Trade and Access to Finance of SMEs: Is There a Nexus?*

Hala El –Said (Cairo University)

Mahmoud Al-Said (Cairo University)

Chahir Zaki (Cairo University)

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Motivation (1)

- 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.

- Finance → Productivity → Exports

Motivation (2)

- The nexus between trade and access to finance can be explained by two different stands:
  - First, according to the stage theory (Johanson and Vahlne, 1977): this approach states that a firm incrementally increases its foreign involvements based on experience and knowledge that it acquires gradually about foreign markets.
  - The second group includes international trade models with heterogeneous firms. Access to finance is likely to improve firms' 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.

Motivation (3)

- For Asia: Ngoc, et. al., 2008 for Vietnamese SMEs.

- For Africa: Gumede (2004) for South Africa.

- For Latin America: Ottaviano and Martincus (2011) for Argentina.

- For Europe: Requena-Silvente, 2005 for UK.

- Examining the nexus between trade and finance was never done neither for MENA countries nor for Egypt.

Why Egypt?

- In Egypt, despite banking reforms that have been launched in 2004, the ability of SMEs to more easily access suitable and sufficient means of finance has always been considered a major obstacle facing many SMEs (Egyptian Banking Institute, 2009).

- This is reflected on SMEs' performance on international markets since only 6 percent of SMEs export, while the remaining serve only the domestic market.

What we do?

- 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 their 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.

What we found?

- 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.

Outline

- Data

- Stylized Facts

- Model

- Empirical Findings

- Conclusion

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Data (1)

- The Central Bank of Egypt (CBE) launched in December 2008 an initiative, as an integral part of the Second Phase of the Banking Sector Reform Program (2008-2011), to enhance SMEs access to finance and banking services.

- The CBE and the Egyptian Banking Institute (EBI) commissioned the Central Agency for Public Mobilization and Statistics (CAPMAS) to conduct an SME nation-wide census.

Data (2)

- 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.).
  - 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 is categorizing firms according to the sales turnover which is the variable banks consider the most while giving loans. It also includes whether the firm exports or not and the destination of exports.
  - Fourth, the questionnaire contains a final module on access to finance: 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.

Data (3)

- The census covers all SMEs in Egypt, identified here as every company or economic activity:
    - that is formally registered,
    - that employs five employees or more,
    - that has a significant economic value added: thus activities of limited economic value added have been excluded, namely Barber shops, beauty salons and kiosks were excluded from the survey.
- Based on these criteria, the census ended-up by including around 36, 492 firms representing small and formally registered firms in Egypt.

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# Distribution of SMEs according to dealing with banks

31%

47%

22%

- Deal with bank but do not have banking facilities
- Deal with bank but have banking facilities
- Do not deal with banks
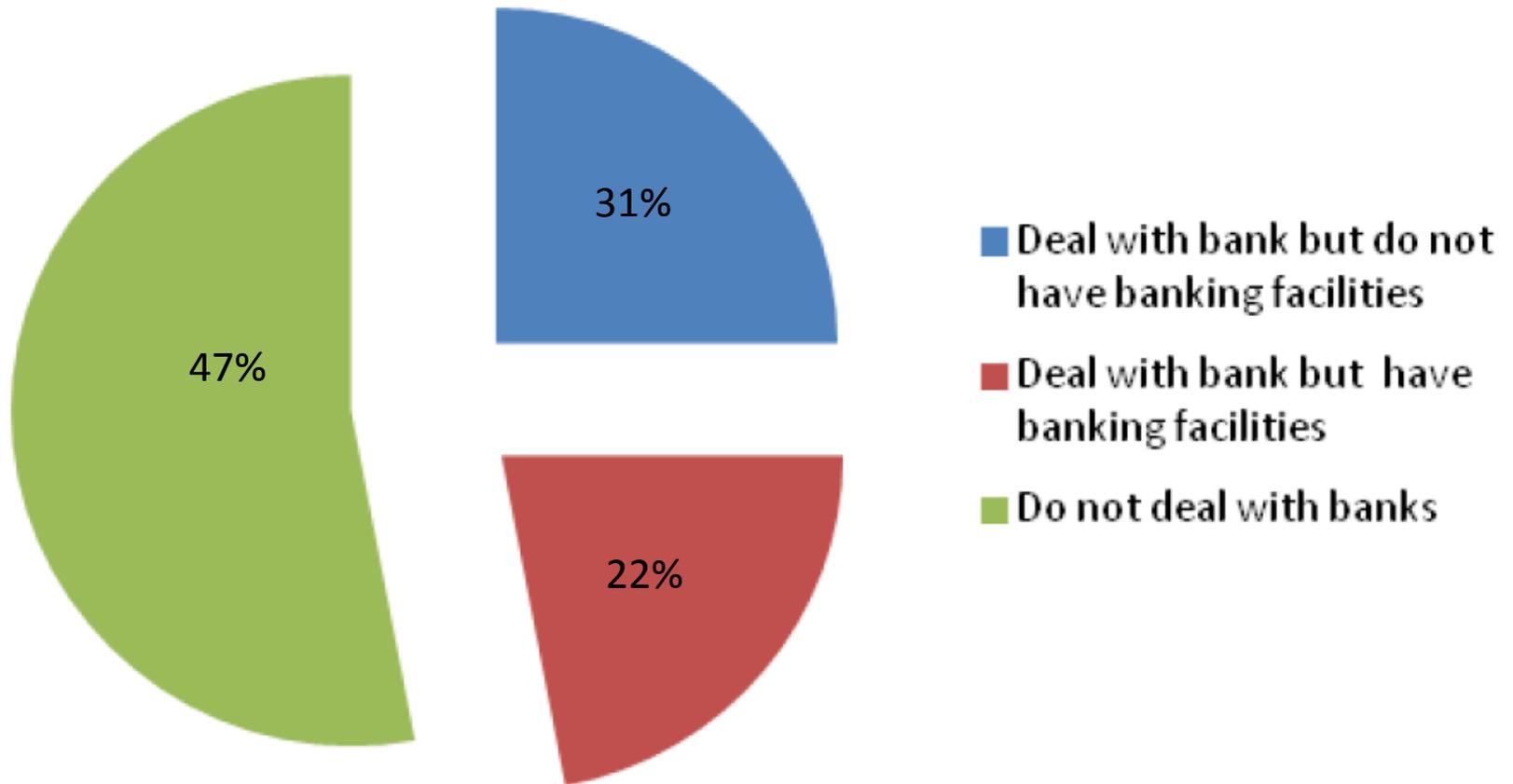
Source: Constructed by the authors using SMEs dataset

Distribution of SMEs by Exporting Status and Capital

Bar chart showing distribution of SMEs by exporting status and capital.

Capital	Exporting	Not Exporting
Less than 250,000 LE	1.8%	98.2%
250,000 LE - Less than Million	11.6%	88.4%
Million - Less than 5 Millions	20.8%	79.2%
5 Millions - Less than 15 Millions	27.0%	73.0%
15 Millions - Less than 30 Millions	27.1%	72.9%
30 Millions and More	24.4%	75.6%

Legend: ■ Exporting ■ Not Exporting
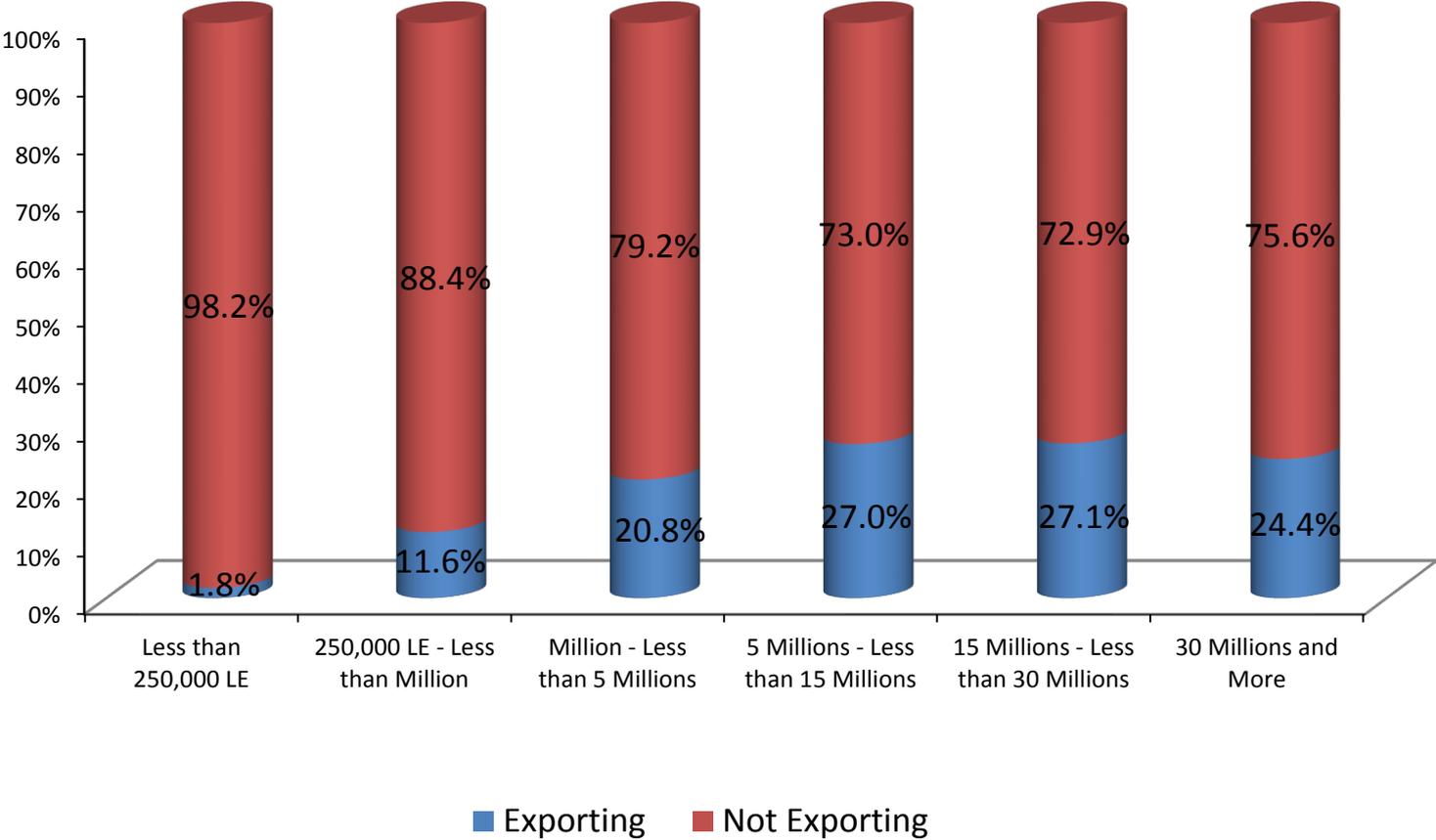
Distribution of SMEs by Exporting Status and Number of Employees
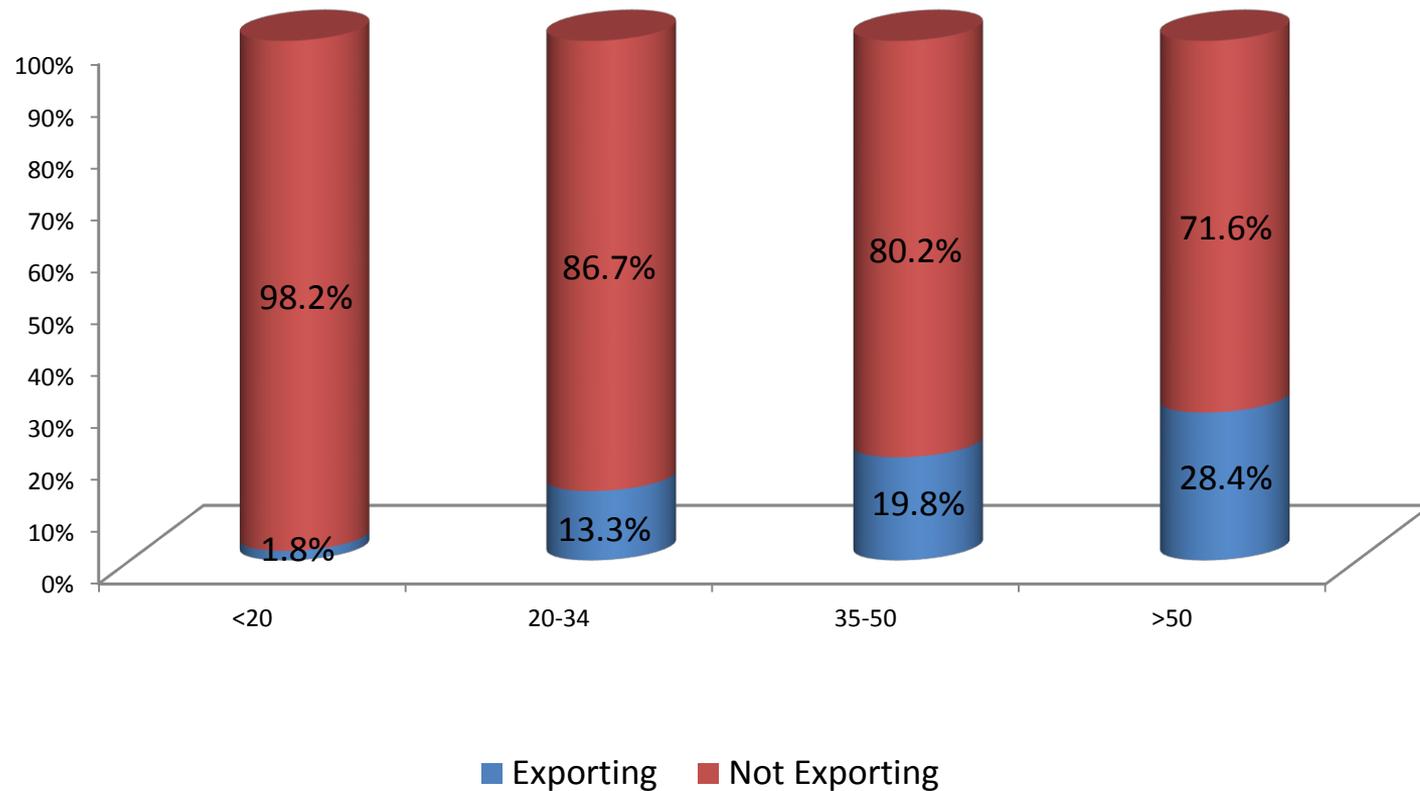
Distribution of SMEs by Exporting Status and Sales Turnover
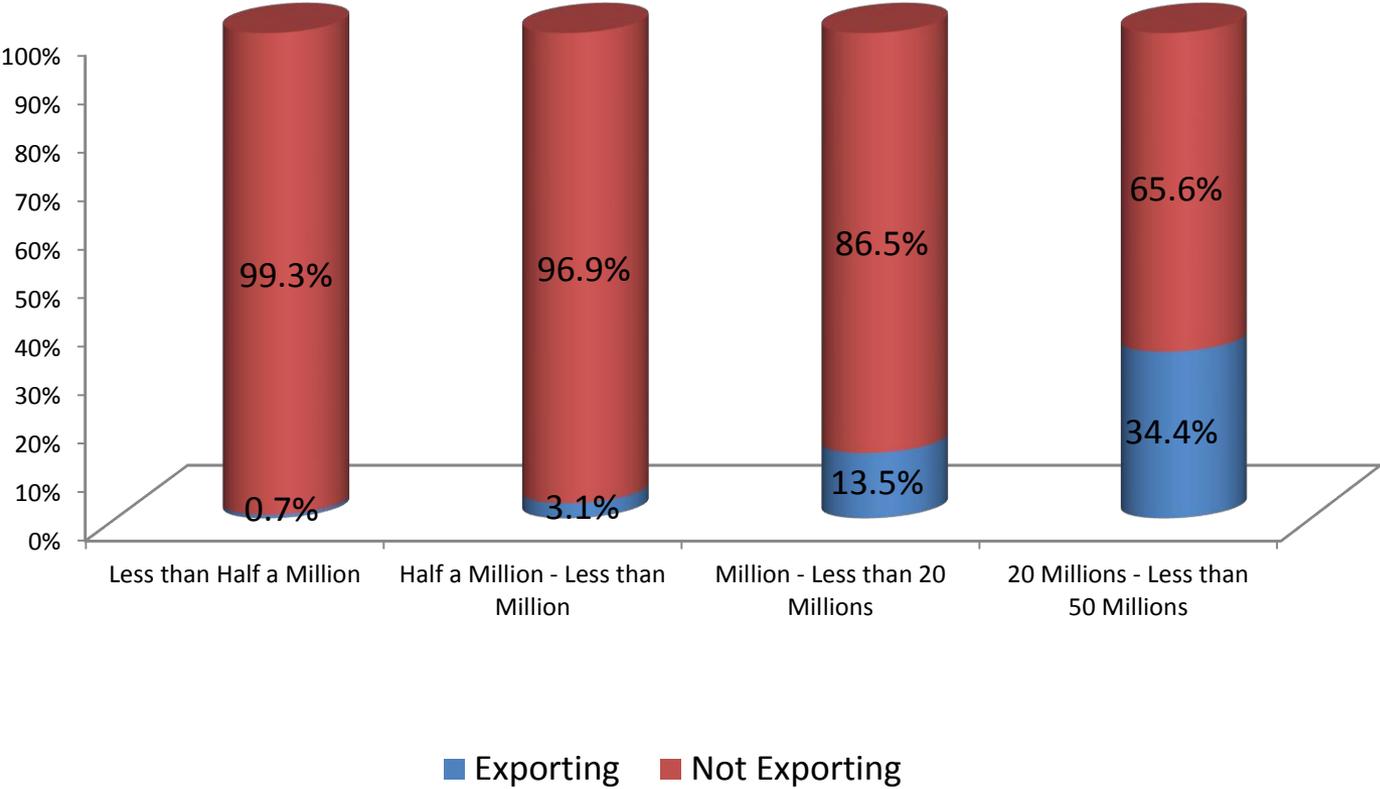
Melitz (2003)
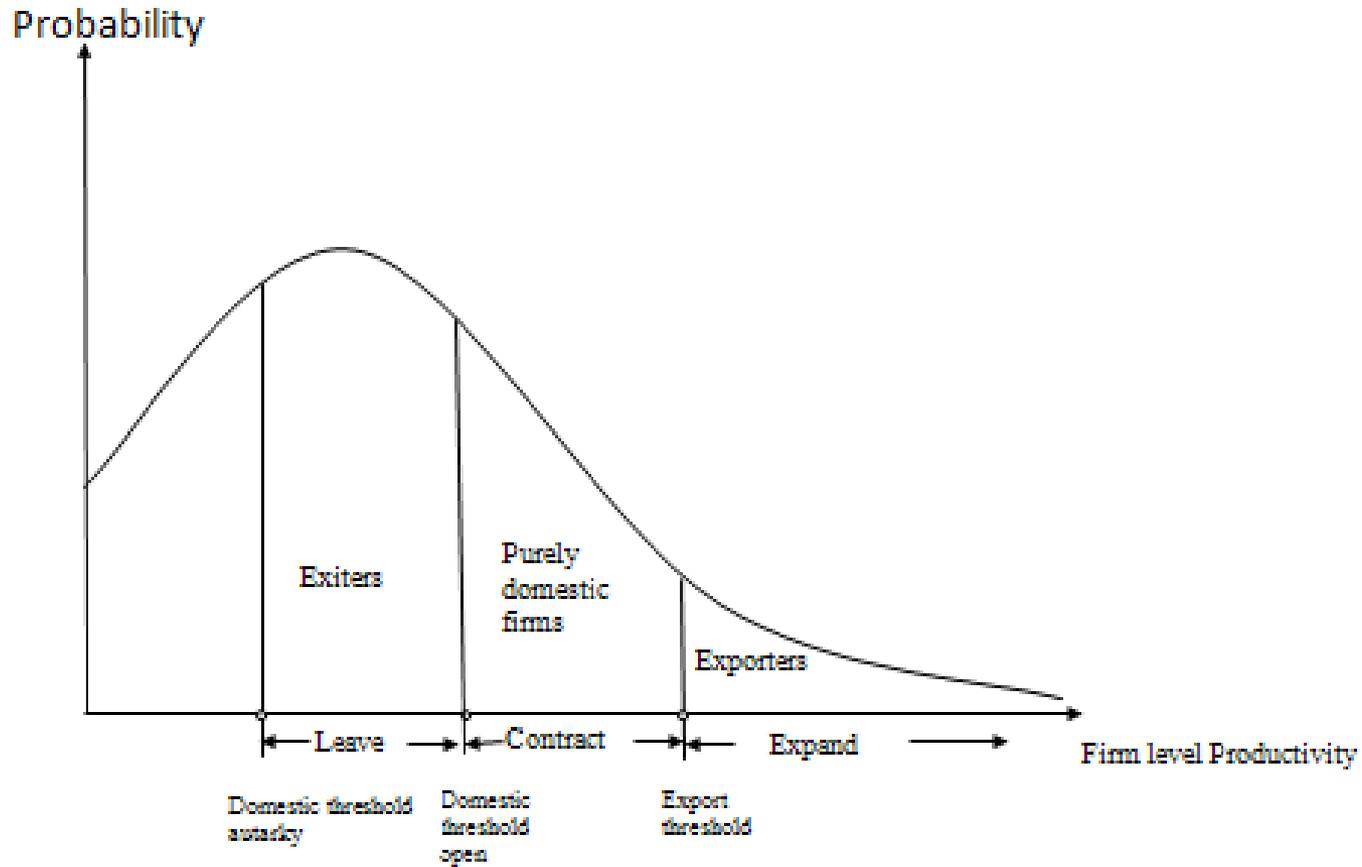
Characteristics of Exporting vs. Non-Exporting SMEs

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

Exports Destinations
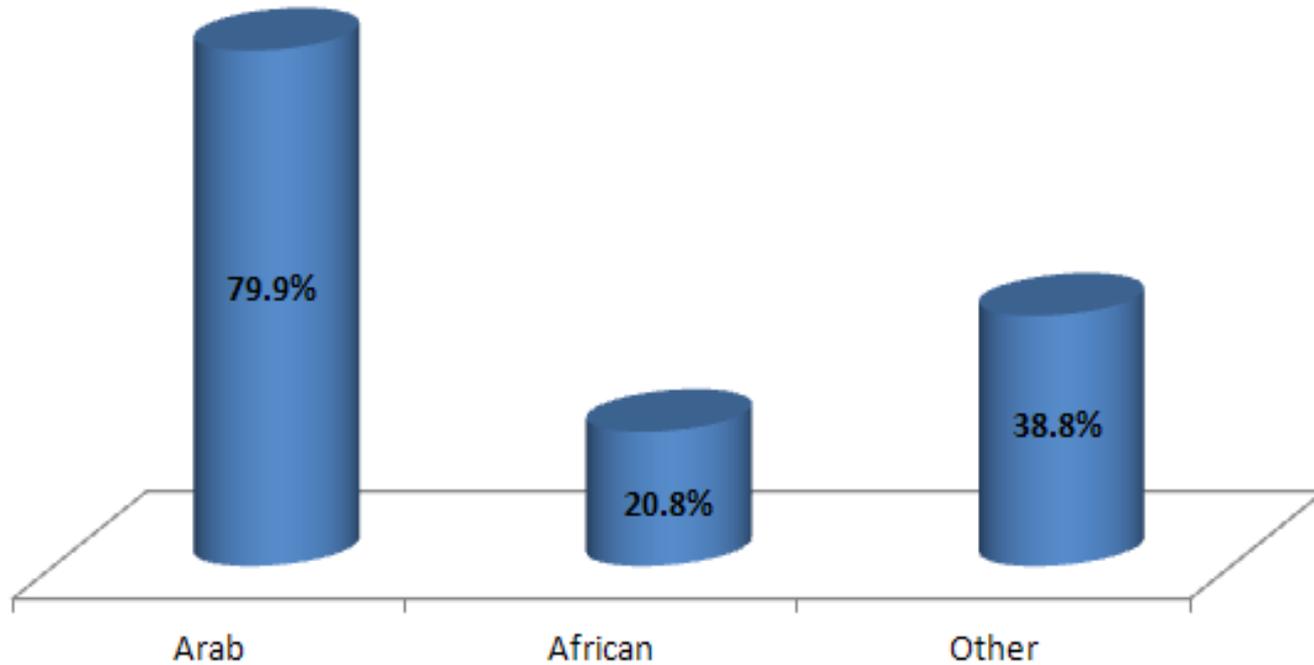
Number of Destinations

33.2%

66.8%
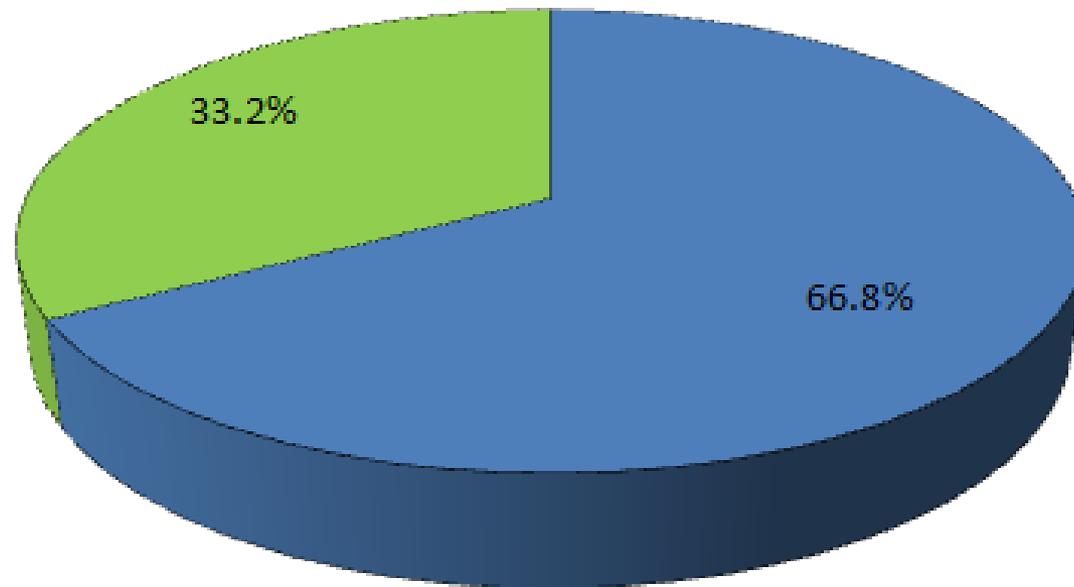
■ One Destination   ■ Two or More Destinations

Destination and SMEs' Capital
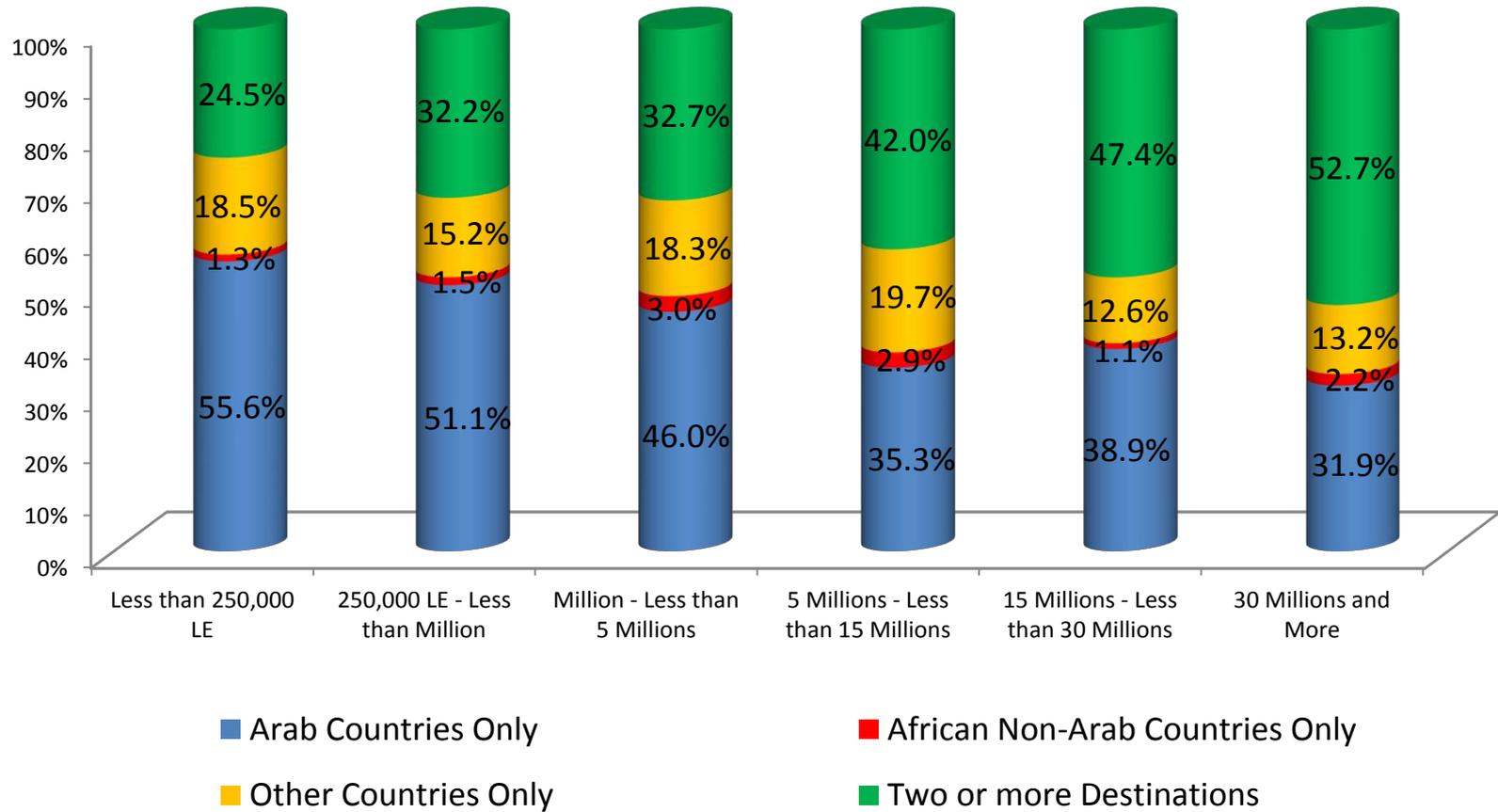
Distribution of SMEs by Exporting Status and Dealing with Banks
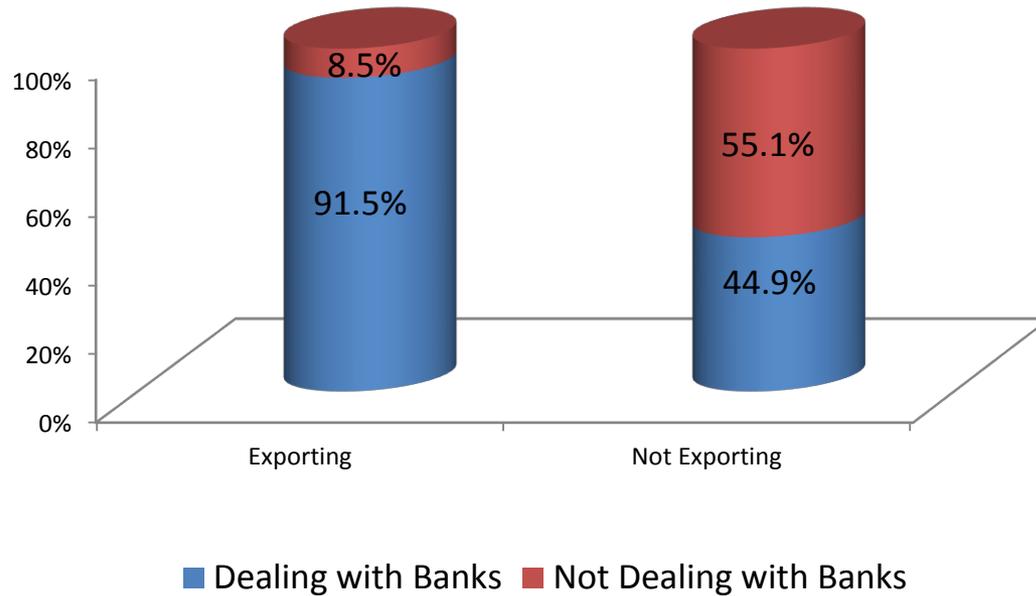
Distribution of SMEs by Exporting Status and Having Banking Facilities
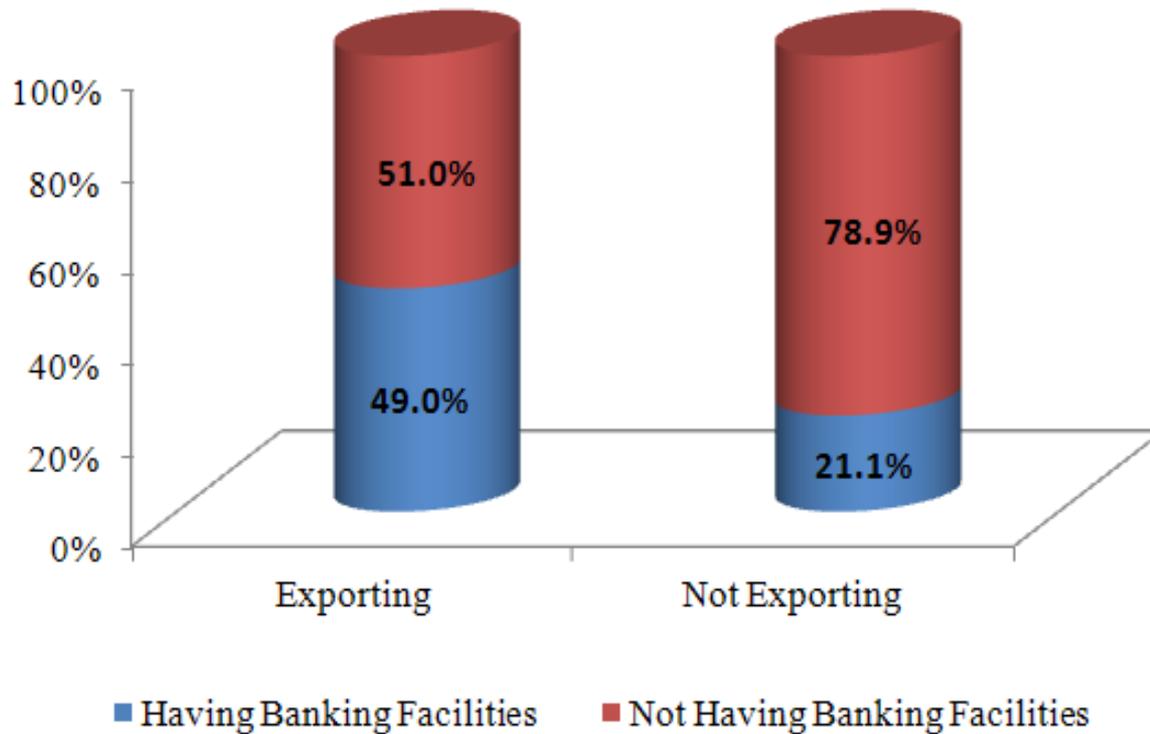
Access to Finance and Exports

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

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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

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

Regressions

- 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 a destination in order to analyze whether access to finance can help a firm serve several destinations or not

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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	.783***	-0.287	0.062	.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	.826**
Sole	-0.344	0.101	.709***	-0.507	0.102	.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	.353***
Frontier	-1.581	0.372	.206***	-1.575	0.373	.207***

The impact of access to finance on the probability to export

Sales Turnover***						
Million - < 20 Millions	0.874	0.076	2.397***	1.004	0.077	2.729***
20 Millions - < 50 Millions	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 Millions	1.023	0.092	2.781***	1.2	0.092	3.319***
5 Millions - < 15 Millions	0.953	0.117	2.595***	1.108	0.117	3.029***
15 Millions - < 30 Millions	0.882	0.164	2.415***	1.045	0.164	2.844***
30 Millions 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	.002***	-5.507	0.164	.004***

The impact of access to finance on the probability of exporting to Arab c.

	B	S.E.	Exp(B)	B	S.E.	Exp(B)
Having Banking Facilities	0.135	0.129	1.144			
Dealing with Banks*				-0.853	0.3	.426***
Constant*	1.1	0.379	3.003***	1.903	0.461	6.703***

The impact of access to finance on the probability of exporting to Africa

	B	S.E.	Exp(B)	B	S.E.	Exp(B)
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***

The impact of access to finance on the probability of exporting to Others

	B	S.E.	Exp(B)	B	S.E.	Exp(B)
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***

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)
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***

Multinomial Logit

		Having Banking Facil.***	Dealing with Banks***
	B	0.52	-
	Std. Error	0.069	-
One destination	Exp(B)	1.683***	-
	B	0.804	-
More than One Destination	Std. Error	0.096	-
	Exp(B)	2.234***	-
	B	-	1.596
	Std. Error	-	0.11
One destination	Exp(B)	-	4.935***
	B	-	1.63
More than One Destination	Std. Error	-	0.19
	Exp(B)	-	5.101***

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Conclusion and Recommendations

- Access to finance may be perceived as a way to promote exports:

  – 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 make their international activities easier.

Conclusion and Recommendations

- 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 benefit from banking facilities. For this reason, it is important to facilitate access to finance to SME 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 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.

Thanks for your attention