤسسات الصغيرة والمتوسطة عنها من الشركات الكبيرة. واحد من الأسباب الذي يشرح قلة موارد المؤسسات الصغيرة والمتوسطة هو محدودية الوصول إلى الخدمات المالية. وهذا، بدوره، يقلل من احتمال قابليتها للتصدير. ومع وضع هذا في الاعتبار، وباستخدام تعداد المنشآت الصغيرة والمتوسطة الذي قام به البنك المركزي المصري والمعهد المصرفي المصري (بنك الإمارات الدولي)، نقوم بدراسة تأثير الحصول على تمويل الشركات الصغيرة والمتوسطة على أداء الصادرات. نقيس الأخير من هامش واسع وهذا يعني احتمال أن تصبح الدولة مصدرة واحتمال ان تخدم العديد من الأسواق. وجدنا أن لهذه العوامل تأثير كبير وإيجابي على احتمال التصدير إلى أكثر من جهة واحدة من التعامل مع البنوك، وبعد التسهيلات المصرفية. وبالتالي، من المرجح أن تزيد من عدد المصدرين وزيادة تنويع صادرات الخدمات المالية على نطاق أوسع وأكثر كفاءة.

1. Introduction

Despite their importance, small and medium enterprises (SMEs) still face several problems, such as, in particular, access to finance, which is a typical challenge in developing countries. During the previous decades, the internationalization behavior of SMEs has received increasing academic attention. Resource constraints in the forms of capital, access to finance, information, managerial expertise and barriers to entry are critically higher for SMEs than for large companies, reducing the likelihood of global activities undertaken by these firms (Acs et al. 1997; Karagozoglu and Lindell 1998; Hollenstein 2005; Pradhan and Sahu 2008). One of the channels that affects their resources is access to finance. Indeed, SME export finance can face various problems, such as lack of export insurance and banks' reluctance to provide export finance due to doubts concerning the genuineness of the export order.

The nexus between trade and access to finance can be explained by two different theories. First, according to the stage theory (Johanson and Vahlne, 1977), a firm gets internationalized in depth through an evolutionary and sequential process comprising incremental stages. This approach states that a firm incrementally increases its foreign involvements based on experience and knowledge about foreign markets that it gradually acquires. The second group includes the growing literature on international trade models with heterogeneous firms that could also be useful for understanding the link between SME export decisions and access to finance. In these models (e.g., Roberts and Tybout 1997; Bernard et al. 2003; and Melitz 2003), firms are required to incur sunk costs or to be productive to enter the foreign market. As the productivity of a firm grows to a critical value, the firm may find it profitable to start exporting by paying a sunk cost. Obviously, access to finance is likely to improve a firm's productivity since the more a firm benefits from financial services (UNCTAD 2001 and El Said et al 2013), the more it is productive and the more it is likely to enter the export market. For this reason, access to finance is likely to affect the export status.

While the impact of access to finance on trade has been empirically studied for several developed and developing countries, the literature is scant for MENA countries in general and for Egypt in particular. Indeed, for Asia, Yang, Chen and Chuang (2004) found that export decisions of manufacturing firms in Taiwan are positively determined by their technology (R&D, technology importing and training investment), firm size (over a relevant range), skills of the workforce, and labor productivity. Firms' technological activities (such as product innovation) and size are suggested as important determinants of exporting by Vietnamese SMEs (Ngoc et. al. 2008). Similarly, Pradhan and Sahu (2008) find that the export performance of Indian SMEs in the pharmaceutical sector improves with firm size, R&D, imports of capital goods and fiscal incentives. As for Africa, Gumede (2004) proved that for South African manufacturing SMEs, enterprise export probability is positively affected by size class, age, competition in South Africa, access to borrowed finance, corporate tax, business linkages, and access to information. In Latin America, Ottaviano and Martincus (2011) showed that Argentinean SMEs have a higher probability of exporting if they are large in size (employment), source inputs from abroad, invest in product improvement and possess higher labor productivity. For Europe, the export participation of UK firms is observed to be more for older, medium-sized and foreign-owned firms, as compared to younger, small-sized and domestic owned firms (Requena-Silvente 2005). Fernández and Nieto (2006) find that export probability and intensity are

both positively associated with the age, size, R&D and foreign ownership of Spanish SMEs.

In Egypt, despite banking reforms that were launched in 2004, the ability of SMEs to more easily access suitable and sufficient means of finance has always been considered a major obstacle many of them (Egyptian Banking Institute 2009). This is reflected on SMEs' performance in international markets, since only 6% of SMEs export, while the remaining only serve the domestic market. Clearly, this may be explained by differences in factor endowments and in access to financial services that may facilitate international transactions.

In this paper, using the census of SMEs done by the Central Bank of Egypt and the Egyptian Banking Institute (EBI), we try to examine the impact of access to finance on the extensive margin of export (the probability of becoming an exporter and the probability of serving more than one market). We run several regressions to examine the impact of access to finance on the exports performance of Egyptian SMEs. We find a significant and positive impact on the probability of exporting and that of exporting to more than one destination from dealing with banks and having banking facilities. Thus, wider and more efficient financial services are likely to increase the number of exporters and boost exports diversification.

The paper is organized as follows: Section 2 shows the data and the questionnaire. Section 3 presents some stylized facts regarding export performance of SMEs in Egypt. Section 4 presents the econometric specifications and section 5 shows the empirical results. Finally, section 6 concludes and presents some policy implications.

2. Data Description

The Central Bank of Egypt (CBE) launched in December 2008 an initiative, which constituted an integral part of the Second Phase of the Banking Sector Reform Program (2008-2011), to enhance SMEs' access to finance and banking services. In this respect, and due to the importance of the availability of accurate information, the Central Bank of Egypt and the Egyptian Banking Institute (EBI) commissioned the Central Agency for Public Mobilization and Statistics (CAPMAS) to conduct an SME nation-wide census, fully focusing on value added formal economic activities on a full census basis. The Center of Surveys and Statistical Applications (CSSA) at the Faculty of Economics and Political Science, Cairo University, undertook the project on site quality control. This survey includes the quantitative and qualitative characteristics of each company or unit. These characteristics are related to identifying the number of employees, legal status, economic activity, level of exports, sales turnover, invested capital and the problems facing each company in dealing with banks, etc.

The questionnaire includes four main categories of questions. First, it contains some general information regarding the legal status of the firm (whether it is a partnership, a limited liability firm, branch of a foreign firm, sole proprietorship, etc.). In addition, since only formal firms are taken into account, the interviewee is asked to mention the number and the date of his industrial and commercial registration. Second, it includes some information related to the firm endowments, such as the number of workers (less than 20, from 20 to 34, from 35 to 50, and more than 51) and the value of the capital. Third, the questionnaire categorizes firms according to the sales turnover, which is the variable that

banks consider the most when giving loans. In addition, this section includes some questions concerning whether the firm exports or not and the destination of exports (Arab countries, African countries, and others). Fourth, the questionnaire contains a final module on access to finance, asking the interviewee: whether she/he deals with banks or not; whether she/he benefits from some banking facilities or not; whether she/he faces problems with banks or not, and, if yes, they are asked to determine the exact problems (high interests, commissions and administrative expenses; banks ask for a lot of collaterals; procedures are lengthy and complicated; banks ask for a lot of documents; and/or others).

The census covers all SMEs in Egypt, identified here as every company or economic activity that is formally registered. Filters were thus set by the census to exclude firms that are informal (representing 20% of firms in Egypt), firms that have less than 5 employees, and firms that have low economic value added (such as barber shops, beauty salons and kiosks). In other words, three filters were applied to only include firms that are formally registered, have more than 5 employees and have significant economic value-added in the census. Based on these criteria, the census ended up covering around 36, 492 firms, representing small and formally registered firms in Egypt.

3. Stylized Facts

3.1 Exporters characteristics

At the international level, while SMEs contribute around 50% of GDP and 60% of employment, evidence suggests that they only contribute about 30% of exports. In Egypt, the situation is more flagrant, given that SMEs contribute around 25% of GDP and 85% of employment, while only 6% of SMEs export. One of the most important explanations behind such underperformance is related to the fact that Egyptian SMEs do not belong to any clusters or export consortiums. Indeed, the Brazilian experience shows that such clusters boost exports. For example, the Brazilian Arranjos Productivos Locais (APL) policy focuses on a cluster of firms within the same territory, operating around the same activity and maintaining ties of cooperation and learning among themselves and with other stakeholders. Garone et al (2013) finds that this APL policy generates a positive impact on export outcomes in the medium and long terms. Furthermore, some Brazilian SMEs created the consortium Flor Brasil, comprising producers of knitwear, working clothes and beachwear. This consortium began exporting to Europe and the United States and has an estimated export turnover of US$1 million for 2003. In Asia, the experience of the Indian Machine Tool Cluster of Bangalore was also successful, since SMEs were capable of exporting to China owing to the UNIDO cluster development program.

It is worthy to note that internationally active SMEs tend to be larger than average SMEs. The average SME employs less than 10 people, whereas the bulk of SME exports come from SMEs which employ more than 50 or 100 employees. This difference in factor endowments is also present in the Egyptian case. Figure 1 shows that the higher the capital, the higher the share of exporting firms. Only 1.8% of the firms having less than EGP 250, 000 do export. This figure increases when capital increases, since the share of exporting firms becomes 27.1% and 24.4% of the firms having a capital between EGP 15 million - EGP 30 million and more than EGP 30 million, respectively.

This observation holds for both labor (Figure 2) and sales turnover (Figure 3), since the higher the number of employees and/or the higher the sales turnover, the more a firm is

likely to export. Figure 2 shows that 28.4% of the firms with more than 50 employees do export. This figure is remarkably low for small firms, since exporting firms represent only 1.8 percent of those having less than 20 employees.

Figure 3 presents exporting vs. non-exporting firms per sales turnover. It is quite clear that the higher the sales turnover, the more likely a firm is to become an exporter. In other words, we can claim that the most productive firms that serve the domestic market have a greater potential to serve an international one as well. This is in line with the Melitz model (2003) of heterogeneous firms. According to this model, firms face uncertainties about their future productivity when making an irreversible costly investment decision to enter the domestic market. Following entry, firms produce with different productivity levels. In addition to the sunk entry costs, firms face fixed production costs, resulting in increasing returns to scale of production. The fixed production costs lead to the exit of inefficient firms whose productivity is lower than the threshold level, as they do not expect to earn positive profits in the future. As each firm is a monopolist for the variety it produces, it sets the price of its product at a constant markup over its marginal cost. The decision to export occurs after firms observe their productivity, since a firm enters export markets if, and only if, the net profits generated from its exports in a given country are sufficient to cover the fixed exporting costs (see Figure 4).

All these facts are confirmed by Table 1, which shows that exporting firms have six times higher capital endowments compared to non-exporting firms, four times greater sales and 2.5 times more labor. At the productivity level, there is a significant difference between their labor productivities, since exporting firms are 1.7 times more productive than non-exporting firms. This difference is less pronounced at the capital level since capital seems to be more productive for non-exporting firms.

3.2 Exports destinations

By observing the destination of those exports, Figure 5 shows that Arab countries are the first destination of SME products, with some 80% of SMEs exporting to them. African economies are not well served by Egyptian SMEs, given that only 21% of SMEs serve the African continent.

Another important characteristic of exporting SMEs is that most of them export to only one destination. This shows that the market extensive margin is very low, given that while 67% export to a single destination, 33% export to more than one destination (Figure 6). Consequently, more efforts should be deployed to increase the presence of SMEs in different markets and help them export to several destinations in order to benefit from higher increasing returns to scale.

As shown in Figure 7, it is worthy to note that the higher the capital, the more a firm can export to more than one destination, since 52.7% of exporting firms with a capital of more than EGP 30 million export to more than two destinations. This finding shows the extent to which boosting SMEs' capital can increase their productivity, change their non-exporting status and even help them serve several foreign markets.

Finally, another factor affecting firms' exporting status is related to their having access to financial services. Figure 8 shows that 91.5% of exporting firms deal with banks and 49% of those who are exporting benefit from banking facilities. The difference between the two

figures is quite striking, given that SMEs face serious barriers to take advantage of the banking facilities (see Figure 8).

These results are confirmed by Table 2, which summarizes the correlation between access to finance variables and exporting status. It is worthy to note that exporting SMEs have more dealings with banks and face less banking problems.

Consequently, all these factors affect SMEs' productivity and that is why only larger firms with more employees, larger capital and access to banking facilities are the most likely to be productive and therefore start exporting.

4. Econometric Specification

To examine the impact of access to finance on export performance, we run the following models. We have estimated a logit model where the dependent variable is the probability of exporting or not (a dummy variable that takes 1 if the firm exports and 0 otherwise) as follows:

$$Prob(Exporting)_i = \beta_0 + \beta_1 Age_i + \beta_2 Eco.\ Act_i + \beta_3 Legal_i + \beta_4 Capital_i + \beta_5 Labor_i + \beta_6 Sales_i + \beta_{7i} Geo.\ Loc._i + \beta_{8i} Finance_i + \varepsilon_i \quad (1)$$

Where Age_i is the age of firm i being the difference between the date of establishing the firm and 2011 (date of the census), $Eco.\ Act_i$ is a categorical variable taking three values 1 for manufacturing, 2 for trade and 0 otherwise (reference category), $Legal_i$ capturing the effect of the legal form on the probability of having access to banking facilities. It takes five values for being a Joint Stock enterprises (reference category); Joint Liability; Sole; Partnership in Commendam or any other legal form. For the factors of production, $Capital_i$ determines the total value of the firm's capital. It is also a categorical variable taking six values as follows: less than EGP 250,000 (reference category); EGP 250,000 to less than EGP 1 million; EGP 1 million to less than EGP 5 million; EGP 5 million to less than EGP 15 million; EGP 15 million to less than EGP 30 million; EGP 30 million or more. $Labor_i$ captures the number of workers, with four categories: less than 20 employees (reference category); 20-34; 35-50 and 51 or more. $Sales_i$ determines the value of the firm's sales, with four categories: less than EGP 500,000; EGP 500,000 to less than EGP 1 million; EGP 1 million to less than EGP 20 million; EGP 20 million to less than EGP 50 million. Finally, $Geo.\ Loc._i$ captures whether the firm is located in Cairo and Alexandria (reference category), Upper Egypt, Lower Egypt or frontier governorates. ε_i the discrepancy term.

We run several regressions to examine the exports performance. Indeed, our first dependent variable is the probability of becoming an exporter. This variable measures the extensive margin at the firm level. In the second set of regressions, we use the probability of exporting to a certain destination (African, Arab or other countries) to see whether access to finance has a different impact on each destination or not. Moreover, we use the probability of exporting to more than one destination in order to analyze whether access to finance can help a firm serve several destinations or not. We use the census of SMEs done by the Central Bank of Egypt and the Egyptian Banking Institute (EBI).

5. Empirical Results

Table 1 shows the impact of access to finance on the probability of becoming an exporter. Access to finance is measured by two variables: first by just dealing with banks and second

by having banking facilities. Overall, both of the two fitted models are significant and all the variables entered in the model have a significant effect on exporting.

First, non-startup enterprises are less likely to export compared to startup enterprises. The odds of exporting of the non-startup firms are three quarters than for the startup ones. This shows how experience acquired in the market is likely to increase the likelihood of becoming an exporter. Moreover, on the legal side, the odds of exporting for the Joint Liability enterprises are 0.8 times than for the Joint Stock, while the odds of exporting for the Sole enterprises are 0.6 times than for the Joint Stock. The odds of exporting for the Partnership in Commendam or any other legal form are not significantly different from that for the Joint Stock enterprises.

As per economic activities, when the enterprise works in either of the trade or manufacturing fields, the odds of exporting are greater than when working in any other economic field. Based on the results shown in Table (1), the odds of exporting when the enterprise works in the manufacturing field are approximately 5.5 times the odds of exporting when it works in any other economic filed, and the odds of exporting when the enterprise works in the trade field are 3.3 times than when it works in any other economic filed.

At the geographical level, the odds of exporting when the enterprise is located in Lower Egypt are 1.4 times the odds of exporting when the enterprise is in Greater Cairo or Alexandria. However, if the enterprise is located in Upper Egypt or a frontier governorate, the odds of exporting are less than when the enterprise is located in Greater Cairo or Alexandria. That is, when the enterprise is in Upper Egypt the odds of exporting are about one-third the odds of when the enterprise is located in Greater Cairo or Alexandria, and when it is located in a frontier governorate the odds of exporting are one-fifth the times than when it is in Greater Cairo or Alexandria. This confirms the main findings of the new economic geography theory, proving that there is incentive for agglomeration of production and demand in regions offering large size of market, savings on transport costs, greater scope for forward and backward linkages, and increasing returns (Krugman 1991a; Fujita and Krugman 2004). Consequently, SME export activities are likely to differ substantially between regions within a country given the regional disparities in the presence of required infrastructure and manpower are crucial to minimize transport costs and to take advantage from returns to scale (Krugman, 1991b; Fujita, Krugman and Venables, 1999). This leads to the prediction that regions with large markets (such as Greater Cairo and Alexandria) are likely to contribute more to exports than other regions with smaller market sizes (Upper Egypt or a frontier governorate).

As seen in Table 3, the higher the sales turnover value, the more likely the enterprise exports. When the enterprise sales turnover ranges from EGP 1 million to less than EGP 20 million, the odds of exporting are about two and half times the odds of enterprises with sales turnover less than EGP 1 million. If the sales turnover increases to be ranging from EGP 20 million to less than EGP 50 million, the odds of exporting becomes about four times that of enterprises with sales turnover of less than 1 million. Similarly, the higher the capital, the higher the probability of becoming an exporter. The odds of exporting for enterprises with a capital of EGP 250,000 or more are greater than that for enterprises with a capital of less than EGP 250,000. For example, the odds of exporting for enterprises with capital ranging from EGP 5 million to less than EGP 15 million are three times the odds of

enterprises with capital less than EGP 250,000. Also, the odds of exporting for enterprises with capital EGP 30 million or more are almost 2.5 times the odds of enterprises with capital less than EGP 250,000. Finally, the more the number the employees increases, the greater the odds of exporting. That is, when the enterprise has 20 to 34 employees, the odds of exporting are almost 2.5 times that of enterprises with a number of employees less than 20. If the number of employees increases to be ranging from 35 to 50 employees, the odds of exporting will be 2.8 times that of enterprises with number of employees less than 20. Having 51 employees or more makes the odds of exporting to be 3.5 times that of enterprises with a number of employees of less than 20. This is in line with the literature stating that a firm's capacity to internationalize is linked to the size of its *valuable* resources (Wernerfelt 1984; Rodríguez and Rodríguez 2005; Newbert 2007; Roxas and Chadee 2011). These resources could be physical capital and intangible capital covering technological assets, human capital, organizational capital and social capital.

Concerning the impact of access to finance on the probability of becoming an exporter, the odds of exporting for the enterprises that access banking facilities are 1.8 times the odds of enterprises that do not access banking facilities. Similarly, the odds of exporting for the enterprises that deal with banks are five times the odds of the enterprises that do not deal with banks.

In order to examine the impact of access to finance on the exporting probability to specific destinations, we run three sets of regressions for three different destinations: African countries, Arab countries and other countries.

It turns out that for African countries, the fitted model is significant. However, as shown in Table 4, each of: legal form, labor, capital, and having banking facilities have a significant effect on exporting to African countries; the age of the firm, geographical location, economic activity, and sales turnover do not. In addition, the odds of exporting to African countries for the enterprises that have banking facilities are 1.7 times the odds of the enterprises that do not have banking facilities. Similarly, when we measure access to finance by dealing with banks, it turns out that the odds of exporting to African countries for the enterprises that deal with banks are 1.7 times the odds of the enterprises that do not deal with them.

As for Arab countries, results presented in Table 5 show that, overall, the fitted model is insignificant. However, while the geographical location has a significant effect on exporting to Arab countries, having banking facilities does not. By contrast, when access to finance is measured by dealing with banks, the fitted model becomes significant and only the dealing with banks variable has a slightly positive and significant effect on exporting to Arab countries, since the odds of exporting to Arab countries for the enterprises that deal with banks are 0.4 times the odds of the enterprises that do not deal with them.

Finally, when other destinations are taken into account, the fitted model (see Table 6) is significant, only the sales turnover and labor have a significant effect on exporting to other countries. The odds of exporting to other countries for enterprises with sales turnover of EGP 1 million or more are about 1.5 times the odds of enterprises with sales turnover of less than EGP 1 million. Moreover, the odds of exporting to other countries do not significantly differ among enterprises with a small to moderate number of employees. Only

when the number of employees exceeds 51, do the odds of exporting to other countries become 1.5 times the odds of enterprises with a number of employees less than 20. While having banking facilities does not impact the probability of exporting to other countries, the odds of exporting to other countries for the enterprises that deal with banks are 1.6 times the odds of the enterprises that do not deal with them.

In order to examine the impact of access to finance on the extensive margin of exporting firms at the destination level, Table 7 shows the probability of exporting to more than one destination. Overall, the fitted model is significant and only the geographical location, labor, and having banking facilities have a significant effect on exporting to several destinations. First, the odds of exporting to several destinations when the enterprise is located in Upper Egypt are about half the odds of exporting to several destinations when the enterprise is located in Greater Cairo or Alexandria. However, if the enterprise is located in Lower Egypt or in a frontier governorate, the odds of exporting to several destinations do not significantly differ from when it is located in Greater Cairo or Alexandria. Second, the odds of exporting to several destinations for enterprises with 20 employees or more are greater than for enterprises with a number of employees that is less than 20, and are about 1.5 greater than the latter. Last but not least, the odds of exporting to several destinations for the enterprises that have banking facilities are 1.4 times the odds of the enterprises that do not have banking facilities. By contrast, dealing with banks does not boost the probability of exporting to more than one destination. In this regression, the fitted model is significant and only the sales turnover, capital, and labor variables have a significant effect on exporting to several destinations.

Finally, the multinomial logit estimation presented in Table 8 shows that: enterprises having banking facilities, compared to those who do not have, are more likely to export to one destination than being non-exporting; enterprises that have banking facilities, compared to those who do not have, are more likely to be exporting to more than one destination than being non-exporting. On the other hand, when access to finance is measured by the dealing with banks variable, it is worthy to note that enterprises that deal with banks, compared to those who do not, are more likely to be exporting to one destination than being non-exporting. In addition, enterprises that deal with banks, compared to those who do not, are more likely to be exporting to more than one destination than being non-exporting. In both of the two cases, all the variables introduced in the model have a significant effect on the exporting status of the enterprises and the fitted models are significant.

6. Conclusion and Policy Implications

Access to finance of small and medium enterprises is extremely important in promoting entrepreneurship and innovation and in improving the export performance of SMEs in Egypt. Indeed, according to the International Trade Center (2009), trade finance facilitates trade and increases exports by helping overcome the information asymmetry between buyers and sellers and by increasing SMEs' trust. Moreover, trade finance contributes to international trade in four areas: payment facilitation, risk mitigation, and financing and the provision of information about the status of payments or shipments. Thus, one of the mechanisms that can be used in order to increase the sustainability of SME activities in Egypt is to increase their integration in international markets through facilitating their access to finance.

In this paper, using the census of SMEs done by the Central Bank of Egypt and the Egyptian Banking Institute (EBI), we tried to examine the impact of access to finance on the extensive margin of export (the probability of becoming an exporter and the probability of serving more than one market). We run several regressions to examine the impact of access to finance on the exports performance of Egyptian SMEs. We found a significant and positive impact of dealing with banks and having banking facilities on the probability of exporting and that of exporting to more than one destination. Thus, wider and more efficient financial services are likely to increase the number of exporters and boost exports diversification.

The main policy recommendations can be summarized as follows. First, facilitating the access to finance is also likely to help SMEs export. Indeed, reducing the need for active SMEs to comply with multiple sets of bureaucratic documentation, rules or requirements is essential to boost their exports performance. Second, facilitating the access to the banking and financial information (related to tax, regulatory frameworks and requirements and dispute resolution procedures) for SMEs is essential to making their international activities easier. Third, the inclusion of local SMEs in the supply chains of multinational enterprises or clusters, and their involvement in exporting activity can lead to significant diffusion of technology and more efficient business models, thereby raising the international competitiveness of SMEs. This will make SMEs more credible and consequently allow them to benefit from banking facilities. For this reason, it is important to facilitate access to finance to SMEs who provide intermediary products to larger firms and multinationals. This will help those SMEs enhance quality of products and diversify their products. Finally, promoting new public-private partnership initiatives are likely to help SMEs reach global markets for innovative products and to access foreign sources of advanced technologies and knowledge. This involves broadening the scope for foreign participation in national programs and linking national networks of SMEs with similar needs and complementary capabilities.

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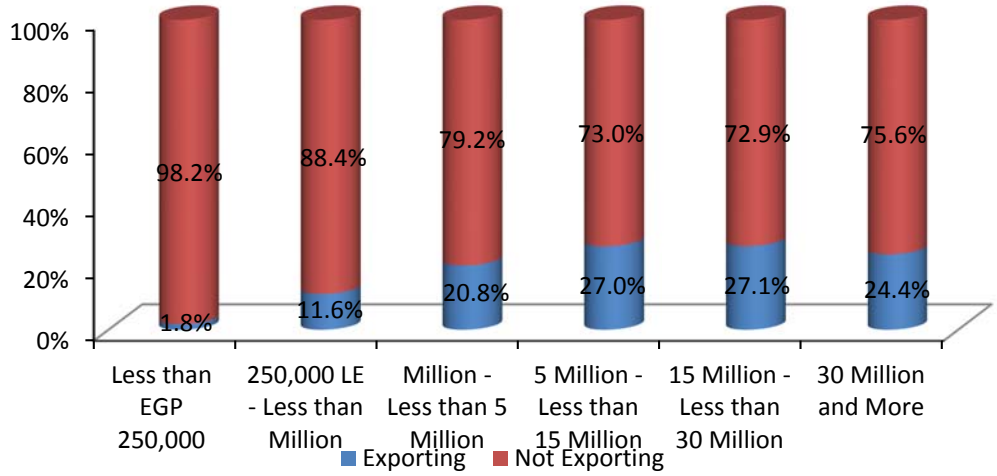
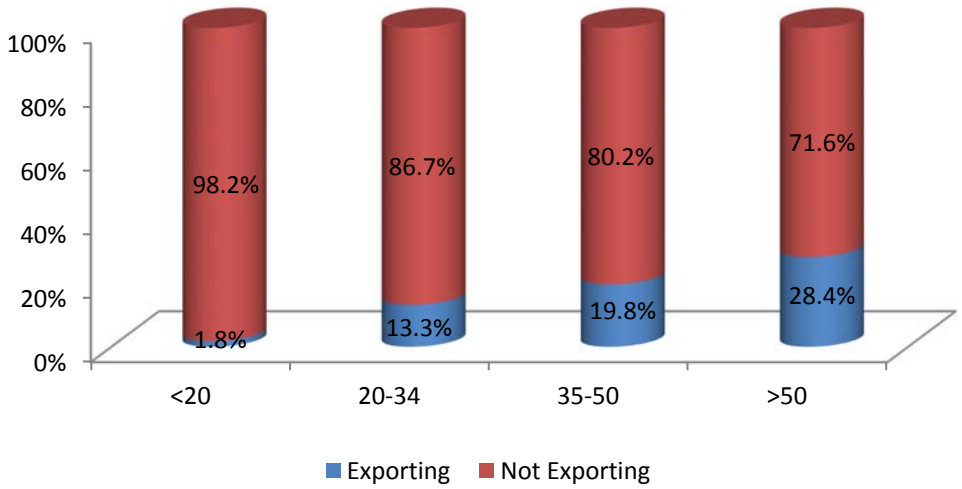
Figure 1: Distribution of SMEs by Exporting Status and Capital



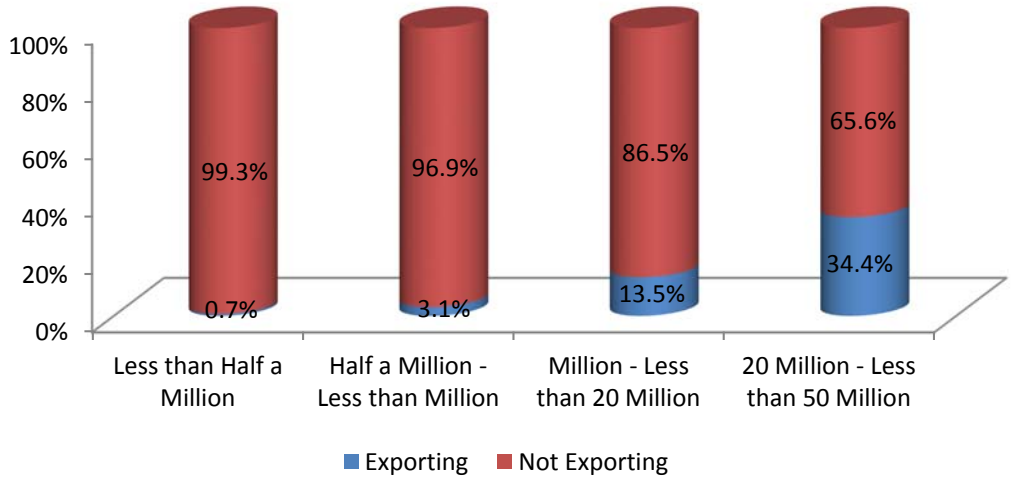
Source: Constructed by the authors using SMEs dataset

Figure 2: Distribution of SMEs by Exporting Status and Number of Employees



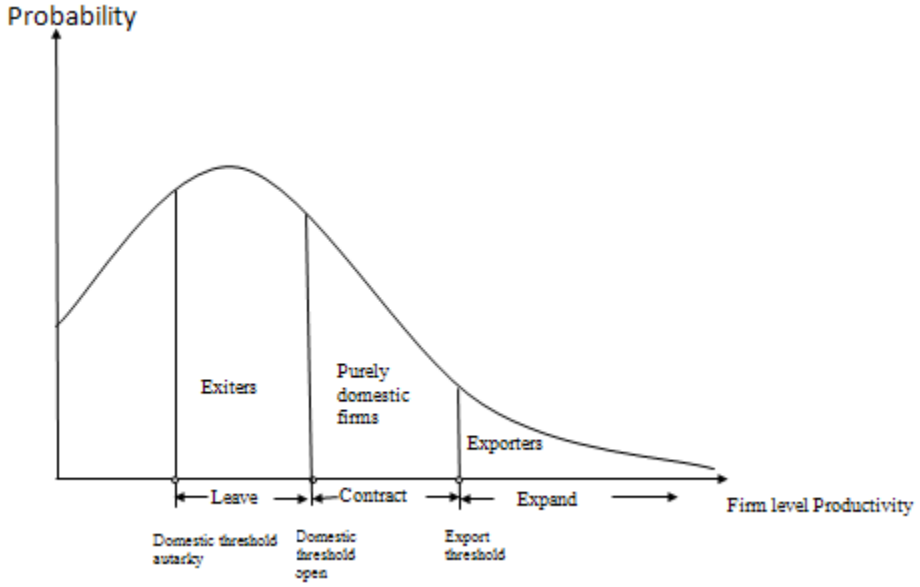
Source: Constructed by the authors using SMEs dataset.

Figure 3: Distribution of SMEs by Exporting Status and Sales Turnover



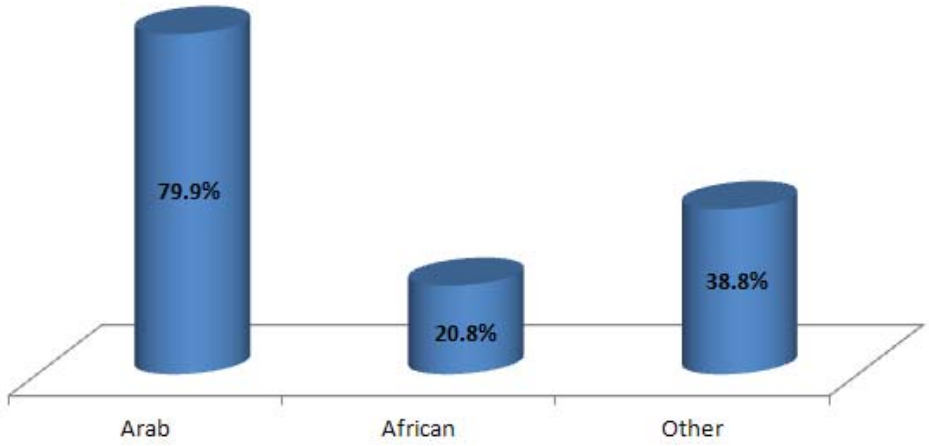
Source: Constructed by the authors using SMEs dataset.

Figure 4: Exports and Firm Productivity Level



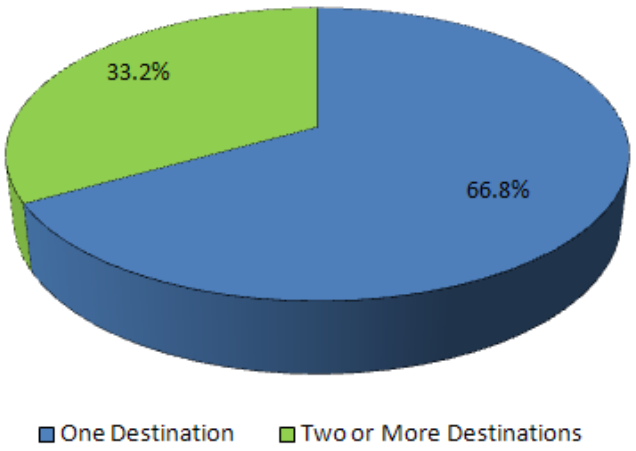
Source: Metliz (2003)

Figure 5: Destination of SMEs Exports



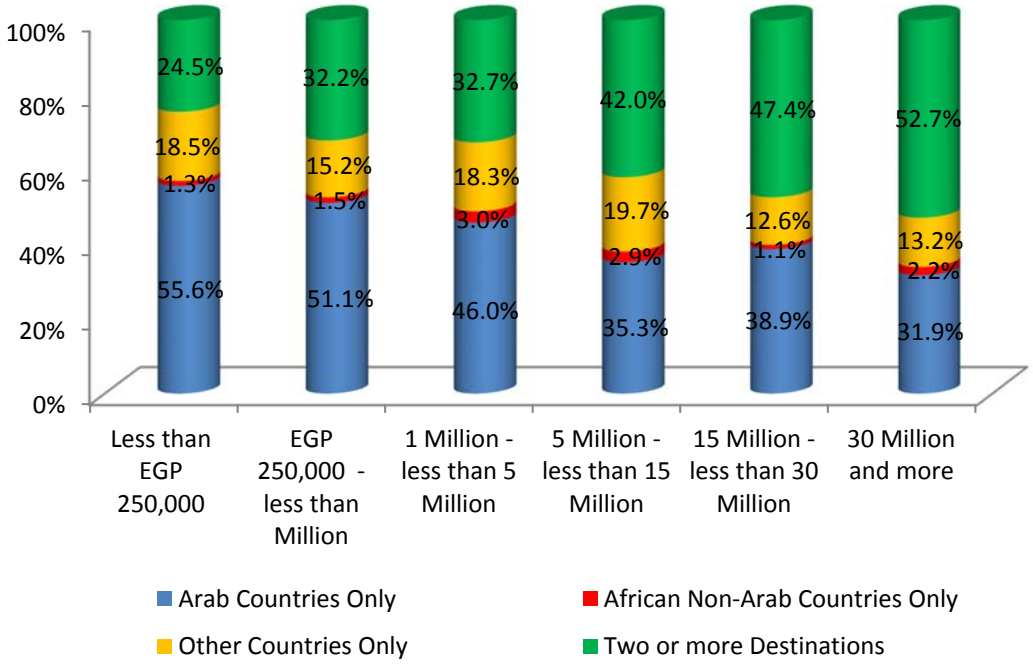
Source: Constructed by the authors using SMEs dataset

Figure 6: Distribution of Exporting SMEs by Number of Destinations



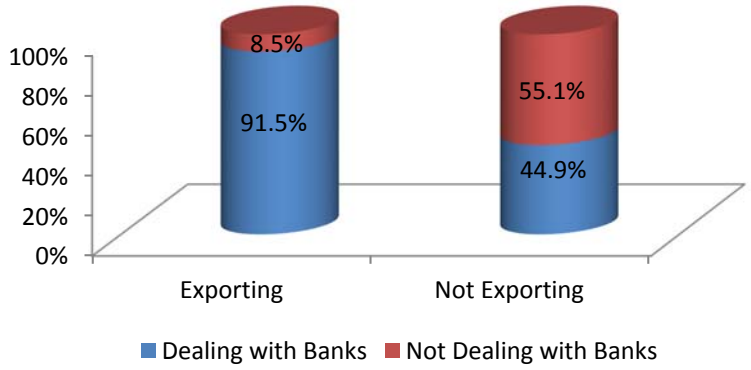
Source: Constructed by the authors using SMEs dataset

Figure 7: Distribution of SMEs by Capital and Importing Country



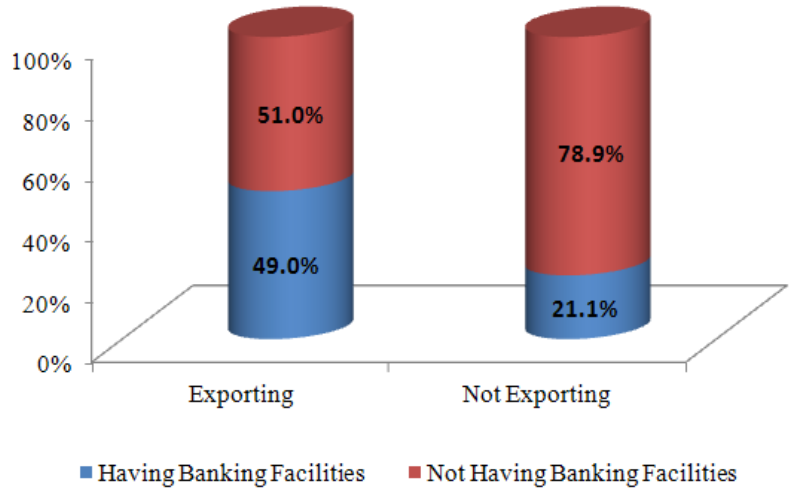
Source: Constructed by the authors using SMEs dataset.

Figure 8: Distribution of SMEs by Exporting Status and Dealing with Banks



Source: Constructed by the authors using SMEs dataset.

Figure 9: Distribution of SMEs by Exporting Status and Having Banking Facilities



Source: Constructed by the authors using SMEs dataset.

Table 1: Characteristics of Exporting vs. Non-Exporting SMEs

Characteristic	Exporting	Non-Exporting	Exp/Non-Exp
Average Capital	7.71	1.26	6.14
Average Sales	11.24	2.65	4.24
Average Labor	35.18	13.88	2.53
Capital Productivity	1.46	2.11	0.69
Labor Productivity	0.32	0.19	1.67

Source: Constructed by the authors using SMEs dataset.

Table 2: Access to Finance and Exporting Status

Non-Exporting	Exporting (%)	
Deal with Banks		Yes
42.2%	5.5	No
51.8%	0.5	
Have Banking Facilities		
19.8%	2.9	Yes
74.2%	3.1	No
Have Problems with Banks		
15.0%	1.1	Yes
79.0%	4.9	No

Source: Constructed by the authors using SMEs dataset.

Table 3: The Impact of Access to Finance on the Probability to Export

	B	S.E.	Exp(B)	B	S.E.	Exp(B)
Non-Start Up Firm* **	-0.244	0.062	0.783***	-0.287	0.062	0.750***
Legal Form* **						
Partnership in Commendam	0.062	0.089	1.064	0.061	0.09	1.063
Joint Liability	-0.094	0.097	0.91	-0.192	0.097	0.826**
Sole	-0.344	0.101	0.709***	-0.507	0.102	0.602***
Other	-0.117	0.141	0.89	-0.185	0.14	0.831
Economic Activity* **						
Manufacturing	1.782	0.127	5.944***	1.722	0.127	5.598***
Trade	1.185	0.138	3.272***	1.183	0.138	3.265***
Geographical Location* **						
Lower Egypt	0.302	0.062	1.353***	0.303	0.062	1.354***
Upper Egypt	-0.949	0.139	.387***	-1.042	0.14	0.353***
Frontier	-1.581	0.372	.206***	-1.575	0.373	0.207***
Sales Turnover* **						
Million - < 20 Million	0.874	0.076	2.397***	1.004	0.077	2.729***
20 Million - < 50 Million	1.327	0.122	3.769***	1.447	0.124	4.251***
Capital* **						
250,000 - < Million	0.846	0.085	2.330***	1.006	0.085	2.735***
Million - < 5 Million	1.023	0.092	2.781***	1.2	0.092	3.319***
5 Million - < 15 Million	0.953	0.117	2.595***	1.108	0.117	3.029***
15 Million - < 30 Million	0.882	0.164	2.415***	1.045	0.164	2.844***
30 Million or more	0.771	0.167	2.162***	0.876	0.169	2.400***
Labor* **						
20 – 34	0.77	0.09	2.159***	0.897	0.09	2.452***
35 – 50	0.891	0.111	2.439***	1.031	0.112	2.803***
51 or more	1.197	0.091	3.311***	1.252	0.091	3.497***
Dealing with Banks* **	1.602	0.096	4.964***			
Having Banking Facilities* **				0.61	0.06	1.840***
Constant* **	-6.471	0.18	0.002***	-5.507	0.164	0.004***

Note: *** p<0.01, ** p<0.05, * p<0.1
Source: Constructed by the authors

Table 4: The Impact of Access to Finance on the Probability of Exporting to African Countries

	B	S.E.	Exp(B)	B	S.E.	Exp(B)
Non-Start Up Firm	-0.035	0.134	0.966	-0.028	0.134	0.972
Legal Form*						
Partnership in Commendam	0.131	0.17	1.14	0.19	0.172	1.209
Joint Liability	-0.188	0.207	0.829	-0.179	0.209	0.836
Sole	-0.404	0.224	.668*	-0.371	0.225	.690*
Other	-0.456	0.329	0.634	-0.456	0.33	0.634
Economic Activity						
Manufacturing	-0.111	0.293	0.895	-0.062	0.295	0.94
Trade	0.16	0.325	1.173	0.159	0.328	1.172
Geographical Location						
Lower Egypt	-0.104	0.131	0.902	-0.121	0.132	0.886
Upper Egypt	-0.574	0.396	0.564	-0.689	0.396	.502*
Frontier	0.055	0.864	1.057	0.009	0.876	1.009
Sales Turnover						
1 Million - < 20 Million	0.158	0.177	1.171	0.159	0.177	1.172
20 Million - < 50 Million	0.151	0.236	1.163	0.106	0.237	1.112
Capital* **						
250,000 - < 1 Million	0.107	0.202	1.113	0.079	0.203	1.082
1 Million - < 5 Million	0.26	0.198	1.297	0.25	0.198	1.284
5 Million - < 15 Million	0.487	0.226	1.628**	0.424	0.228	1.528*
15 Million - < 30 Million	0.608	0.298	1.837**	0.563	0.3	1.757*
30 Million or more	1.253	0.299	3.502***	1.159	0.301	3.187***
Labor**						
20 – 34	0.604	0.203	1.829***	0.614	0.204	1.849***
35 – 50	0.461	0.241	1.585*	0.496	0.241	1.643**
51 or more	0.38	0.203	1.463*	0.382	0.203	1.466*
Dealing with Banks*	0.544	0.312	1.722*			
Having Banking Facil.***				0.534	0.13	1.705***
Constant***	-2.355	0.47	.095***	-2.155	0.389	.116***

Note: *** p<0.01, ** p<0.05, * p<0.1
Source: Constructed by the authors.

Table 5: The Impact of Access to Finance on the Probability of Exporting to Arab Countries

	B	S.E.	Exp(B)	B	S.E.	Exp(B)
Non-Start Up Firm	0.113	0.132	1.12	0.127	0.132	1.136
Legal Form						
Partnership in Commendam	0.25	0.182	1.285	0.22	0.182	1.246
Joint Liability	-0.007	0.2	0.993	-0.024	0.2	0.976
Sole	-0.019	0.205	0.981	-0.118	0.206	0.889
Other	0.191	0.308	1.211	0.156	0.308	1.169
Economic Activity						
Manufacturing	0.06	0.303	1.062	0.049	0.304	1.05
Trade	0.086	0.329	1.09	0.107	0.33	1.113
Geographical Location*						
Lower Egypt	0.34	0.131	1.404***	0.305	0.131	1.356**
Upper Egypt	-0.032	0.322	0.969	0.002	0.32	1.002
Frontier	0.728	1.082	2.07	0.668	1.083	1.951
Sales Turnover						
1 Million - < 20 Million	-0.159	0.166	0.853	-0.117	0.166	0.889
20 Million - < 50 Million	0.049	0.244	1.05	0.115	0.243	1.122
Capital						
250,000 - < 1 Million	0.334	0.191	1.397*	0.359	0.191	1.432*
1 Million - < 5 Million	0.109	0.186	1.115	0.129	0.186	1.137
5 Million - < 15 Million	0.018	0.223	1.018	0.053	0.223	1.054
15 Million - < 30 Million	0.707	0.351	2.028**	0.726	0.352	2.067**
30 Million or more	0.431	0.343	1.539	0.464	0.342	1.59
Labor						
20 – 34	-0.073	0.201	0.93	-0.005	0.202	0.995
35 – 50	-0.171	0.236	0.843	-0.102	0.237	0.903
51 or more	-0.387	0.192	.679**	-0.312	0.192	0.732
Having Banking Facilities	0.135	0.129	1.144			
Dealing with Banks***				-0.853	0.3	0.426***
Constant***	1.1	0.379	3.003***	1.903	0.461	6.703***

Note: *** p<0.01, ** p<0.05, * p<0.1
Source: Constructed by the authors.

Table 6: The Impact of Access to Finance on the Probability of Exporting to Other Countries

	B	S.E.	Exp(B)	B	S.E.	Exp(B)
Non-Start Up Firm	-0.124	0.11	0.883	-0.134	0.11	0.875
Legal Form						
Partnership in Commendam	-0.163	0.149	0.85	-0.154	0.148	0.857
Joint Liability	-0.072	0.168	0.931	-0.063	0.168	0.939
Sole	0.005	0.172	1.005	0.055	0.172	1.056
Other	-0.036	0.246	0.964	-0.014	0.247	0.986
Economic Activity						
Manufacturing	-0.21	0.243	0.811	-0.212	0.243	0.809
Trade	-0.15	0.265	0.861	-0.161	0.265	0.852
Geographical Location						
Lower Egypt	-0.035	0.107	0.965	-0.012	0.107	0.988
Upper Egypt	-0.252	0.283	0.777	-0.25	0.282	0.779
Frontier	-0.009	0.745	0.991	0.023	0.745	1.023
Sales Turnover* **						
1 Million - < 20 Million	0.399	0.137	1.491***	0.376	0.138	1.457***
20 Million - < 50 Million	0.47	0.196	1.599**	0.44	0.196	1.553**
Capital						
250,000 - < Million	-0.097	0.154	0.907	-0.106	0.154	0.899
Million - < 5 Million	-0.196	0.157	0.822	-0.206	0.157	0.814
5 Million - < 15 Million	0.081	0.188	1.085	0.072	0.187	1.075
15 Million - < 30 Million	-0.14	0.259	0.87	-0.141	0.26	0.869
30 Million or more	-0.401	0.275	0.67	-0.403	0.275	0.668
Labor*						
20 – 34	0.146	0.164	1.157	0.11	0.164	1.116
35 – 50	0.197	0.194	1.218	0.155	0.195	1.167
51 or more	0.411	0.159	1.508***	0.372	0.16	1.450**
Having Banking Facilities	0.008	0.106	1.008			
Dealing with Banks**				0.468	0.21	1.596**
Constant*	-0.55	0.309	.577*	-0.943	0.355	.389***

Note: *** p<0.01, ** p<0.05, * p<0.1
Source: Constructed by the authors.

Table 7: The Impact of Access to Finance on the Probability of Exporting to more than One Destination

	B	S.E.	Exp(B)	B	S.E.	Exp(B)
Non-Start Up Firm	-0.048	0.116	0.953	-0.052	0.115	0.949
Legal Form						
Partnership in Commendam	-0.019	0.153	0.981	-0.062	0.152	0.94
Joint Liability	-0.198	0.177	0.821	-0.209	0.176	0.811
Sole	-0.203	0.183	0.816	-0.241	0.183	0.786
Other	-0.148	0.259	0.862	-0.159	0.259	0.853
Economic Activity						
Manufacturing	-0.272	0.252	0.762	-0.296	0.25	0.744
Trade	-0.03	0.277	0.97	-0.024	0.275	0.976
Geographical Location*						
Lower Egypt	0.16	0.112	1.174	0.162	0.112	1.176
Upper Egypt	-0.624	0.328	.536*	-0.539	0.327	.583*
Frontier	0.185	0.774	1.204	0.192	0.766	1.211
Sales Turnover						
1 Million - < 20 Million	0.303	0.148	1.354**	0.312	0.148	1.367**
20 Million - < 50 Million	0.345	0.204	1.412*	0.386	0.204	1.471*
Capital						
250,000 - < 1 Million	0.186	0.165	1.204	0.202	0.164	1.224
1 Million - < 5 Million	0.07	0.167	1.073	0.007	0.167	1.08
5 Million - < 15 Millions	0.333	0.196	1.395*	0.373	0.195	1.452*
15 Million - < 30 Million	0.504	0.263	1.655*	0.526	0.263	1.693**
30 Million or more	0.621	0.277	1.861**	0.68	0.275	1.974**
Labor**						
20 – 34	0.401	0.173	1.494**	0.41	0.173	1.506**
35 – 50	0.356	0.206	1.427*	0.351	0.206	1.420*
51 or more	0.483	0.169	1.620***	0.497	0.17	1.644***
Having Banking Facilities***	0.328	0.111	1.388***			
Dealing with Banks				0.107	0.219	1.112
Constant***	-1.305	0.326	.271***	-1.235	0.37	.291***

Note: *** p<0.01, ** p<0.05, * p<0.1
Source: Constructed by the authors.

Table 8: Results of the Multinomial Logit Model

	One destination			More than One Destination			One destination			More than One Destination		
	B	Std. Error	Exp(B)	B	Std. Error	Exp(B)	B	Std. Error	Exp(B)	B	Std. Error	Exp(B)
Intercept* **	-5.766	0.197		-7.039-	0.268		-6.748	0.215		-7.974	0.307	
Non-Start Up Firm* **	-.277	0.072	.758***	-.313-	0.1	.731***	-.234	0.072	.791***	-.268	0.1	.765***
Legal Form * **												
Partnership in Commendam	0.085	0.104	1.089	0.028	0.133	1.028	0.092	0.104	1.096	0.018	0.132	1.019
Joint Liability	-.126	0.112	0.882	-.326-	0.156	.722**	-.021	0.112	0.979	-.243	0.155	0.784
Sole	-.459	0.118	.632***	-.600-	0.169	.549***	-.286	0.118	.752**	-.460	0.168	.631***
Other	-.152	0.163	0.859	-.240-	0.222	0.787	-.076	0.164	0.927	-.185	0.222	0.831
Economic Activity* **												
Manufacturing	1.775	0.158	5.901***	1.613	0.2	5.018***	1.839	0.157	6.290***	1.665	0.199	5.288***
Trade	1.213	0.17	3.364***	1.137	0.222	3.119***	1.201	0.169	3.323***	1.175	0.222	3.238***
Geographical Location* **												
Lower Egypt	0.228	0.072	1.256***	0.464	0.099	1.591***	0.226	0.072	1.253***	0.466	0.098	1.593***
Upper Egypt	-.967	0.156	.380***	-1.317-	0.292	.268***	-.891	0.155	.410***	-1.188	0.291	.305***
Frontier	-1.541	0.465	.214***	-1.643-	0.602	.193***	-1.546	0.464	.213***	-1.653	0.601	.191***
Sales Turnover* **												
Million - < 20 Millions	0.945	0.089	2.572***	1.177	0.141	3.244***	0.803	0.087	2.232***	1.071	0.139	2.919***
20 Millions - < 50 Millions	1.355	0.145	3.876***	1.652	0.191	5.220***	1.21	0.143	3.354***	1.578	0.187	4.844***
Capital* **												
250,000 - < 1 Million	0.981	0.098	2.666***	1.082	0.149	2.950***	0.807	0.098	2.242***	0.95	0.149	2.586***
1 Million - < 5 Million	1.218	0.106	3.381***	1.181	0.156	3.259***	1.027	0.106	2.793***	1.036	0.155	2.818***
5 Million - < 15 Million	1.022	0.138	2.778***	1.273	0.181	3.570***	0.846	0.137	2.330***	1.159	0.179	3.187***
15 Million - < 30 Million	0.881	0.198	2.413***	1.303	0.233	3.682***	0.701	0.198	2.016***	1.17	0.232	3.223***
30 Million or more	0.632	0.21	1.882***	1.19	0.236	3.288***	0.498	0.209	1.645**	1.143	0.233	3.136***
Labor* **												
20 – 34	0.789	0.106	2.201***	1.172	0.156	3.230***	0.658	0.105	1.930***	1.054	0.154	2.868***
35 – 50	0.961	0.129	2.614***	1.228	0.186	3.416***	0.819	0.129	2.268***	1.096	0.185	2.992***
51 or more	1.115	0.106	3.050***	1.567	0.154	4.791***	1.059	0.106	2.882***	1.518	0.153	4.565***
Having Banking Facil.* **	0.52	0.069	1.683***	0.804	0.096	2.234***	-	-	-	-	-	-
Dealing with Banks* **	-	-	-	-	-	-	1.596	0.11	4.935***	1.63	0.19	5.101***

Note: *** p<0.01, ** p<0.05, * p<0.1
Source: Constructed by the authors.