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Productivity, Exports Performance and Investment Climate: Evidence from Firm Level-Data

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Abstract

The objective of this paper is to explore the nexus between exports performance and components of the investment climate. The contribution of this paper is twofold. First, it fills the gap in the available literature by examining not only the impact of investment climate on productivity, but also on the decision of the firm to become an exporter. Second, given the scarcity of the available literature on MENA countries, a developing MENA country, namely Egypt, is used in the empirical exercise. We use the World Bank enterprise survey database to assess the impact of physical infrastructure (access to and quality of water and electricity, and communications, availability and pricing of land) and regulatory infrastructure (days to clear goods through customs, licensing and taxation policies, and access to finance) on the likelihood of becoming on exporter. The case of Egypt is of particular interest since between 2004 and 2008, the government of Egypt implemented a series of reforms in order to improve the investment climate. Moreover, reviewing and improving business-related regulations is currently on top of the reform agenda. Our findings suggest that customs administration, the availability of land and land pricing, access to finance and competition from the informal firms are the most important impediments that hinder the increase in the number of exporters.

J.E.L. classification: F10, F12.

Keywords: Investment, Exports, Firm-Level data, Egypt.

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1. Introduction

The growing literature on international trade models with heterogeneous firms shows that export decision is chiefly determined by the firm productivity. Indeed, according to these models (e.g. Roberts and Tybout, 1997; Bernard et al., 2003; and Melitz, 2003), firms face uncertainties about their future productivity when making an irreversible costly investment decision to enter the domestic market. Furthermore, the decision to export occurs after the 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. The better the investment climate, the lower the sunk cost borne by the firm and the more likely a non-exporter becomes an exporter.

The literature on the nexus between productivity, exports and investment climate is not abundant. Most of the available literature focuses on the relationship between investment climate and firms' performance. In India, the value added per worker is 44% lower in those states that suffer from poor investment climate, where poor access to electricity and Internet seems to explain 25% of the total factor productivity gap in these firms (Dollar et al, 2002). Dollar et al (2004) show that customs delays and power outages are the most serious bottlenecks for firms in Pakistan, Bangladesh and India, and lower for Chinese firms. Subramanian et al (2005) find that delays in customs clearance and utility services interruptions negatively affect firms' performance in China and Brazil. Reducing customs clearance time by one day in China is expected to increase total factor productivity by 2% to 6%. Kinda et al (2009) find that the investment climate seems to be poorer for MENA than for other developing countries. MENA firms are also less export oriented than their peers in other developing countries. To the contrary, Hallward-Driemeier et al (2006) and Bastos and Nasir (2004) find no evidence on the impact of physical infrastructure on firms' productivity. Escribano et al (2010) suggest that customs clearance delays affect mainly firms' performance in faster growing African economies, while poor access to electricity and telecommunications matter for slower growing African economies. Şeker (2011) suggests that improvements in regulation, access to finance, and physical infrastructure significantly increase export volumes across countries with different income levels.

The objective of this paper is therefore to explore the nexus between exports performance and components of the investment climate. Our contribution is twofold. First, the paper fills the gap in the available literature by examining not only the impact of investment climate on productivity, but also on the decision of the firm to become an exporter. Second, we use data on Egypt in the empirical exercise to fill the gap in available studies on the MENA region. We use the World Bank enterprise survey database to assess the impact of physical infrastructure (access to and quality of water and electricity, and communications, availability and pricing of land) and regulatory infrastructure (days to clear goods through customs, licensing and taxation policies,

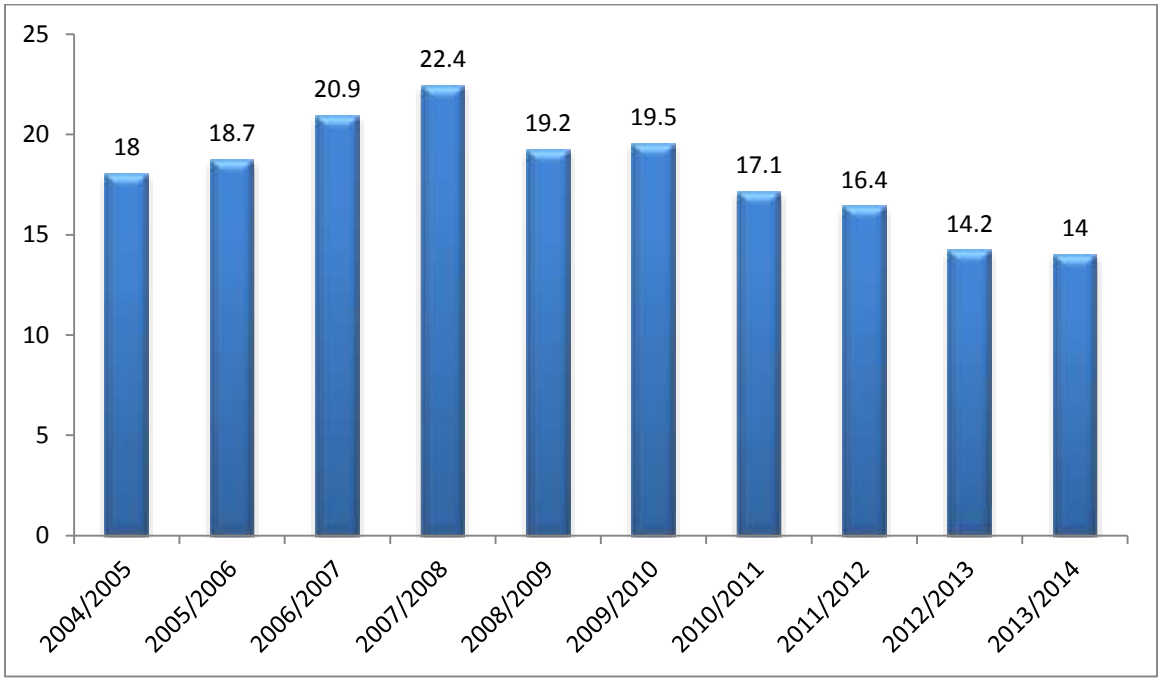
and access to finance) on firms' decision to export. The case of Egypt is of particular interest since between 2004 and 2008, the government of Egypt implemented a series of reforms in order to improve the investment climate. This is why, according to the Doing Business ranking, Egypt was the top reformer in the MENA region for five years in a row. Since 2014, the government has also been carrying out additional reforms to enhance business environment and boost investments and exports. Our findings suggest that customs administration, the availability of land and land pricing, access to finance and competition from the informal firms are the most important impediments to the increase in the number of exporters.

The paper is organized as follows. Section 2 describes the data sets used in the analysis and presents preliminary evidence and stylized facts. Section 3 presents the estimation framework. Section 4 discusses the empirical results. Section 5 concludes.

2. Stylized Facts

Political instability following the 2011 unrest had a negative impact on business and investment in Egypt. Figure 1 depicts the evolution of the share of total investments to GDP between fiscal years 2004/2005 and 2013/2014. Investments reached a peak of 22.4% of GDP in FY 2007/2008 as a consequence of successful regulatory reforms carried out between 2004 and 2008 to boost domestic and foreign investment and enhance the business environment. Since 2008/2009, investments witnessed a drop due to overall economic slowdown at the international level, and later due to the wave of political unrest in Egypt and the region since 2011, to reach 14% of GDP in FY 2013/2014. Exports have also dropped from 30.3% to only 15.2% of GDP during the same period. According to the World Bank 2013 Enterprise Survey, nearly 50% of firms reported unstable political conditions as the main obstacle to their operations. This percentage is higher than the average share in MENA region, which does not exceed 30%. The impact of political, economic and business conditions differ according to firm size. Medium and large firms reported political instability to be the major obstacle to their operation more frequently than smaller firms.

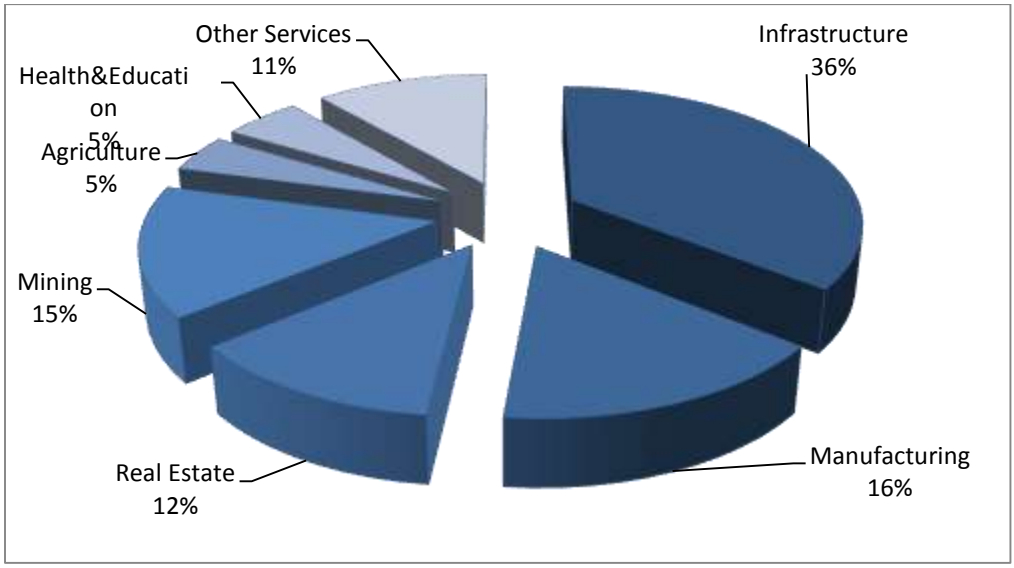
Figure 1: Share of total investments in GDP in % (2004/2005 – 2013/2014)



Source: Ministry of Finance (2008, 2015)

The distribution of investments per sector is depicted in figure 2 where infrastructure services (water, electricity, telecommunications and construction) account for 35% of total investments in Egypt, followed by the manufacturing sector with a share of 15.7%.

Figure 2: Sectoral distribution of investments (2013/2014) in %



Source: Ministry of Finance (2015)

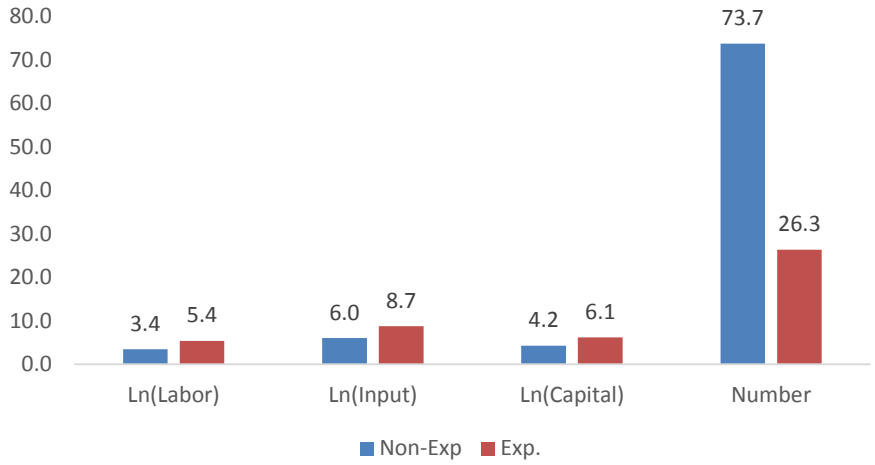
Table 1 depicts the number of establishments in the manufacturing sector between 2004 and 2008. Firm size and the share of exporting firms are illustrated in Figure 3. It is quite obvious that exporters are larger in terms of labor, capital and use of intermediate inputs. Yet, their number is smaller since they represent 26.3 % of the total number of firms.

Table 1: the number of establishments in the manufacturing sector

	2004	2007	2008	Total
Garments	120	109	130	359
Textiles	141	170	193	504
Machinery & equipments	32	38	38	108
Chemicals	126	151	87	364
Electronics	42	43	7	92
Metal industries	150	157	189	496
Non-metal industries	0	0	133	133
Agro industries	156	150	15	321
Other industries	210	178	364	752
Total	977	996	1,156	3,129

Source: Constructed by the authors using the WBES.

Figure 3: Characteristics of Exporters vs. Non-Exporters



Source: Constructed by the authors using the WBES.

In response to this overall slowdown, the Egyptian government has carried out a series of reforms to improve the business environment and encourage investment, especially in export-oriented sectors. Table 2 summarizes recent investment-related reforms undertaken by the Egyptian government. In March 2014, the Egyptian Regulatory Reform and Development Activity (ERRADA) was launched with the objective of reviewing and streamlining business-related regulations and eliminating burdensome administrative procedures. A Law-Decree No. 17/2015 was issued in March to simplify investment procedures and standardize incentives. The

law amends the Investment Incentives and Guarantees Law No.8/1997 and related in Corporate Law No. 59/1981 and Tax Law No. 91/2005. The new law includes special incentives for export-oriented activities and new government-investor dispute settlement mechanisms, enforces the role of the General Authority for Investment (GAFI) as a one-stop-shop for investors. More specifically, the law provides a reduction of the sales tax of used machinery and equipment from 10% to 5% and a flat tariff rate on imports of equipment used for production at 2%. A number of non-tax incentives are provided in labor-intensive projects, investments in remote areas and sectors of national priority. These include free allocation of land, reductions on energy prices, and reimbursement on costs of infrastructure established by investors. The licensing system is also enhanced with a maximum issue period of 15 days following the submission of all required documents and completion of procedures. Finally, new dispute settlement mechanisms are introduced through the establishment of a number of specialized committees.

Table 2: Major business-related regulatory reforms in Egypt (2004-2015)

Year	Regulatory Reform	Summary
2014	Reviving the role of the Egyptian Regulatory Reform and Development Activity (ERRADA)	Reviewing all investment – related regulations, eliminating burdensome and redundant regulations
	Decree-Law No. 56/2014 on competition is issued	Amends Competition Law No.3/2005 to reinforce the role of the Competition Authority
2015	Decree- Law No. 87/2015 on electricity is issued	Separation between regulation and provision of electricity. Privatization of generation and distribution.
	New Investment Law-Decree No.17/2015 is issued	Further incentives and guarantees to investors
	Suspension of Capital Gains Tax	Valid for two years
	Law No. 82/2002 on Intellectual Property Rights is amended	New varieties of plants covered

Source: constructed by the authors

In addition to these incentives, amendments in the tax law increase the amount of earnings exempted from taxation from EGP 5,000 to EGP 6,500. The 22.5% tax rate ceiling was imposed and unified for all firms operating in Egypt. Additionally, the capital gains tax has been suspended for two years. In a step to restructure the customs system, executive regulations of the Customs Law were amended to allow for electronic submission of some documents. The Law on Intellectual Property Rights Protection No.82/2002 was amended to set a legal framework for protection of new varieties of plants. Such amendment comes in line with WTO TRIPs Agreement. The Competition Law No.3/2005 has been amended by Decree-Law No.56/2014 in order to guarantee the independence of the Egyptian Competition Authority (ECA) and resolve the overlap between ECA and sectoral regulatory authorities. Finally, Decree-Law No.87/2015 has been issued to reform the electricity sector. The new law seeks to increase investments in the

energy sectors to cope with increasing demand and eliminate power cuts by privatizing generation and distribution of electricity, and leaving the government in charge of regulation and policy.

According to the Doing Business 2016 Report, Egypt's rank is 131 out of 189 countries in the ease of doing business, compared to a ranking of 126 in the previous year[‡], and has a distance to frontier (DTF)[§] score of 54.43. Egypt scored the largest increase in DTF over the past 12 years. Yet, most of the gains occurred between 2004 and 2008 after the creation of a single access point for business registration in 2004, the reduction of business registration fees in 2007, and the elimination of the minimum capital requirement in 2009.

Tables 3 and 4 provide comparisons of Egypt's ranking and performance in a number of selected indicators to two subgroups: MENA and lower middle-income countries. Egypt's Doing Business rank is 73 in 189 economies for the ease of starting a business. It has the 3rd and the 14th position among 20 MENA and 51 lower middle-income countries respectively. In terms of obtaining a license, the survey shows that Egyptian firms need longer time to obtain all types of licenses than their peers in MENA and in lower middle-income countries. In the case of operating licenses, the delay is 4 to 5 times higher in Egypt (138.9 days compared to 33.4 and 28.1 days in both groups respectively). Licensing is also a more complicated and lengthy procedure for small and medium enterprises than for large ones. In addition to lengthy procedures, corruption indicators are also higher in Egypt than in both benchmark groups. For example, more than 71.9% of Egyptian firms responding to the survey reported having been expected to give gifts to obtain operating licenses, compared to around 20% in the two other groups.

Egypt lags behind in the ease of paying taxes, with a global rank of 151, and ranks of 18 and 35 within MENA and lower middle-income countries subgroups respectively. According to the Doing Business Reports, Egyptian firms make 29 tax payments a year, spend 392 hours a year filing, preparing and paying taxes, and pay total taxes amounting to 45% of profit.

Lengthy licensing procedures, costly taxation and corruption are, among other reasons, three important causes of the prevalence of informality in Egypt. About 90% of firms responding to the enterprise survey reported having started their business without being formally registered.

Egypt's ranks 79th globally and first in MENA countries in access to credit. However, financial intermediation remains relatively low and the non-government loans-to-deposits ratio has decreased from 54.2% in June 2010 to 43.8% in June 2015 (Ministry of Finance, 2015). More specifically, firms operating in the trade sector receive only 16.4% of total non-government credit facilities, compared to a share of 44.1% for firms in the industrial sector

[‡] The change in ranking does not necessarily reflect deterioration in performance, but rather a change in methods of calculation. Previous rankings using the old methodology are currently not available.

[§] The DTF score benchmarks the performance of economies to best regulatory practices, where 0 indicates the worst performance and 100 the best performance (Egypt Doing Business Report, 2016) .

(Ministry of Finance, 2015). SMEs represent around 97% of total enterprises in the manufacturing sector (of which 6% is exporting), yet their share of credit is limited to a mere 25%. It is thought that limited access to finance is mainly caused by the reluctance of banks to lend small entrepreneurs due to high risk and low returns, in addition to the lack of awareness of small entrepreneurs with procedures and required documents and overall lack of financial education. The enterprise survey depicts limited efficiency of the financial intermediation market, with 89.1% of firms relying on internal funds and informal sources (such as family) to finance their activities, compared to 72% in both other groups. Only 6% of firms have bank loans or other forms of credit, and 59.6% have a bank account.

Table 3: Doing Business global ranking for Egypt and among MENA and lower-middle income countries (2015/2016)

Doing Business Indicator	Global Rank	Filtered Rank (20 MENA countries)	Best Practice among subgroup	Filtered Rank (51 Lower Middle-Income Countries)	Best Practice among subgroup
Ease of doing business	131	14	United Arab Emirates	29	Georgia
Ease of starting business	73	3	Morocco	14	Armenia
Dealing with construction permits	113	12	United Arab Emirates	22	Georgia
Getting electricity	144	18	United Arab Emirates	34	Philippines
Getting credit	79	1	Egypt + Saudi Arabia	22	Georgia
Paying taxes	151	18	United Arab Emirates	35	Kiribati
Trading across borders	157	14	Malta	38	Bhutan

Source: Constructed by the authors using the Doing Business Database (2015)

Table 4: Selected indicators from the Enterprise Survey (2013): Egypt, MENA and lower middle-income countries

Indicator	Egypt	MENA	Lower middle-income countries
Incidence of Graft Index (%)[**]	47	23.7	20.2
Days to obtain and operating license	138.9	33.4	28.1
% of firms with bank loans/line of credit	6	25.6	30.5
Number of power outages/month	16.3	17.6	8.4
% of exporter firms	10.8	24.2	17
Losses due to theft or robbery (% of sales)	0.6	0.7	0.9

Source: constructed by the authors using Enterprise Surveys (2013)

Access to water has been significantly improved, clean water networks covering nearly 100% in urban areas and 93% in rural areas of Egypt (African Development Bank, 2015). Water shortage in Egypt is lower than MENA and lower middle-income economies, with around 2 cut-offs a month, compared to 2.75 and over 4 cut-offs a month for both groups respectively.

The number of power outages in a typical month in Egypt reaches up to 16.3, slightly below MENA average and significantly higher than the group of lower middle-income countries. Meanwhile, losses in sales due to power outage are as high as 5.6% of total sales value in Egyptian firms, higher than MENA and lower middle-income averages (4.7% and 4% respectively). Moreover, delays to get an electricity connection are significantly higher in Egypt than MENA and lower middle-income countries, with nearly 76 days compared to only 41 and 29 days for both groups respectively. According to the Doing Business Report, Egypt ranks 144th in access to electricity. Getting electricity requires 7 procedures and costs 272.9% of income per capita. Delays to obtain a telephone line are currently at 7 days[††], compared to 8.5 days for MENA and 19.4 days for lower middle-income countries. Moreover, Internet use is lower in Egyptian firms than in the case of their peers from both benchmark groups. Only 45% of Egyptian firms communicate with their clients through Internet, compared to more than 60% both subgroups.

Egypt's global rank in the ease of trading across borders is 157, and it comes at the 14th place among 20 MENA countries. About half of the firms responding to the survey use inputs of foreign origin. Exporting firms have reported an average of 7.4 days to clear exports through customs, which is one day higher than MENA average. Meanwhile, importing firms need 9.2 days in average to clear imports from customs, which is lower than MENA average and lower middle-income countries. Losses due to spoilage or breakage while exporting are significantly lower in Egypt, with losses of 0.5% of total exports, compared to over 1% in MENA and lower

[**] The Graft Index is the proportion of instances in which firms were either expected or requested to pay a gift or informal payment when applying for six different public services.
[††] Communication with Telecom Egypt customer service.

middle-income countries. Despite the procedures carried out to facilitate trading through borders, statistics from Doing Business show that Egypt lags behind in the number of procedures, the time and the cost of clearing exports and imports, which represents one of the major obstacles to Egyptian firms.

Crime imposes an extra cost on operating firms where a proportion of their resources are shifted to cover security issues. Indicators of crime suggest that the situation in Egypt is generally better than in both benchmark groups in terms of losses due to thefts and robbery, and fairness of courts.

3. Methodology and Data

To examine the impact of investment climate, we undertake our empirical analysis in several steps, extending the work of Dollar et al (2004). Indeed, since productivity is one of the most important determinants of becoming an exporter (Melitz, 2003), we estimate first the total factor productivity. For this reason, we estimate the logarithmic form of production function and retrieve the logarithm of TFP as the residual. The production function which takes a general Cobb-Douglas form is as follows:

$$Y_{it} = A_{it} L_{it}^{\alpha} K_{it}^{\beta} I_{it}^{\sigma} \quad (1)$$

where Y is total output, K is capital, L is labor, I is total intermediate inputs, A is technology efficiency parameter, i denotes individual plant and t denotes years. By log-linearizing equation (1), we obtain an estimable equation as follows:

$$logY_{it} = logA_{it} + \alpha\, log\, L_{it} + \beta\, log\, K_{it} + \sigma\, log\, I_{it} + \varepsilon_{it} \quad (2)$$

We estimate the TFP as follows:

$$TFP = logA_{it} = logY_{it} - \widehat{logY}_{it} \quad (3)$$

with $\widehat{logY}_{it}$ the estimated production.

Second, this estimated TFP is used to determine the extensive margin by regressing the probability of becoming an exporter as follows:

$$Prob(X_{it}) = \beta_0 + \beta_1\, ln(TFP_{it}) + \beta_2 Z_{it} + d_r + d_s + d_t + \varepsilon_{it} \quad (4)$$

We include a vector Z_{it} that includes a set of variables that are likely to affect the decision to export. In fact, we divide them into 5 groups. The first group incorporates infrastructural

variables such as water, electricity, telecommunication and transportation. The second one is dedicated to regulations and different macroeconomic policies. Thus, it includes customs procedures, tax policy, general regulations, obtaining business license and macro framework. Third, a bunch of variables measuring the labor market regulations are taken into account followed by variables measuring the access to finance and last but not least some variables measuring the competition coming from both formal and informal sectors and corruption. To control for the regional and sectoral characteristics, we add time, region and industry dummies (d_r, d_t and d_s). This regression is run using a probit model.

We use manufacturing establishment surveys carried out by the World Bank (World Bank Enterprise Survey) in most developing countries over the last decade and a half, including several from the Arab world. For Egypt, we use for surveys for 2004, 2007 and 2008. Given that the World Bank Enterprise Survey includes both exporting and non-exporting firms, this dataset will be used to examine the effect of different variables assessing the investment climate on the probability of becoming an exporter (firm-extensive margin).

5. Empirical Findings

In order to examine the impact of investment climate on exports, we have to first estimate the TFP which is an important determinant of exports (Melitz, 2003). Table 5 shows the results of the production function. Both labor and capital are positive and highly significant. Yet, when we add intermediate inputs, the values of the coefficients of labor and capital decrease. Indeed, the elasticity of production with respect to intermediate inputs is high and statistically significant. Moreover, the R-squared of the model increases from 70% to 84%.

Table 5: Empirical Findings 1

	Ln(Sales)	Ln(Sales)
Ln(Lab)	0.750***	0.307***
	(0.0304)	(0.0260)
Ln(Cap)	0.340***	0.127***
	(0.0202)	(0.0160)
Ln(Int.)		0.586***
		(0.0177)
Constant	2.878***	1.878***
	(0.232)	(0.170)
Year dummies	YES	YES
Gov. dummies	YES	YES
Activity dummies	YES	YES
Observations	1301	1288
R-squared	0.695	0.840

Standard errors in parentheses

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

We estimated the value of TFP for Egyptian firms and found that exporters are doing much better in terms of their TFP as shown in the Kernel density in Figure 4. Indeed, the most productive firms who serve the domestic market have a greater potential to serve 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 productivities are lower than a 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 the 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 5).

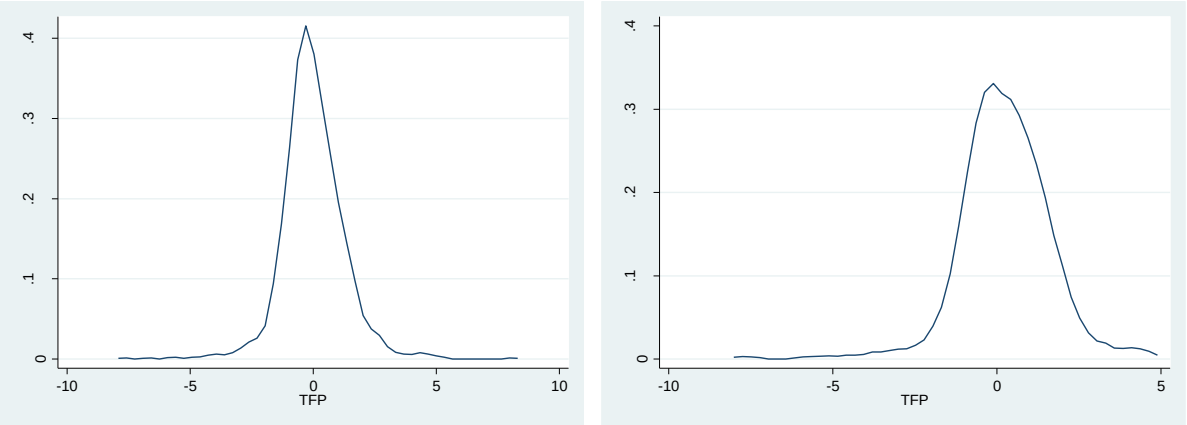
Table 6: TFP Descriptive Statistics

Percentiles	Value	Smallest	Num.	Perc.	Cum. Num.	Cum. Perc.
0.01	-3.37414	-7.7011	14	1.1%	14	1.1%
0.05	-1.66502	-6.71083	51	3.9%	65	5.0%
0.10	-1.28919	-5.75904	65	5.0%	130	10.0%
0.25	-0.67672	-5.62893	195	15.0%	325	25.0%
0.50	-0.08074	-	326	25.1%	651	50.0%
Percentiles	Value	Largest	Num.	Perc.	Cum. Num.	Cum. Perc.
0.75	0.650805	4.930429	324	24.9%	975	74.9%
0.90	1.440743	5.082029	195	15.0%	1170	89.9%
0.95	1.956214	5.087637	66	5.1%	1236	95.0%
0.99	3.612342	8.104063	52	4.0%	1288	99.0%
1.00	-	8.104063	13	1.0%	1301	100.0%
Mean	3.3E-09		Skewness	0.08481		
Std. Dev.	1.254232		Kurtosis	7.811217		
Variance	1.573099					

Source: Constructed by the authors.

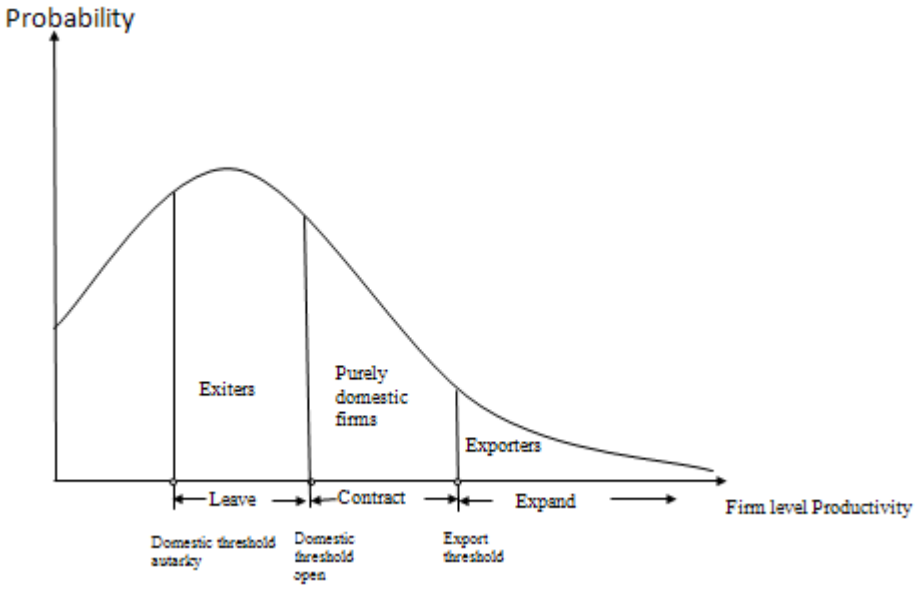
Figure 4: Kernel Density Estimate for TFP

(a) All Firms (b) Exporting Firms



Source: Constructed by the authors.

Figure 5: Exports and Firm Productivity Level



Source: Metliz (2003)

As per the determinants of the likelihood of becoming an exporter, Table 7 shows that first productivity does matter in becoming an exporter. This is in line with what has been previously mentioned.

Moreover, among the host of variables that are included, only 5 variables turn to be significant. First, customs and administrative barriers are the most significant and exert a significantly negative impact. This shows to what extent removing administrative barriers that still hinder exports is essential in increasing the number of exporters. Indeed, new types of trade

(intra-industry trade and trade in services) that have emerged required a more efficient and quicker trade environment. Second, supply chains become more interdependent. A quicker delivery of semi-final goods and intermediary inputs for MNF that use the "just-in-time" production techniques is crucial for two reasons. On the one hand, it should reduce their stocks and on the other hand it should allow them to benefit from offshoring advantages. Increased facilitation means more efficient production lines, greater increase in domestic production, and better use of domestic resources, more exports and in turn greater benefit from economies of scale. Third, trade procedures are complicated, lengthy, and redundant and their cost remains excessively high. The reduction or elimination of such costs is likely to have a positive impact on international trade and the number of exporters.

Second, access to finance is still an important issue in the Egyptian case since it has a negative impact on the probability of becoming an exporter. Indeed, El Said et al (2015) showed that access to finance is an important impediment to the small and medium enterprises in Egypt. More generally, in the models of heterogeneous firms (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 some critical value, the firm may found it profitable to start exporting by paying a sunk cost. Obviously, 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. For this reason, access to finance is likely to affect the export status.

Third, competition coming from the informal sector does have a negative impact on the probability of becoming an exporter. This is quite interesting since informal firms in Egypt increased in recent years and provide cheaper products compared to formal ones. Therefore, formal firms' sales decrease which negatively affects their productivity and therefore their likelihood to become an exporter.

Fourth, and most importantly, the availability and the pricing policy of land do have a negative impact on the likelihood to export. Indeed, no expansion without land which the most important factor of production. Moreover, having a transparent and simple pricing policy would clearly improve the investment climate and provide more incentives to expand and increase exports.

In a nutshell, in order to increase the number of exporters in Egypt, more efforts must be deployed to improve the customs administration, the availability of land and land pricing, access to finance and formalizing informal firms.

Table 7: Empirical Findings 2

	Pr(Exp.)	Pr(Exp.)	Pr(Exp.)	Pr(Exp.)	Pr(Exp.)	Pr(Exp.)	Pr(Exp.)	Pr(Exp.)
TFP	0.135***	0.135***	0.123***	0.136***	0.136***	0.135***	0.134***	0.133***
	(0.0301)	(0.0301)	(0.0302)	(0.0301)	(0.0302)	(0.0301)	(0.0301)	(0.0308)
Telecom		-0.00783						0.0578
		(0.118)						(0.121)
Elect		-0.0470						-0.0479
		(0.0942)						(0.0989)
Transp		0.115						0.141
		(0.0953)						(0.100)
Water		0.110						0.173*
		(0.0971)						(0.102)
Regul			0.331***					0.369***
			(0.0994)					(0.106)
Tax rate			-0.204*					-0.176
			(0.108)					(0.111)
Tax adm			0.00776					0.00831
			(0.103)					(0.108)
Custom			-0.334***					-0.308***
			(0.0885)					(0.0922)
Bus. Lic			0.0911					0.0798
			(0.0869)					(0.0959)
Macro			0.262*					0.324**
			(0.141)					(0.149)
Lab. Reg.				0.0327				0.0239
				(0.0835)				(0.0941)
Skill				0.113				0.159*
				(0.0898)				(0.0962)
Acc. Fin					-0.217			-0.257*
					(0.144)			(0.150)
Cost Fin.					-0.0730			-0.0958
					(0.151)			(0.158)
Corr.						-0.000572		0.0295
						(0.0899)		(0.104)
Comp Inf.							-0.241***	-0.225**
							(0.0931)	(0.0985)
Comp. For.							0.128	0.117
							(0.0923)	(0.0986)
Land								-0.213**
								(0.0953)
Pr. Land								-0.236**
								(0.0974)
Constant	-0.428*	-0.449*	-0.502*	-0.536**	-0.277	-0.428*	-0.386	-0.357
	(0.237)	(0.242)	(0.272)	(0.250)	(0.243)	(0.245)	(0.255)	(0.294)
Year dummies	YES	YES	YES	YES	YES	YES	YES	YES
Gov. dummies	YES	YES	YES	YES	YES	YES	YES	YES
Activity dummies	YES	YES	YES	YES	YES	YES	YES	YES
Observations	1241	1241	1241	1241	1241	1241	1241	1241

Standard errors in parentheses

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

6. Conclusion and Policy Recommendations

The objective of this paper is to explore the nexus between exports performance and components of the investment climate. The contribution of this paper is twofold. First, it fills the gap in the available literature by examining not only the impact of investment climate on productivity, but also on the decision of the firm to become an exporter. By investment climate, we focus on a set of variables reflecting physical as well as regulatory infrastructure. Second, given the scarcity of the available literature on MENA countries, a developing MENA country, namely Egypt, is used in the empirical exercise. The case of Egypt is of particular interest since between 2004 and 2008, the government of Egypt implemented a series of reforms in order to improve the investment climate. Moreover, enhancing business-related regulations has been on top of the reform agenda since 2014. We found that customs administration, the availability of land and land pricing, access to finance and competition from the informal firms are the most important impediments that hinder the increase in the number of exporters.

Enhancing the overall investment climate is a topic of particular interest for developing countries in general and Egypt in particular. In the light of the existing poor physical infrastructure, enhancing access to and efficiency of backbone services is imperative. Vertical separation in the electricity sector according to the new electricity law is therefore expected to improve provision and reduce losses from power outages. Moreover, the quality of social infrastructure, such as policies, regulations, and administrative procedures are likely to influence firm's productivity and affect both sector size and export potential. In the particular context of Egypt, enhancing the investment climate is currently one of the national priorities, and the reforms recently undertaken should enhance the business climate and rebuild domestic and foreign investors' confidence in Egyptian institutions and market. Nevertheless, inefficient taxing policies, limited access to finance, and corruption are likely to remain major obstacles hindering Egyptian firms to enter and operate, and potentially engage in exporting activities.

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