On Women Participation and Empowerment in International Trade: Impact on Trade Margins in the MENA region

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Motivation

- Sen (1999) points out that "the empowerment of women in one of the central issues in the process of development for many countries in the world today".

- In one of the dimensions of unachieved gender equality, one can highlight the relatively low participation of women in trade, as employees, producers and owners (ITC, 2015).

- Female participation in trade can provide an additional boost to the growth potential of openness.

- This topic is timely and critical for the MENA region where female entrepreneurship and labor participation in international trade are weak. Women remain a huge, untapped reservoir of human potential for countries in the region that is looking for new sources of competitiveness to stimulate exports and economic growth (Nabli and Nedereh, 2004).

What we do

- This paper investigates the contribution of female labor participation as well female ownership/management to the extensive margin (the probability of trade) and intensive margin (volume of trade) in the MENA region.

- We use the World Bank's Enterprise Surveys Database that gathers information on private firms operating in 18 manufacturing and services sectors for 8 MENA countries (Egypt, Israel, Jordan, Lebanon, Morocco, Tunisia, West Bank and Gaza, Yemen) in 2013.

1. Our control variables include a vector of plant-characteristics that may impact exports.

2. Since export volume is only observed for exporters, we run a Heckman selection model where the selection variable is labor productivity that is seen as a fixed export entry cost.

3. The gender variable is tackled in different dimensions: the number of female full-time workers in the firm, and whether the firm is owned or managed by a female or not.

4. Then we run the regressions by firm size, by sector and we take into account the different types of barriers faced by female owners/managers.

What we find

- First, female workers have a positive a significant impact on both the probability of export and export volume, regardless the size of the firm, but their effect is relatively higher for small firms than large firms. Female labor participation matters in traditional sectors where the MENA region has a comparative advantage.

- Second, female management/ownership matters more for the probability of large firms to export, which this effect being mainly driven by female ownership and not management. In other words, female entrepreneurship and therefore female empowerment matters for entering the export market.

- Third, the effect of financial constraints on exports is more pronounced for female-owned/managed firms than for their male counterparts, and therefore female entrepreneurs tend to rely on self-finance.

Outline

- Stylized Facts

- Methodology and Data

- Findings

- Conclusion

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Stylized Facts

Figure 1: Female participation rate in exporting firms' total workforce, by region
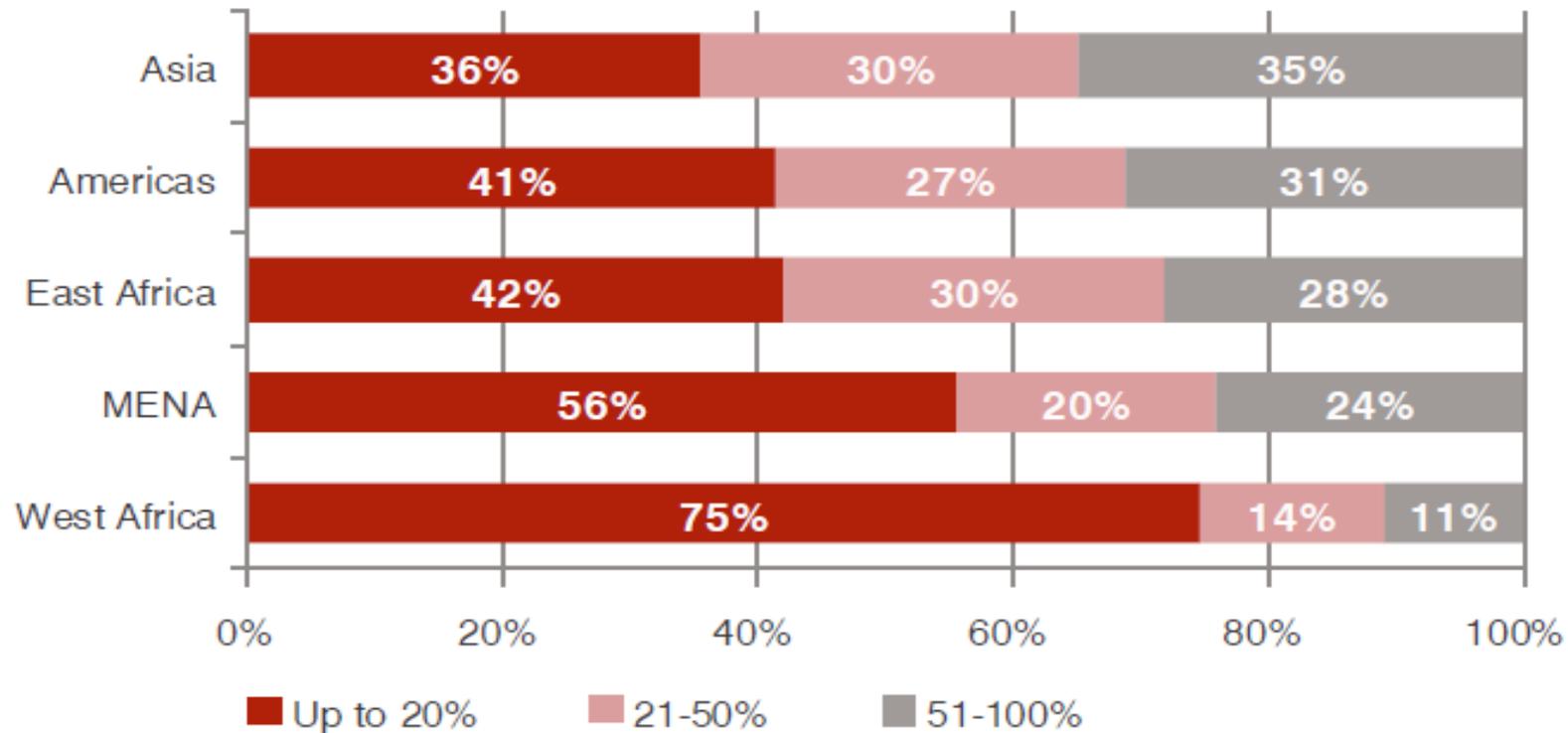
Figure 2: Average female participation rate in the MENA region
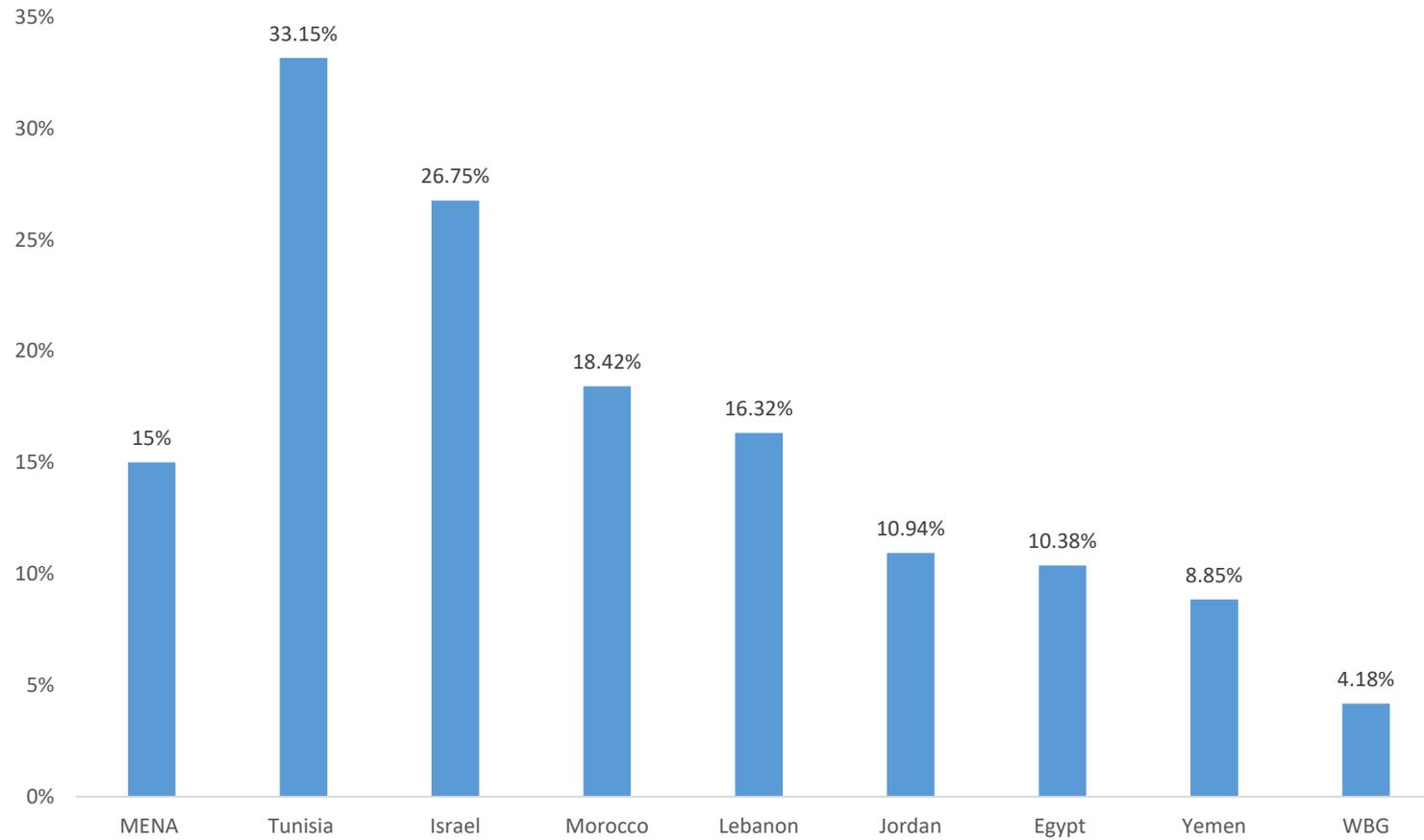
Source: Authors' Calculations from the World Bank Enterprise Surveys for 2013.

Figure 3: Women participation rate in exporting firms, by firm size

	Up to 20%	21-50%	51-100%
more than 100 employees	72.82%	16.28%	10.90%
between 20 and 100 employees	77.26%	16.58%	6.16%
between 5 and 20 employees	79.63%	15.99%	4.38%
less than 5 employees	42.86%	42.86%	14.29%

■ Up to 20%   ■ 21-50%   ■ 51-100%
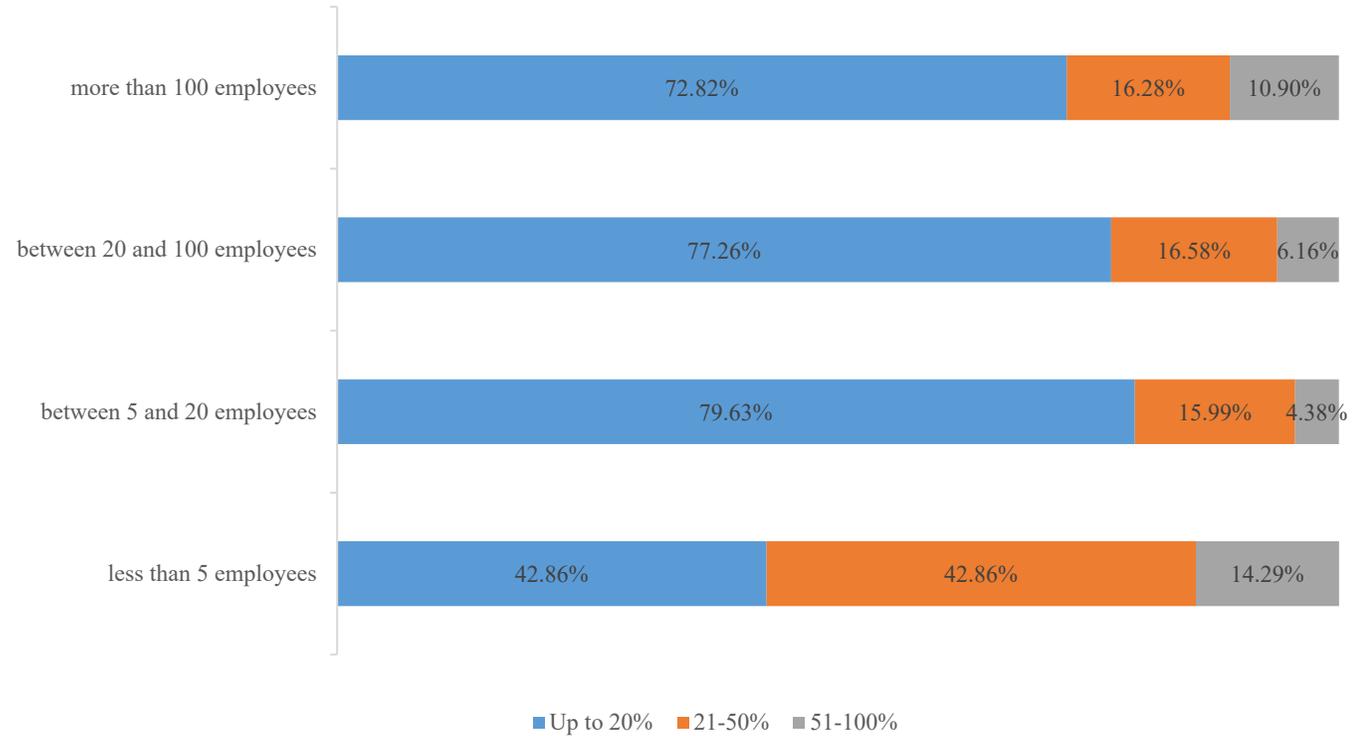
Source: Authors' Calculations from the World Bank Enterprise Surveys for 2013.

Figure 4: Average women participation rate in exporting firms, by sector

Sector	Rate
Garments	30.39%
Telecom	24.67%
Food	18.33%
Transport	17.77%
Textiles	12.86%
Other manufacturing	12.71%
Construction	12.62%
Other services	12.17%
Publishing printing and recorded media	11.94%
Machinery and equipment	10.84%
Hotels and restaurants	9.64%
Furniture	9.29%
Chemicals	9.13%
Plastics & rubber	6.84%
Metals and Metal Products	5.65%
Leather	4.78%
Non metallic mineral products	4.29%
Wood	3.94%
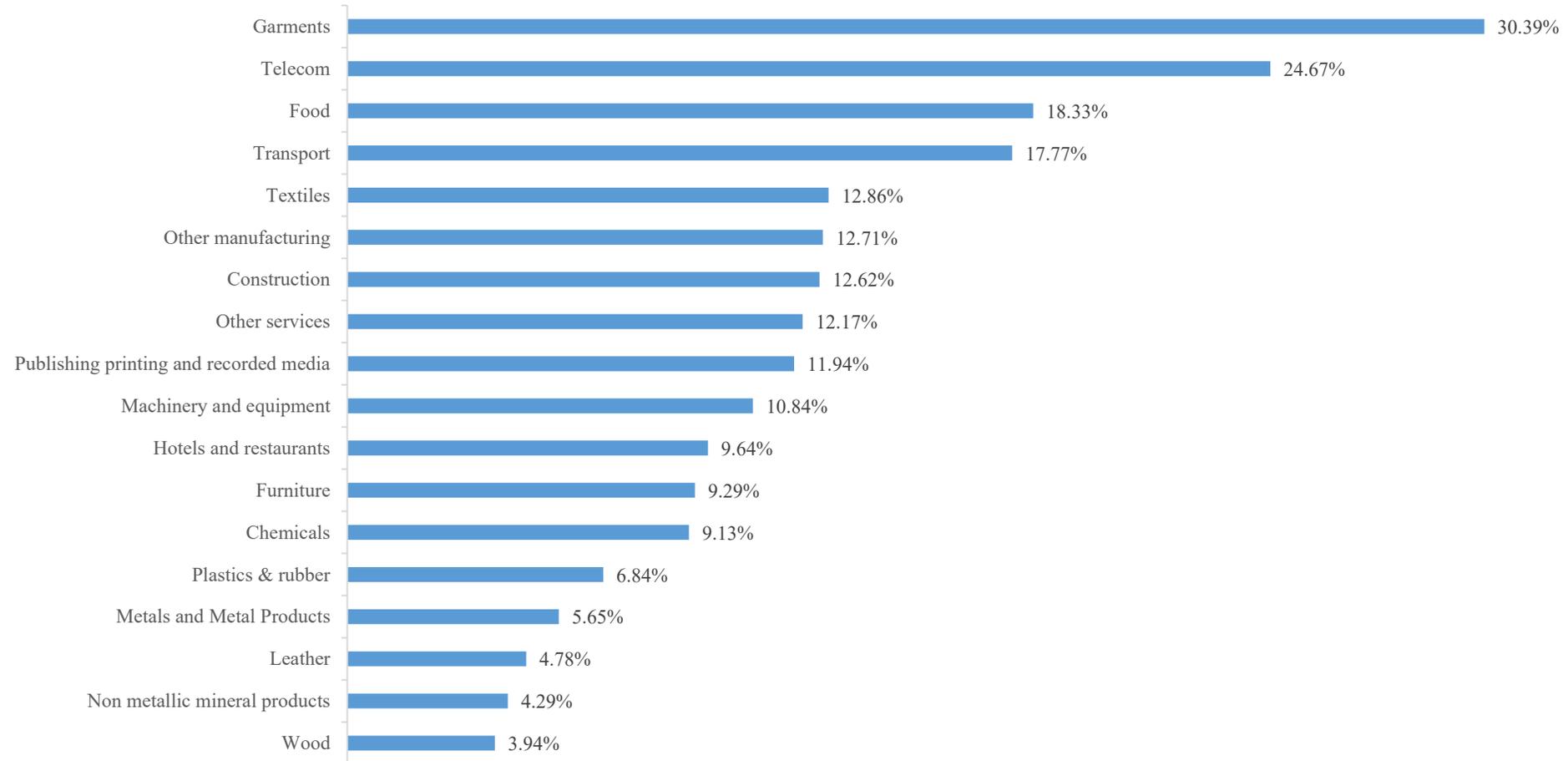
Source: Authors' Calculations from the World Bank Enterprise Surveys for 2013.

Table 2: Share of female-owned/managed firms, by country

	Women-Owned	Women-Managed	Women-Owned/Managed
Egypt	21.68%	5.49%	23.75%
Israel	28.57%	6.83%	30.23%
Jordan	16.58%	1.75%	16.58%
Lebanon	31.61%	4.63%	38.68%
Morocco	34.89%	5.16%	36.36%
Tunisia	54.04%	7.77%	54.39%
WBG	13.13%	2.30%	13.59%
Yemen	11.04%	0.67%	11.37%

Source: Authors' Calculations from the World Bank Enterprise Surveys for 2013.

Figure 7: Share of female-owned/managed exporting firms, by sector

Sector	Share
Transport	36.30%
Publishing printing and recorded media	36.02%
Garments	33.88%
Plastics & rubber	33.52%
Telecom	28.96%
Food	28.82%
Other manufacturing	28.54%
Construction	27.39%
Chemicals	26.58%
Machinery and equipment	26.25%
Hotels and restaurants	25.99%
Other services	25.56%
Leather	25%
Textiles	24.90%
Metals and Metal Products	19.58%
Wood	17%
Non metallic mineral products	17%
Furniture	16.94%
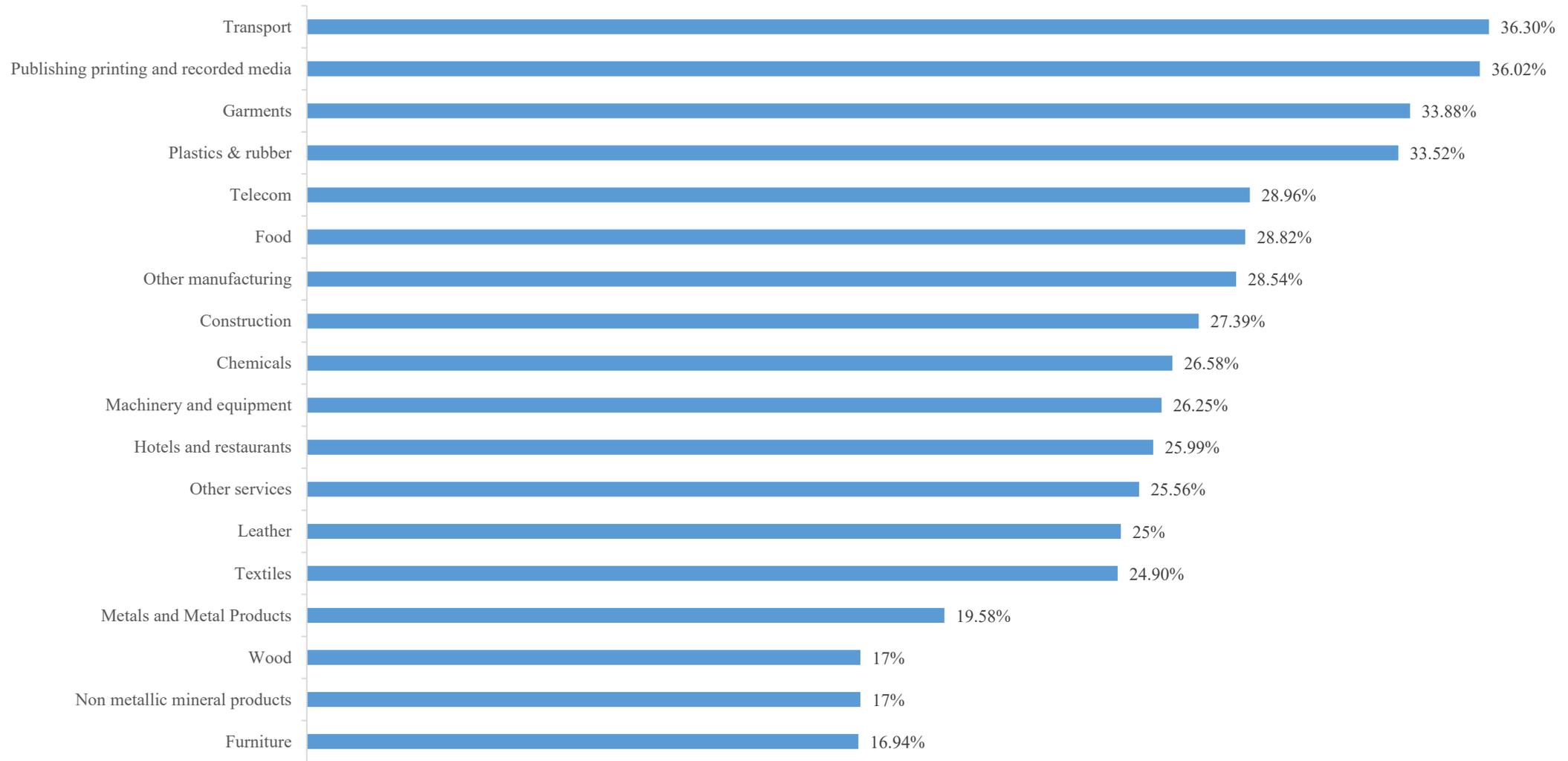
Source: Authors' Calculations from the World Bank Enterprise Surveys for 2013.

Figure 8: Women-owned/managed exporting firms, by firm size

more than 100 employees	37.48%
between 20 and 100 employees	33.42%
between 5 and 20 employees	20.03%
less than 5 employees	39.29%
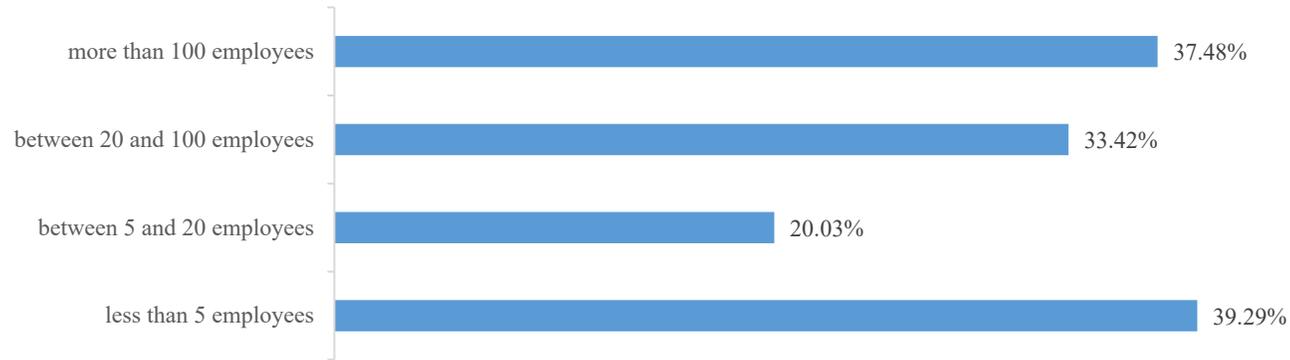
Figure 9: Female labor participation in women-owned/managed exporting firms

Men-Owned/Managed Firms	80.17%	14.50%	5.32%
Female-Owned/Managed Firms	67.89%	20.64%	11.47%

■ Up of 20% of female employees ■ 21-50% of female employees ■ 51-100% of female employees
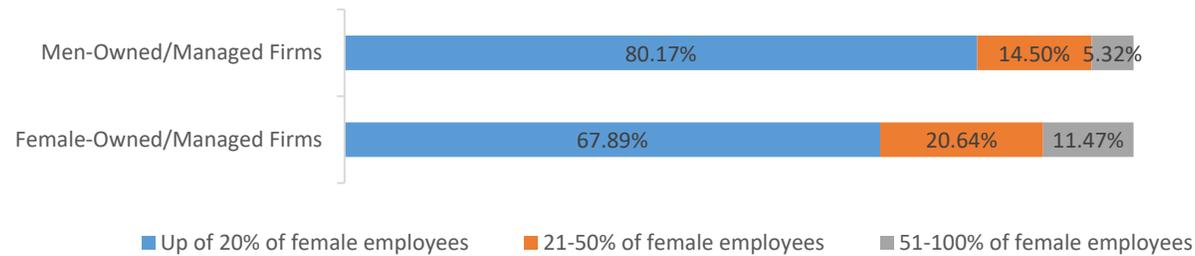
Source: Authors' Calculations from the World Bank Enterprise Surveys for 2013.

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Methodology

Our basic specifications of the determinants of trade margins in the MENA region is as follows:

$Prob(X)_{ijk} = \alpha_1 X_{ijk} + \alpha_2 Ln(labprod)_{ijk} + \alpha_3 (Fem)_{ijk} + dsize + dst + dct + dloc + \varepsilon_{ijk}$ (1)

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$Ln(X)_{ijk} = \lambda_1 X_{ijk} + \lambda_2 Ln(labprod)_{ijk} + \lambda_3 (Fem)_{ijk} + dsize + dst + dct + dloc + \varepsilon_{ijk}$ (2)

- X is a vector of plant-characteristics that are believed to impact exports, such as firm age, foreign ownership and government ownership, and whether the firm has earned a foreign certification.

- $(Fem)_{ijk}$ captures different dimensions of gender:

o $Ln(Fem. Work)_{ijk}$ is the logarithm of the number of female full-time workers in firm i in country j in sector k

o $Female\ Boss_{ijk}$ is a dummy variable taking the value 1 if the firm is owned or managed by a female, and 0 otherwise

o $Female\ Manager_{ijk}$ is a dummy variable taking the value 1 if the firm is managed by a female, and 0 otherwise

o $Female\ Owner_{ijk}$ is a dummy variable taking the value 1 if the firm is owned by a female, and 0 otherwise.

Methodology

- Firm size is captured by dummy variables that differentiate between micro firms (less than 5 employees), small firms (between 5 and 19 employees), medium firms (between 20 and 99 employees) and large firms (more than 100 employees).

- Location, sectoral and country dummies (*dloc*, *dst* and *dct* respectively) are added to control for location, sector and country unobservable characteristics that can affect firm performance.

- Equation (2) may suffer from a selection bias given the fact that export volumes are only observed for exporting firms (around one-third of our dataset). We run a Heckman two-stage selection model:

o First, we examine the determinants of becoming an exporter, controlling for the determinants that affect the decision to export (Equation (1)).

o Then, we investigate the determinants of expanding export volumes for exporting firms (Equation (2)). $labprod_{ijk}$ is excluded from Equation (2), to account for the fact that labor productivity is a fixed export entry cost (Aboushady and Zaki, 2019).

Data

- We use the World Bank's Enterprise Surveys Database that gathers information on private firms operating in 18 manufacturing and services sectors for 8 MENA countries (Egypt, Israel, Jordan, Lebanon, Morocco, Tunisia, West Bank and Gaza, Yemen) in 2013.

Our sample contains 6327 manufacturing and services firms located in eight MENA countries.

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Table 4: Determinants of Trade Margins

	P(Exp)	Ln(Exp)
Ln(Lab Prod.)	0.0697***	0.0363
	(0.0166)	(0.0287)
Ln(Age)	0.0389	-0.0374
	(0.0237)	(0.0349)
Ln(Gov.)	-0.0770	0.0121
	(0.0572)	(0.0701)
Ln(For.)	0.100***	0.0881***
	(0.0181)	(0.0178)
Certif.	0.618***	0.0776
	(0.0564)	(0.0705)
Size dum.	YES	YES
Loc dum.	YES	YES
Sector dum.	YES	YES
Country dum.	YES	YES
Observations	4,508	1,333
R-squared	0.245	0.917

Table 5: Women and Trade Margins

	Ln(Exp)	P(Exp)	Ln(Exp)	P(Exp)	Ln(Exp)	P(Exp)
Ln(Lab Prod.)		0.0735***		0.0701***		0.0724***
		(0.0168)		(0.0168)		(0.0168)
Ln(Age)	-0.0848***	0.0373	-0.0844***	0.0360	-0.0845***	0.0363
	(0.0307)	(0.0239)	(0.0309)	(0.0237)	(0.0308)	(0.0239)
Ln(Gov.)	-0.0278	-0.0951	-0.00778	-0.0743	-0.0280	-0.0948
	(0.0694)	(0.0586)	(0.0695)	(0.0571)	(0.0695)	(0.0586)
Ln(For.)	0.0839***	0.0942***	0.0902***	0.101***	0.0835***	0.0947***
	(0.0197)	(0.0183)	(0.0201)	(0.0181)	(0.0198)	(0.0183)
Certif.	0.0853	0.592***	0.0989	0.612***	0.0845	0.589***
	(0.0817)	(0.0568)	(0.0838)	(0.0565)	(0.0819)	(0.0570)
Ln(Fem. Work)	0.0869***	0.149***			0.0824***	0.158***
	(0.0247)	(0.0209)			(0.0281)	(0.0240)
Female Boss			-0.00398	0.0743	-0.0512	0.0940
			(0.0612)	(0.0504)	(0.101)	(0.0760)
Ln(Fem Wor)*Boss					0.0138	-0.0301
					(0.0362)	(0.0339)
Constant	3.253***	-2.186***	3.221***	-2.165***	3.270***	-2.192***
	(0.472)	(0.294)	(0.478)	(0.293)	(0.475)	(0.294)
Size dum.	YES	YES	YES	YES	YES	YES
Loc dum.	YES	YES	YES	YES	YES	YES
Sector dum.	YES	YES	YES	YES	YES	YES
Country dum.	YES	YES	YES	YES	YES	YES
Observations	4,506	4,506	4,506	4,506	4,506	4,506

Table 6: Female Workers and Trade Margins, by firm size

	SME		Large	
	Ln(Exp)	P(Exp)	Ln(Exp)	P(Exp)
Ln(Lab Prod.)		0.0769***		0.108***
		(0.0195)		(0.0343)
Ln(Age)	-0.0479	0.0313	-0.0882**	0.122**
	(0.0457)	(0.0284)	(0.0413)	(0.0480)
Ln(Gov.)	0.0183	0.00712	-0.0451	-0.143*
	(0.155)	(0.121)	(0.0765)	(0.0746)
Ln(For.)	0.123***	0.112***	0.0357	0.0819***
	(0.0322)	(0.0240)	(0.0249)	(0.0310)
Certif.	0.238**	0.523***	0.0412	0.787***
	(0.113)	(0.0721)	(0.124)	(0.100)
Ln(Fem. Work)	0.119**	0.205***	0.0768**	0.203***
	(0.0465)	(0.0296)	(0.0306)	(0.0311)
Constant	3.134***	-1.747***	3.333***	-2.439***
	(0.363)	(0.255)	(0.418)	(0.462)
Loc dum.	YES	YES	YES	YES
Sector dum.	YES	YES	YES	YES
Country dum.	YES	YES	YES	YES
Observations	3,485	3,485	1,021	1,021

Table 7: Female Boss and Trade Margins, by firm size

	SME		Large	
	Ln(Exp)	P(Exp)	Ln(Exp)	P(Exp)
Ln(Lab Prod.)		0.0815***		0.0858**
		(0.0194)		(0.0339)
Ln(Age)	-0.0437	0.0344	-0.0819**	0.106**
	(0.0458)	(0.0282)	(0.0408)	(0.0463)
Ln(Gov.)	0.0501	0.0451	-0.0315	-0.112
	(0.156)	(0.119)	(0.0762)	(0.0711)
Ln(For.)	0.130***	0.119***	0.0468*	0.100***
	(0.0328)	(0.0238)	(0.0249)	(0.0303)
Certif.	0.273**	0.590***	0.0999	0.814***
	(0.119)	(0.0712)	(0.117)	(0.0985)
Female Boss	0.0995	0.0518	-0.111	0.198**
	(0.0837)	(0.0594)	(0.0888)	(0.0991)
Constant	3.195***	-1.668***	3.409***	-1.866***
	(0.360)	(0.253)	(0.361)	(0.445)
Loc dum.	YES	YES	YES	YES
Sector dum.	YES	YES	YES	YES
Country dum.	YES	YES	YES	YES
Observations	3,485	3,485	1,021	1,021

Table 8: Female Manager and Trade Margins, by firm size

	SME		Large	
	Ln(Exp)	P(Exp)	Ln(Exp)	P(Exp)
Ln(Lab Prod.)		0.0819***		0.0893***
		(0.0194)		(0.0339)
Ln(Age)	-0.0407	0.0354	-0.0865**	0.110**
	(0.0457)	(0.0281)	(0.0409)	(0.0462)
Ln(Gov.)	0.0443	0.0430	-0.0239	-0.114
	(0.155)	(0.119)	(0.0762)	(0.0714)
Ln(For.)	0.128***	0.118***	0.0475*	0.0972***
	(0.0327)	(0.0238)	(0.0250)	(0.0303)
Certif.	0.286**	0.592***	0.0744	0.833***
	(0.120)	(0.0712)	(0.119)	(0.0979)
Female Manager.	0.214	-0.103	0.0174	-0.148
	(0.176)	(0.119)	(0.234)	(0.261)
Constant	3.184***	-1.653***	3.391***	-1.849***
	(0.359)	(0.253)	(0.363)	(0.445)
Loc dum.	YES	YES	YES	YES
Sector dum.	YES	YES	YES	YES
Country dum.	YES	YES	YES	YES
Observations	3,485	3,485	1,021	1,021

Table 9: Female Manager and Trade Margins, by firm size

	SME		Large	
	Ln(Exp)	P(Exp)	Ln(Exp)	P(Exp)
Ln(Lab Prod.)		0.0814***		0.0865**
		(0.0194)		(0.0339)
Ln(Age)	-0.0427	0.0345	-0.0813**	0.105**
	(0.0458)	(0.0282)	(0.0408)	(0.0463)
Ln(Gov.)	0.0456	0.0450	-0.0338	-0.110
	(0.156)	(0.119)	(0.0762)	(0.0712)
Ln(For.)	0.129***	0.119***	0.0472*	0.1000***
	(0.0328)	(0.0239)	(0.0249)	(0.0303)
Certif.	0.272**	0.589***	0.105	0.812***
	(0.120)	(0.0712)	(0.116)	(0.0985)
Female Owner	0.0646	0.0548	-0.121	0.219**
	(0.0846)	(0.0604)	(0.0891)	(0.100)
Constant	3.214***	-1.665***	3.397***	-1.863***
	(0.360)	(0.253)	(0.359)	(0.445)
Loc dum.	YES	YES	YES	YES
Sector dum.	YES	YES	YES	YES
Country dum.	YES	YES	YES	YES
Observations	3,485	3,485	1,021	1,021

Table 10a: Female Workers and Trade Margins, by sector

	Chemicals		Food		Garments	
	Ln(Exp)	P(Exp)	Ln(Exp)	P(Exp)	Ln(Exp)	P(Exp)
Ln(Lab Prod.)		0.192**		0.0266		0.0796
		(0.0942)		(0.0484)		(0.0713)
Ln(Age)	-0.371*	0.114	0.0517	-0.0170	-0.145**	-0.0886
	(0.197)	(0.131)	(0.0937)	(0.0712)	(0.0688)	(0.0897)
Ln(Gov.)	0.169	2.436	0.487	-0.427*	0.176	2.700
	(0.273)	(1.392e+09)	(0.371)	(0.245)	(0.371)	(244,587)
Ln(For.)	0.0960	0.107	0.0239	0.0643	0.0847***	0.224***
	(0.0776)	(0.0851)	(0.0524)	(0.0497)	(0.0301)	(0.0608)
Certif.	0.536	1.194***	-0.128	0.610***	0.119	1.514***
	(0.382)	(0.266)	(0.200)	(0.137)	(0.147)	(0.281)
Ln(Fem. Work)	0.0405	0.290***	0.142*	0.341***	0.0811**	0.225***
	(0.0894)	(0.111)	(0.0809)	(0.0459)	(0.0325)	(0.0540)
Constant	3.415***	-3.486***	2.641***	-1.662***	3.949***	-1.757**
	(0.799)	(1.003)	(0.660)	(0.503)	(0.302)	(0.730)
Country dum.	YES	YES	YES	YES	YES	YES
Observations	148	148	562	562	344	344

Table 10b: Female Workers and Trade Margins, by sector

	Non-met		Other Ser.		Plastic and Rub.	
	Ln(Exp)	P(Exp)	Ln(Exp)	P(Exp)	Ln(Exp)	P(Exp)
Ln(Lab Prod.)		-0.0272		0.105***		0.114
		(0.199)		(0.0330)		(0.121)
Ln(Age)	-0.168	0.889	-0.00714	0.0742	0.357***	0.0865
	(0.354)	(0.674)	(0.0968)	(0.0532)	(0.0798)	(0.0902)
Ln(Gov.)	-0.373**	2.519		-3.866		
	(0.169)	(402,795)		(52,184)		
Ln(For.)	-0.518***	0.123	0.110	0.0797*	-0.0112	-0.0655
	(0.197)	(0.236)	(0.0889)	(0.0483)	(0.128)	(0.142)
Certif.	0.230	1.106**	0.230	0.319**	0.793**	1.077***
	(0.531)	(0.540)	(0.276)	(0.141)	(0.387)	(0.350)
Ln(Fem. Work)	0.112	0.273*	0.209**	0.117***	0.238**	0.168
	(0.119)	(0.164)	(0.0877)	(0.0413)	(0.109)	(0.124)
Constant	3.374**	-4.241	1.862**	-2.810***	0.746	-2.525**
	(1.603)	(3.365)	(0.843)	(0.380)	(0.772)	(1.116)
Country dum.	YES	YES	YES	YES	YES	YES
Observations	55	55	961	961	107	107

Table 10c: Female Workers and Trade Margins, by sector

	Publish		Tex.		Wood		Metals	
	Ln(Exp)	P(Exp)	Ln(Exp)	P(Exp)	Ln(Exp)	P(Exp)	Ln(Exp)	P(Exp)
Ln(Lab Prod.)		0.200*		0.216**		0.312*		0.220***
		(0.109)		(0.102)		(0.179)		(0.0827)
Ln(Age)	-0.0748	0.0787	0.0584	0.143	-0.224	-0.296	-0.327*	-0.115
	(0.255)	(0.128)	(0.133)	(0.129)	(0.637)	(0.385)	(0.192)	(0.144)
Ln(Gov.)			-0.0651	1.831				
			(0.148)	(17,459)				
Ln(For.)	0.297**	0.122	0.101	0.0436			0.183	0.232**
	(0.136)	(0.121)	(0.0905)	(0.0824)			(0.116)	(0.102)
Certif.	0.132	0.775**	0.666*	1.134***	0.225	1.537**	0.264	0.943***
	(0.417)	(0.333)	(0.399)	(0.251)	(0.798)	(0.772)	(0.439)	(0.282)
Ln(Fem. Work)	0.144	0.230*	0.0529	0.235***	0.507	0.642	0.203	0.395***
	(0.152)	(0.125)	(0.0930)	(0.0842)	(0.518)	(0.401)	(0.178)	(0.110)
Constant	2.571**	-3.455***	2.659***	-3.511***	3.168**	-3.280	3.275***	-3.481***
	(1.124)	(1.148)	(0.813)	(1.083)	(1.483)	(2.042)	(1.029)	(0.962)
Country dum.	YES	YES	YES	YES	YES	YES	YES	YES
Observations	133	133	194	194	64	64	310	310

Table 11: Female Workers and Trade Margins in Services

	Ln(Exp)	P(Exp)
Ln(Lab Prod.)		0.0585***
		(0.0163)
Ln(Age)	-0.0935***	0.0381
	(0.0315)	(0.0237)
Ln(Gov.)	-0.00796	-0.104*
	(0.0703)	(0.0571)
Ln(For.)	0.0992***	0.108***
	(0.0208)	(0.0180)
Certif.	0.00894	0.561***
	(0.0839)	(0.0556)
Ln(Fem. Work)	0.109***	0.221***
	(0.0285)	(0.0223)
Services	-0.0860	-0.128*
	(0.123)	(0.0751)
Ln(Fem. Work)*Services	-0.0137	-0.195***
	(0.0515)	(0.0353)
Constant	3.279***	-2.327***
	(0.489)	(0.266)
Size dum.	YES	YES
Loc dum.	YES	YES
Country dum.	YES	YES
Observations	4,506	4,506

Table 12: Women, Trade Margins and Finance

	Self-Finance		Finance from a priv. inst.		Credit Line	
	Ln(Exp)	P(Exp)	Ln(Exp)	P(Exp)	Ln(Exp)	P(Exp)
Ln(Lab Prod.)		0.0717***		0.0661***		0.0660***
		(0.0170)		(0.0172)		(0.0172)
Ln(Age)	-0.0857***	0.0442*	-0.0840***	0.0472*	-0.0979***	0.0272
	(0.0310)	(0.0241)	(0.0312)	(0.0242)	(0.0330)	(0.0253)
Ln(Gov.)	-0.0139	-0.0826	-0.00963	-0.0733	-0.00332	-0.0900
	(0.0707)	(0.0576)	(0.0696)	(0.0574)	(0.0747)	(0.0621)
Ln(For.)	0.0912***	0.102***	0.0908***	0.104***	0.0930***	0.106***
	(0.0203)	(0.0185)	(0.0207)	(0.0186)	(0.0211)	(0.0187)
Certif.	0.120	0.619***	0.111	0.591***	0.124	0.610***
	(0.0848)	(0.0576)	(0.0851)	(0.0581)	(0.0877)	(0.0581)
Female Boss	0.180	0.0262	0.000105	0.117*	-0.131	0.162**
	(0.230)	(0.188)	(0.0765)	(0.0604)	(0.0866)	(0.0665)
Variable	0.0835**	0.0361	-0.0308	0.0363*	-0.247***	0.130**
	(0.0381)	(0.0284)	(0.0236)	(0.0194)	(0.0833)	(0.0662)
Female Boss* Variable	-0.0424	0.0144	0.0104	-0.0378	0.277**	-0.229**
	(0.0554)	(0.0449)	(0.0346)	(0.0298)	(0.123)	(0.101)
Constant	2.880***	-2.341***	3.285***	-2.126***	3.384***	-2.136***
	(0.511)	(0.320)	(0.487)	(0.298)	(0.494)	(0.299)
Size dum.	YES	YES	YES	YES	YES	YES
Loc dum.	YES	YES	YES	YES	YES	YES
Sector dum.	YES	YES	YES	YES	YES	YES
Country dum.	YES	YES	YES	YES	YES	YES
Observations	4,416	4,416	4,304	4,304	4,395	4,395

Table 13: Women, Trade Margins and Other Barriers

	Import days		Website	
	Ln(Exp)	P(Exp)	Ln(Exp)	P(Exp)
Ln(Lab Prod.)		-0.0369		0.0610***
		(0.0376)		(0.0170)
Ln(Age)	-0.0801	0.0404	-0.0840***	0.0458*
	(0.0505)	(0.0586)	(0.0310)	(0.0241)
Ln(Gov.)	0.0739	0.0267	-0.00122	-0.0548
	(0.113)	(0.141)	(0.0695)	(0.0573)
Ln(For.)	0.0869***	0.138***	0.0891***	0.103***
	(0.0269)	(0.0376)	(0.0205)	(0.0182)
Certif.	0.0873	0.662***	0.0707	0.528***
	(0.114)	(0.118)	(0.0820)	(0.0577)
Female Boss	-0.112	-0.407	-0.0160	-0.0321
	(0.237)	(0.295)	(0.127)	(0.0890)
Variable	-0.132*	-0.210***	0.0794	0.410***
	(0.0741)	(0.0795)	(0.0901)	(0.0603)
Female Boss* Variable	0.0124	0.223*	0.00503	0.111
	(0.1000)	(0.117)	(0.142)	(0.106)
Constant	4.689***	-0.882	3.260***	-2.163***
	(1.057)	(0.895)	(0.496)	(0.297)
Size dum.	YES	YES	YES	YES
Loc dum.	YES	YES	YES	YES
Sector dum.	YES	YES	YES	YES
Country dum.	YES	YES	YES	YES
Observations	936	936	4,499	4,499

Outline

- Stylized Facts

- Methodology and Data

- Findings

- Conclusion

Conclusion

- Female workers have a positive a significant impact on both the probability of export and export volume, regardless the size of the firm, but their effect is relatively higher for small firms than large firms.

- Female labor participation matters in traditional sectors where the MENA region has a comparative advantage.

- Female management/ownership matters more for the probability of large firm to export, which this effect being mainly driven by female ownership and not management.

- Female-owned/managed firms face more financial constraints that hinder exports and therefore tend to rely on self-finance. In addition, the effect of a credit line on exports tends to decrease for a female-owned/managed firm, with respect to a men-owned/managed firm. The effect of other regulatory barriers on exports, such as the number of days to import, is more pronounced for female-owned/managed firm, with respect to a men-owned/managed firm.

Policy Implications

- First, female labor participation contributes to firms' export and this effect is larger for SMEs. Second, female entrepreneurship matters more than female management for the probability of large firm to become an exporter. Third, female owners/managers face more financial and regulatory barriers than their male counterparts to enter international markets.

- Therefore, policies in the MENA region must favor SMEs with high female labor participation and contribute to decreasing the impediments to trade faced by women entrepreneurs. This will ensure that trade policies contribute effectively to growth and development, and also supports the achievement of gender equality goals.

Thank you for your attention