Stronger Together: Female Export Consortia
Experimental Evidence from Tunisia

Florian Münch[1]   Fabian Scheifele[2]   Amira Bouziri[3]

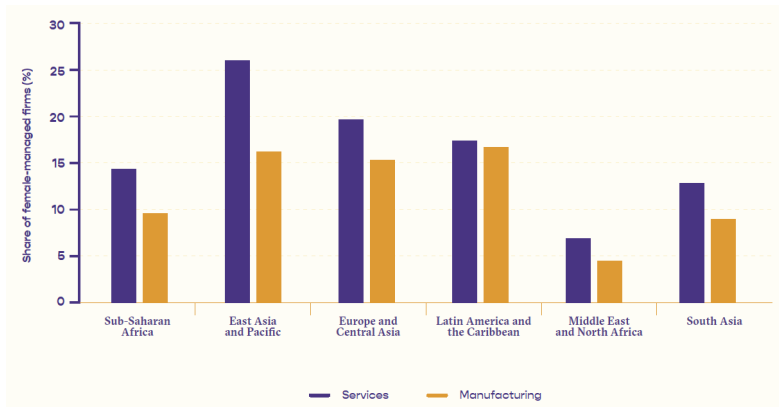[1]London School of Economics/IFC

[2]World Bank

[3]Mediterranean School of Business (MSB) Tunis

June 3, 2024

Introduction

Context: Very few firms worldwide are female-managed, even fewer in MENA

World Bank, 2019, p.123

Information/
Knowledge
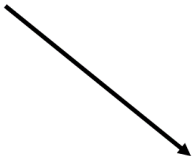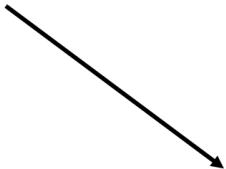
Information/ Knowledge

Capabilities

Information/ Knowledge

Capabilities

Funding

Information/
Knowledge

Capabilities

Funding

Modest impact
(Mckenzie, Woodruff et al. 2021)

Expensive
(Mckenzie, Woodruff et al. 2021)

Hard to scale
(Mckenzie, Woodruff et al. 2021)

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Hard to scale
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Focus on solo/micro firms helpful?

Coordinate cooperation among female entrepreneurs managing small firms

* There is no prior connection between the entrepreneurs/firms.

Randomize offer to participate in female export consortium

Control

Treatment

ToC/Mechanism 1

ToC/Mechanism 2

Cost-sharing: sales, production costs?

ToC/Mechanism 3

Joint Scale: Variety, Volume?

Preliminary Findings

1. Consortia creation expanded female entrepreneurs networks

2. Consortia creation strengthened entrepreneurial self-confidence & independent decision-making

3. Increase in profits, likely via sales (joint product offerings) & cost reductions

4. No significant effect on final but intermediary export outcomes during consortia creation

5. More homogenous firm characteristics & conflict resolution mechanism could further increase consortia effectiveness

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Contribution

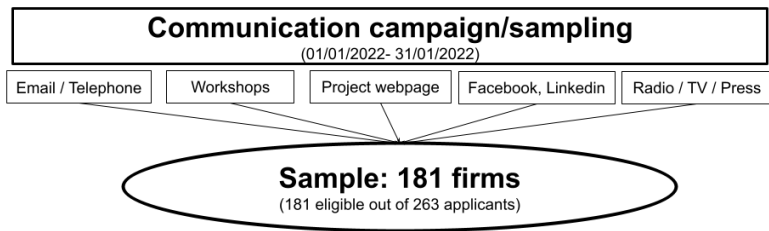- Among the first RCTs targeted at female-owned firms, providing evidence for entrepreneurial empowerment
  - Very little evidence on what measures work to promote female entrepreneurs
    (Jayachandran, 2020; Woodruff et al. 2022)

- Among the first RCTs to attempt creating new networks & permanent cooperation between firms
  - Networking/group interventions show promising, cost-effective results
    (Cai & Szeidl 2018, Quinn & Fafchamps 2018, exception female-firms: **Asiedu et al. 2023)**
  - 2 quasi-experimental studies find consortia increase firms probability of exporting in Chile (Alvarez, 2004; Crespi & Alvarez, 2000)

- Among the first RCTs to test export support policies
  - Only 4 randomized experiments in the area of export promotion for SMEs, 3 null-results (Atkin et al., 2017; Breinlich et al., 2017; Kim et al., 2018, Mckenzie et al., Ali & Verhoogen)

Experimental Set-up

Research Design: Sampling/Outreach campaign

Communication campaign/sampling				
(01/01/2022- 31/01/2022)				
Email / Telephone	Workshops	Project webpage	Facebook, Linkedin	Radio / TV / Press

Sample: 181 firms
(181 eligible out of 263 applicants)

Research Design: Randomisation
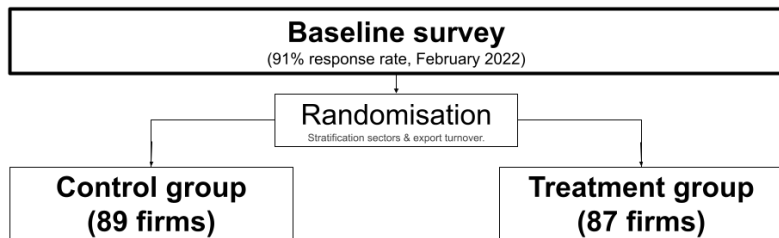
Research Design: Treatment and surveys
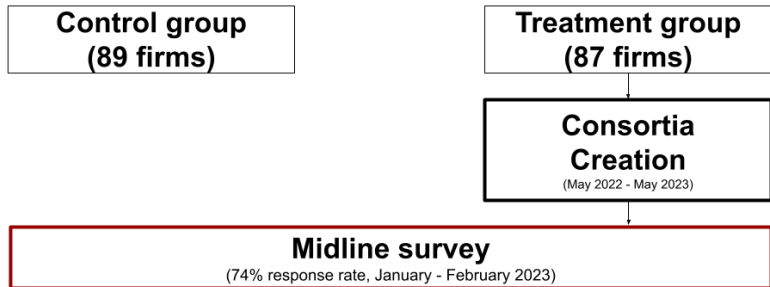
Treatment Phase 1: Consortia Creation

1. Consortia creation

$\longrightarrow$ Phase I, May 2022 - May 2023

$\longrightarrow$ 8 workshops: Legal format, female entrepreneurship, networking, technicalities of exporting

$\longrightarrow$ Individual online coaching sessions for firm-specific problems

Consortia Creation: Workshops

Consortia Creation: Networking Events

Consortia Creation: Participation decision

Research Design: Treatment and surveys

Treatment Phase 2: Consortia Promotion

① **Phase 1: Consortia creation**

$\longrightarrow$ One year: May 2022 - May 2023

$\longrightarrow$ 8 workshops: Legal format, female entrepreneurship, networking, technicalities of exporting

$\longrightarrow$ Individual online coaching sessions for firm-specific problems

② **Phase 2: Consortia Promotion**

$\longrightarrow$ One year: May 2023 - May 2024

$\longrightarrow$ Recruitment of consortia administrative staff

$\longrightarrow$ Consortia participation in international trade fairs

$\longrightarrow$ Joint marketing (website and social media creation)

4 consortia
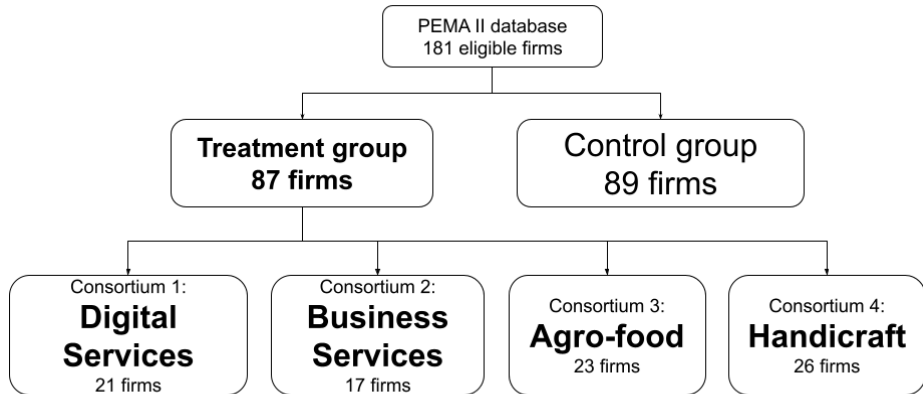
Handicraft Consortium Facebook page

Digital Services Consortium website

How does a consortium work?

- **Legal status & membership**
    - Voluntary legal agreement to become a member of & cooperate in a "Groupement d'intérêt économique"
    - Membership criteria: gender, sector, export intention
    - Financial contribution (in theory), varying in practice

- **Organizational structure**
    - Executive office: President, Vice-President, Treasury
    - Administrative support: Administrative assistant, Coordinator, Accountant

- **Communication and joint decision making**
    - Adhoc communication: Google meet, Whatsapp, Slack
    - Weekly meetings (executive office): in-person or online
    - Important decisions: General assembly with majority vote

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Results 1: Female entrepreneur's business networks

Consortia enlarged members' network size & made them view other CEOs more positively as partners

	(1) Network size	(2) Female CEOs met	(3) Male CEOs met	(4) Network quality	(5) + view CEO exchange	(6) − view CEO exchange
Panel A: Intention-to-treat (ITT)						
Treatment	2.187	2.242*	0.106	0.188	0.239*	-0.168
	(2.295)	(1.197)	(1.435)	(0.397)	(0.136)	(0.128)
	0.342	0.063	0.941	0.637	0.082	0.192
	.568	.107	.874	.568	.05	.107
Panel B: Treatment Effect on the Treated (TOT)						
Consortium participant	2.924	2.994**	0.142	0.252	0.324**	-0.229
	(2.676)	(1.382)	(1.692)	(0.454)	(0.162)	(0.153)
	0.275	0.030	0.933	0.579	0.046	0.136
	.543	.082	.874	.543	.034	.082
Control group mean	8.46	3.67	4.80	7.76	2.43	0.44
Control group SD	12.35	6.23	8.27	2.26	0.84	0.67
Observations	141	141	141	123	145	145
Strata controls	Yes	Yes	Yes	Yes	Yes	Yes
Y0 controls	Yes	Yes	Yes	Yes	Yes	Yes

Results 2: Entrepreneurial confidence/empowerment

Consortia increased female entrepreneurial confidence

	(1) Entrepreneurial empowerment	(2) Ability	(3) Control over environment
Panel A: Intention-to-treat (ITT)			
Treatment	0.228**	0.224*	0.175
	(0.111)	(0.125)	(0.115)
	0.041	0.075	0.131
	.0212	.056	.056
Panel B: Treatment Effect on the Treated (TOT)			
Consortium participant	0.298**	0.292**	0.229*
	(0.127)	(0.143)	(0.131)
	0.019	0.042	0.081
	.017	.055	.056
Control group mean	0.01	0.00	-0.00
Control group SD	0.69	0.76	0.74
Observations	135	135	134
Strata controls	Yes	Yes	Yes
Y0 controls	Yes	Yes	Yes

▶ Entrepreneurial confidence index ▶ Baseline questionnaire ▶ Midline questionnaire ▶ Distribution ▶ Coefficient plot

13% in control but none in treatment consult a male family member before taking strategic business decisions

List experiment (midline)
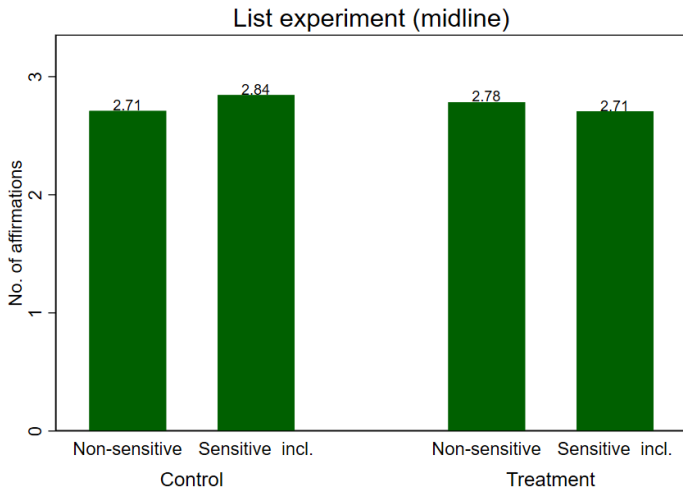
Results 3: Knowledge transfer: management practices, innovation, and export readiness

Knowledge transfer was thus far limited to management practices

	(1) mpi	(2) innovations	(3) innovated	(4) eri	(5) eri_ssa	(6) ssa_action1
Panel A: Intention to Treat Effect (ITT)						
Treatment	0.143	-0.109	-0.104	0.020	0.021	0.142
	(0.091)	(0.193)	(0.070)	(0.099)	(0.101)	(0.094)
Constant	-0.128	1.101**	0.596***	-0.053	-0.104	0.596***
	(0.236)	(0.539)	(0.198)	(0.127)	(0.143)	(0.228)
Observations	139	176	176	136	131	131
Strata controls	Yes	Yes	Yes	Yes	Yes	Yes
Y0 control	Yes	Yes	Yes	Yes	Yes	Yes
Panel B: Treatment Effect on the Treated (TOT)						
Consortium participant	0.190*	-0.173	-0.166	0.026	0.027	0.186*
	(0.106)	(0.277)	(0.102)	(0.113)	(0.116)	(0.108)
Constant	-0.119	1.098**	0.594***	-0.051	-0.103	0.605***
	(0.199)	(0.479)	(0.168)	(0.108)	(0.125)	(0.207)
Observations	139	176	176	136	131	131
Strata controls	Yes	Yes	Yes	Yes	Yes	Yes
Y0 control	Yes	Yes	Yes	Yes	Yes	Yes

Robust Standard errors in parentheses.

Management practices, export readiness and export readiness Sub-Sahara Africa in column (1), (4) and (5) are z-score indeces.

Innovated and having a potential client in Sub-Sahara Africa in column (3) and (6) are binary dummies.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Knowledge transfer about management practices happened primarily via consultants

Source of New Management Strategies
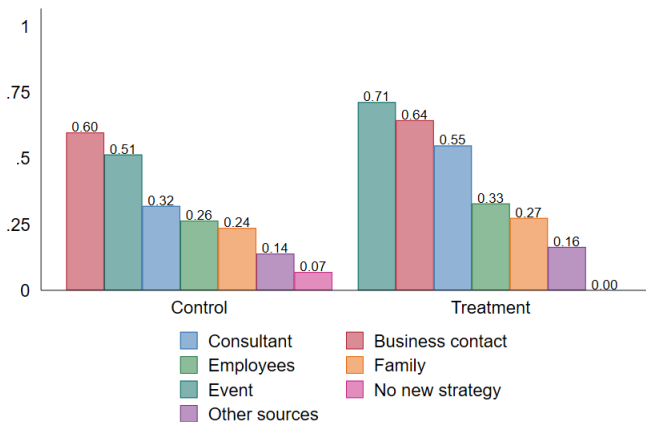
Results 4: Business and export performance

	(1) Total sales	(2) Costs	(3) Profit	(4) Profit	(5) Employees	(6) Female employees
Panel A: Intention-to-treat (ITT)						
Treatment	0.606	-1.886	2.707*	0.061	0.002	4.057*
	(0.452)	(1.730)	(1.619)	(0.049)	(0.134)	(2.135)
	0.182	0.278	0.097	0.215	0.989	0.060
	-0.29,1.50	-5.32,1.55	-0.50,5.92	-0.04,0.16	-0.26,0.27	-0.17,8.28
Panel B: Treatment Effect on the Treated (TOT)						
Consortium participant	0.781	-2.409	3.453**	0.077	0.002	5.319**
	(0.504)	(1.835)	(1.724)	(0.051)	(0.151)	(2.508)
	0.121	0.189	0.045	0.134	0.987	0.034
	-0.21,1.77	-6.01,1.19	0.07,6.83	-0.02,0.18	-0.29,0.30	0.40,10.23
Control group mean	11.57	6.47	4.86	0.49	2.22	5.33
Control group SD	3.80	9.02	9.47	0.30	1.07	9.16
Observations	120	103	103	103	132	132
Strata controls	Yes	Yes	Yes	Yes	Yes	Yes
Y0 controls	Yes	Yes	Yes	Yes	Yes	Yes

▶ Distribution ▶ Coefficient plot

Sensitivity of profit estimates to transformation choice

	(1) Profit, k = 1	(2) Profit, k = 2	(3) Profit, k = 3	(4) Profit, k = 4	(5) Profit, pct	(6) Profit > 0
Panel A: Intention-to-treat (ITT)						
Treatment	2.719*	0.905	0.430	0.130	0.061	0.120
	(1.619)	(0.595)	(0.304)	(0.115)	(0.049)	(0.089)
	0.096	0.131	0.160	0.258	0.215	0.181
	.304	.304	.304	.304	.404	.404
	-0.49,5.93	-0.28,2.09	-0.17,1.03	-0.10,0.36	-0.04,0.16	-0.06,0.30
Panel B: Treatment Effect on the Treated (TOT)						
Consortium participant	3.467**	1.150*	0.543*	0.163	0.077	0.152
	(1.724)	(0.635)	(0.324)	(0.121)	(0.051)	(0.093)
	0.044	0.070	0.093	0.176	0.134	0.101
	.276	.304	.291	.276	.404	.382
	0.09,6.85	-0.09,2.40	-0.09,1.18	-0.07,0.40	-0.02,0.18	-0.03,0.33
Control group mean	4.86	2.07	1.14	0.36	0.49	0.66
Control group SD	9.47	3.59	1.90	0.70	0.30	0.48
Observations	103	103	103	103	103	103
Strata controls	Yes	Yes	Yes	Yes	Yes	Yes
Y0 controls	Yes	Yes	Yes	Yes	Yes	Yes

Notes: Each specification includes controls for randomization strata, baseline outcome, and a missing baseline dummy. All variables are winsorized at the 99th percentile (apart from the positive profit dummy). K refers to the units of profits. $K = 4$ implies profit is measured in units of ten thousand (10^4), $k = 3$ implies profit is measured in units of thousand (10^3), and so forth. Panel A reports ANCOVA estimates as defined in Mckenzie and Bruhn (2011). Panel B documents IV estimates, instrumenting take-up with treatment assignment. Clustered standard errors by firms in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$ denote the significance level. P-values and adjusted p-values for multiple hypotheses testing using the Romano-Wolf correction procedure (Clarke et al., 2020) with 999 bootstrap replications are reported below the standard errors. Confidence intervals are documented below the adjusted p-values.

▶ Distribution   ▶ Coefficient plot

Export performance

	(1) Export investment > 0	(2) Export investment	(3) Export costs	(4) Export sales > 0	(5) Export sales
Panel A: Intention-to-treat (ITT)					
Treatment	0.135	-0.046	0.481	-0.063	-0.029
	(0.089)	(0.071)	(0.360)	(0.074)	(0.105)
	0.133	0.523	0.183	0.394	0.784
	.358	.84	.358	.832	.84
	-0.04,0.31	-0.19,0.10	-0.23,1.19	-0.21,0.08	-0.24,0.18
Panel B: Treatment Effect on the Treated (TOT)					
Consortium participant	0.175*	-0.058	0.629	-0.082	-0.037
	(0.100)	(0.079)	(0.425)	(0.081)	(0.115)
	0.081	0.461	0.139	0.316	0.747
	.308	.832	.353	.84	.84
	-0.02,0.37	-0.21,0.10	-0.20,1.46	-0.24,0.08	-0.26,0.19
Control group mean	0.59	0.27	6.25	0.38	0.44
Control group SD	0.50	0.51	2.44	0.49	0.93
Observations	129	129	135	119	119
Strata controls	Yes	Yes	Yes	Yes	Yes
Y0 controls	Yes	Yes	Yes	Yes	Yes

Take-up

Take-up: One-third of the invited firms decided not to participate in the consortium
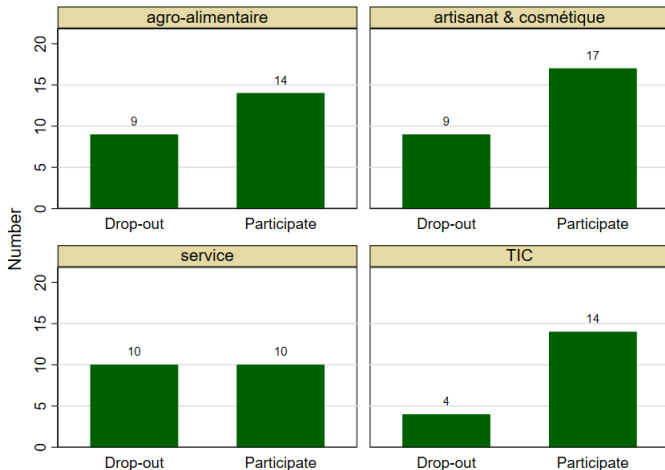
Take-up: Selection in Consortia suggests firms prefer to be with similar peers

Variable	Agro-food, Handicraft, Business Service			Digital Services		
	(1) Drop-out Mean/SD	(2) Participate Mean/SD	T-test P-value (1)-(2) Variable	(1) Drop-out Mean/SD	(2) Participate Mean/SD	T-test P-value (1)-(2)
Export investment > 0	0.70 (0.47)	0.34 (0.48)	0.00***	0.00 (0.00)	0.71 (0.47)	0.00***
Sales	364,790.80 (634,830.34)	113,417.88 (153,604.64)	0.05**	189,000.31 (184,640.71)	486,001.52 (774,453.07)	0.21
Export sales	258,004.16 (612,340.75)	12,982.20 (31,955.24)	0.04**	69,510.94 (111,704.33)	283,624.55 (545,488.92)	0.19
Profit	57,683.20 (109,927.78)	23,219.02 (58,453.61)	0.14	19,558.75 (21,594.03)	57,713.93 (154,832.54)	0.39
Employees	10.19 (13.39)	5.88 (4.76)	0.11	5.75 (3.10)	10.93 (10.73)	0.13
Family business network	2.68 (2.01)	3.99 (5.33)	0.16	2.63 (1.09)	3.43 (3.69)	0.49
Outside family business network	6.57 (5.94)	11.03 (17.59)	0.14	11.13 (5.57)	15.79 (18.29)	0.42
N	27	41		4	14	
F-test of joint significance (F-stat)			5.70***			
F-test, number of observations			68			

Notes: Accounting variables are winsorized at the 99th percentile. One observation is not included, given it is an extreme outlier. The values displayed for t-tests are p-values. The value displayed for F-tests are the F-statistics. Standard deviations in squared brackets are robust. All missing values in balance variables are treated as zero. * significant at the 10% level.

Conclusion

Conclusion 1: Supporting firms to cooperate in a consortia has several substantial positive effects

1. Contacts with female CEOs doubled. Cooperation with other CEOs qualified more positively & as a partnership.

2. Entrepreneurial self-confidence & independent decision-making strengthened.

3. Management practices improved via learning from consultants & workshops rather than other consortia participants.

4. Profits increased thanks to synergies between & across consortia (e.g., combined product offerings).

5. No significant effect (yet) export performance, but encouraging effects on export investment likelihood & knowledge of key trade agreements.

Conclusion 2: Potential for improvement and open questions

Challenges and potential remedies

1. Selecting more homogenous firms, if possible, likely to improve consortia effectiveness
2. Integrating communication training & conflict resolution seem likely to improve consortia effectiveness

Open questions for future work

1. Continuum of cooperation: what is optimal for which context?
2. Group composition: size, gender - cross-overs?

Thank you for your attention!

Stronger Together: Female Export Consortia
Experimental Evidence from Tunisia

Florian Münch[1], Fabian Scheifele[2], Amira Bouziri[3]

[1]London School of Economics/IFC
[2]World Bank
[3]Mediterranean School of Business (MSB) Tunis

Why female exporters?

- Female firms face several challenges that consortium may tackle simultaneously
  - Female entrepreneurs tend to have smaller networks
    (Chaney, 2014; World Bank, 2020)
  - Female entrepreneurs tend to have less formal business/management education
    (Heilbrunn, 2004; Bruhn et al., 2018)
  - Female entrepreneurs tend to be more risk averse/less confident
    (Kirkwood, 2009; Alibhai et al., 2019)
  - Female entrepreneurs tend to have smaller firms
    (Fang et al., 2022; Campos et al., 2018)
- Consortia may enable small firms to overcome the fixed costs of & benefit from export opportunities in a globalizing world economy
  - Fixed costs of export (e.g., market/client search costs, logistics, quality control etc.) prevent small firms from entering or force them out of export markets
    (Melitz, 2003)

Data & Descriptive Statistics

Balance Table

Variable	(1) Control Mean/SD	(2) Treatment Mean/SD	T-test P-value (1)-(2)
Network size	12.33 (16.02)	13.21 (17.62)	0.73
Network quality	7.11 (2.61)	7.31 (2.68)	0.62
Entrepreneurial empowerment	-0.01 (0.66)	-0.08 (0.60)	0.44
Management practices	-0.00 (0.48)	0.05 (0.51)	0.53
Age	7.13 (9.85)	6.66 (8.31)	0.73
Sales	391,879.33 (856,501.52)	624,609.70 (3,419,255.86)	0.54
Profit	29,258.93 (106,668.96)	17,594.97 (219,209.12)	0.66
Employees	7.94 (10.44)	14.68 (48.49)	0.21
Export readiness	-0.04 (0.53)	0.01 (0.52)	0.60
Export sales	96,287.29 (465,104.02)	127,063.70 (419,091.85)	0.65
Export countries, 2021	1.14 (2.12)	1.41 (2.72)	0.45
N	89	87	
F-test of joint significance (F-stat)			6.46***
F-test, number of observations			176

Notes: The value displayed for t-tests are p-values. The value displayed for F-tests are the F-statistics. Standard deviations are robust. All missing values in balance variables are treated as zero.***, **, and * indicate significance at the 1, 5, and 10 percent critical level.

The average participating company has 11 employees, most not more than 25
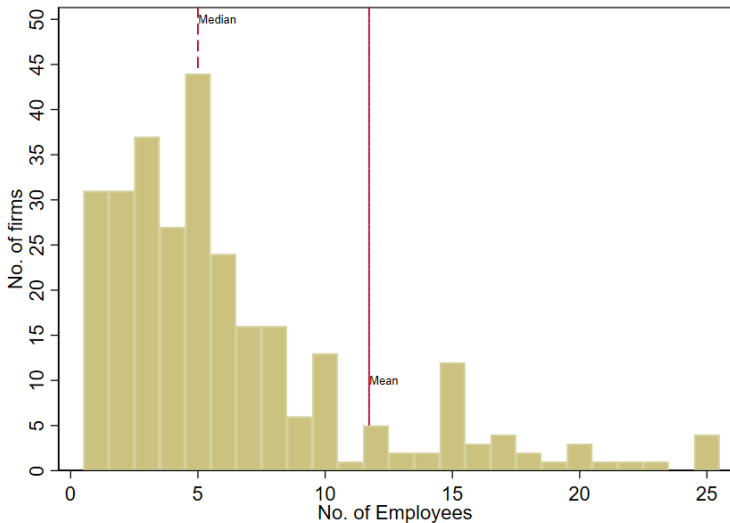
Female entrepreneurs regularly discuss new business ideas & challenges with 11 other people
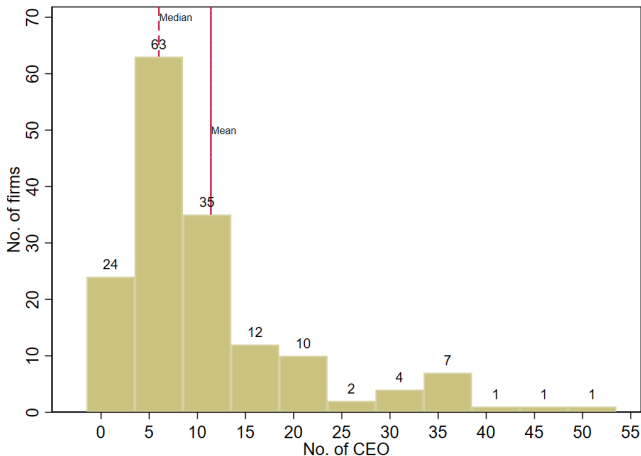
Management practices among women entrepreneurs are average to poor

Management Practices

Legend:
- Frequency of measuring anomalies in production — 2.7
- Regular meetings with employees for feedback — 2.6
- Registration of sales and purchases — 2.3
- Frequency of examining financial performance — 1.8
- Performance indicators for employees — 1.8

▸ Baseline questionnaire
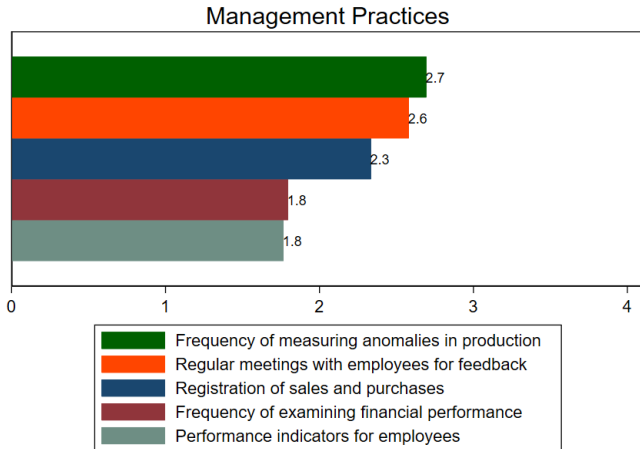
Half of the firms do not export & most export to few countries
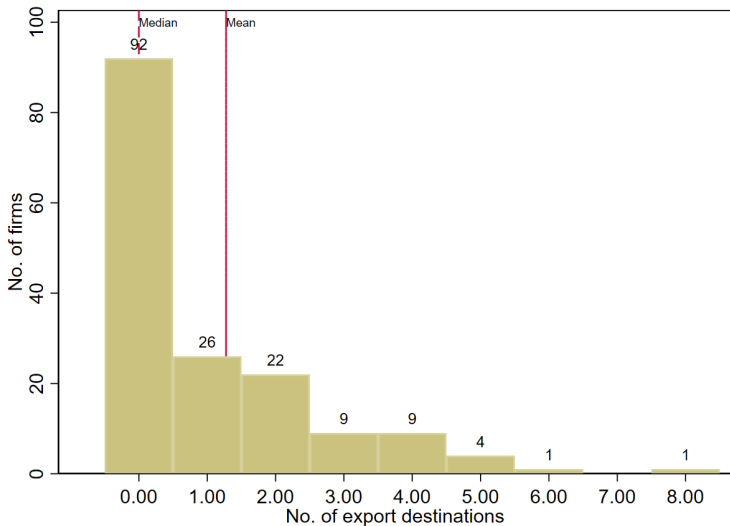
Most firms export to French-speaking or neighbouring countries

Table: Main countries of exports

Country of export	Frequency
France	25
Libya	14
Italy	7
Algéria	5
Germany	5
Côte d'Ivoire	4
Sénégal	4
Canada	3
Others	27
Do not export	73

Back-up slides

There is significant survey attrition at midline, albeit similar in both groups
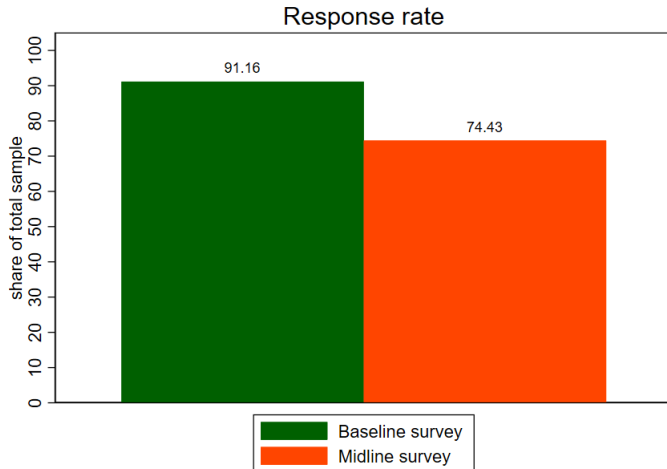
There is significant survey attrition at midline, albeit similar in both groups
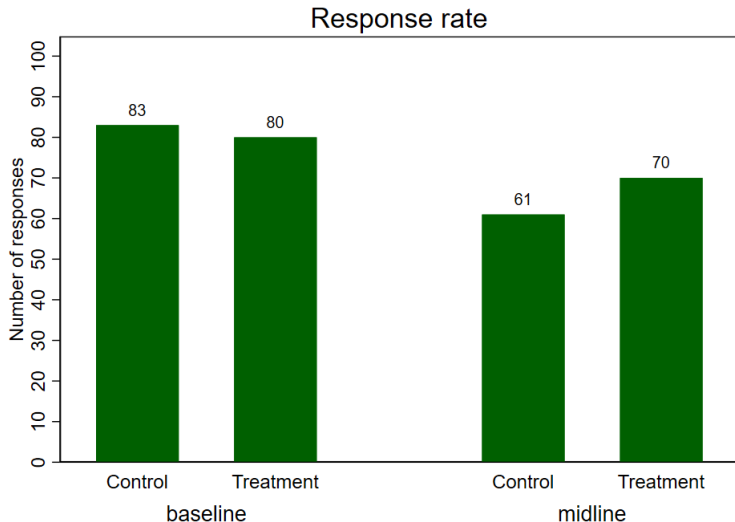
Adjusted Balance Table

Variable	(1) Control Mean/SD	(2) Treatment Mean/SD	T-test P-value (1)-(2)
Network size	12.00 (14.23)	12.76 (15.23)	0.73
Network quality	7.11 (2.61)	7.31 (2.68)	0.62
Pos. view CEO interaction	2.15 (0.78)	2.14 (0.73)	0.94
Neg. view CEO interaction	0.73 (0.64)	0.74 (0.60)	0.95
Entrepreneurial empowerment	-0.01 (0.66)	-0.08 (0.60)	0.44
Effifacy	0.00 (0.76)	-0.10 (0.72)	0.36
Locus of control	-0.05 (0.73)	-0.03 (0.72)	0.85
Management practices	-0.00 (0.48)	0.05 (0.51)	0.53
Total innovations	1.69 (1.40)	1.68 (1.38)	0.97
Innovated	0.74 (0.44)	0.72 (0.45)	0.80
R&D expenditure	21,985.02 (47,898.69)	18,087.04 (36,663.11)	0.54
Age	7.13 (9.85)	6.66 (8.31)	0.73
Domestic sales	1.02 (1.22)	1.04 (1.18)	0.92
Profit	29,258.93 (106,668.96)	17,594.97 (219,209.12)	0.66
Employees	7.94 (10.44)	14.68 (48.49)	0.21
Export readiness	-0.04 (0.53)	0.01 (0.52)	0.60
Export sales	0.27 (0.74)	0.40 (0.91)	0.29
Number of countries exported to in 2021	1.14 (2.11)	1.34 (2.25)	0.53
Export investment	0.09 (0.20)	0.15 (0.38)	0.20
Export costs	5.74 (2.60)	5.54 (2.82)	0.62
Export sales > 0	0.37 (0.49)	0.40 (0.49)	0.67
N	89	87	
F-test of joint significance (F-stat)			1.25
F-test, number of observations			176

Notes: The value displayed for t-tests are p-values. The value displayed for F-tests are the F-statistics. Standard deviations are robust. All missing values in balance variables are treated as zero.***, **, and * indicate significance at the 1, 5, and 10 percent critical level.

Participation rate per workshop

Gouvernorat	Webinaire de lancement	Rencontre 1 - Atelier 1	Rencontre 1 - Atelier 2	Rencontre 2 - Atelier 1	Rencontre 2 - Atelier 2	Rencontre 3 - Atelier	Rencontre 3 - Atelier	
Tx de présence	47%	74%	69%	65%	66%	67%	65%	65%
Total	85	85	85	85	85	85	85	85
Présente	40	63	59	55	56	57	55	55
absente	45	22	26	30	29	28	30	30

In average, female led-firms have met 6/7 CEO during the last 12 months
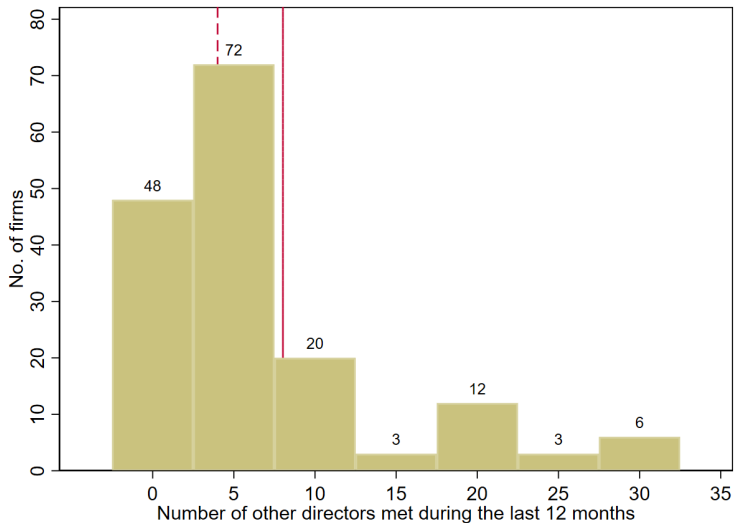
Services from the TIC pole

accès pour abonnement trimestrielle	1
application mobide realite augmente e..	1
assurance	1
atelleirs scientifiques en ligne	1
babysitting	1
bon de role	1
business process outsourcing	1
communication digital	1
communité mangement	1
conseil aux entreprises	1
conseil et formation	1
création contenus digital	1
design graphique	1
développement & intégration digital	1
développement logiciels	1
développement web	1
eclairage public intelegents	1
educanet	1
education	1
etude de conception en génie mécanique	1
impression numérique	1
intégration et développements erps	1
logiciel de gestion commerciadesktop	1
matériel didactique avec service de f..	1
phyt'eau	1
platforme pour therapeute	1
production audio visuelle	1
produit cosmétique	1
produits artisanaux 100% handmade	1
swift smart report application bancaire	1
vente de site web	1
vente de solution logiciel	1
vente produits (life style)	1

Services from the service pole

Rédaction de programmes de formation ..	1
accompagnement projets excellence opé..	1
assistance technique et audits	1
coaching talents	1
conseil	2
conseil dans gestion si	1
conseil en organisation et politiques..	1
conseil et accompagnement aux entrepr..	1
conseil, etude & accompagnement entre..	1
cours complet de formation aux médias	1
création de société	1
enseignement de base	1
etudes	2
formation	4
formation et certification	1
formation et coaching	1
formation langues	1
formation lecture de plan de soudage	1
formation à destination professionnels	1
formation à distance	1
formations profficionelles	1
l'accempagnement entreprises	1
mise a disposition clubs	1
plan technique	1
promotion moalternative réglement	1
réalisation étuenvironnementales	1
service d'aide à l'export pour produc..	1
stans dans foirs	1
tenu de comptabilite	1
tourisme de toutes sortes : affaires,..	1
training	1
Événements	1

Networking question

net_nb **With** approximately how many people do you discuss challenges or ideas related to the development of your business? Note that these are people to whom you are close enough to ask for information, a favor, a contact, etc. [positive number]. [positive number]

net_nb_fam		People within your family
net_nb_dehors		People outside your family

net_nb_qualite Do you find the advice and information from your personal network useful for the management of your business?

1 = Not useful at all	2	3	4	5	6	7	8	9	10 Very useful

net_time How often in the last 12 months do you meet with other CEOs to discuss business? Please put "0" if you do not meet with other CEOs.

Every   week

net_coop Choose the 3 words that best describe your perception of CEO interactions in business.

Win (=1)	Communicate (=2)	Trust (=3)
Eliminate/Block (=4)	Retreat/ Hold-Back (=5)	Power (=6)
Partnership (=7)	Opponent (=8)	Connect (=9)
Dominate (=10)		

Question on exports

exp_pays How many countries did your company export to in 2021? Please put "0" if your company did not export in 2021.

	pays

exp_pays_principal: What was your main export market in 2021?

Sensitive question

listexp **How many of the following statements apply to you? Please note that we don't know which statements apply to you**

...........affirmations [0-3 for group 1 and 0-4 for group 2]

Variable list_group = 0: Group 0 (one-half of the companies):

1. I always support and encourage my team.
2. I dreamed of being a successful woman when I was a child.
3. I try to do my best in my job.

Variable list_group = 1: Group 1 (the 2nd half of the companies):

1. I always support and encourage my team.
2. I dreamed of being a successful woman when I was a child.
3. I try to do my best in my job.
4. **I feel obligated to consult my husband (or another man in my family) before making decisions for the company.**

▶ Results

Baseline results list experiment
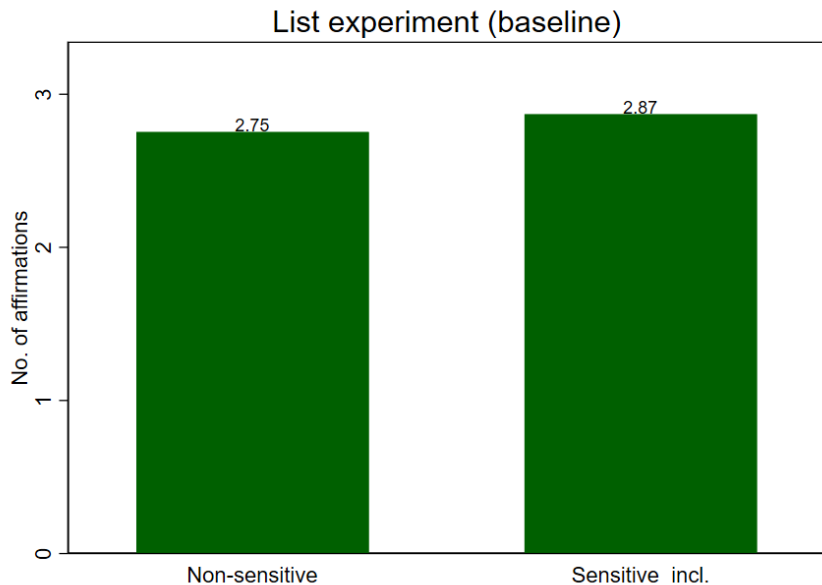
Support program question

support **How can we make it easier for you to participate in consortium meetings? Several options are possible.**

- **support1** No need for support. I can participate in the meetings by myself.
- **support2** Organize virtual meetings, for example, through a platform like Zoom or Skype.
- **support3** Change the meeting place, for example, from one city to another.
- **support4** Adopt a time slot before or after the regular workday.
- **support5** Offer free childcare during consortia meetings.
- **support6** Offer financial support for transportation and accommodation.
- **support7** Other:

Increased female entrepreneurs' self-perceived entrepreneurial control and ability, and independent decision-making

Midline Distribution of Women's locus of control index
Index calculated based on z-score method
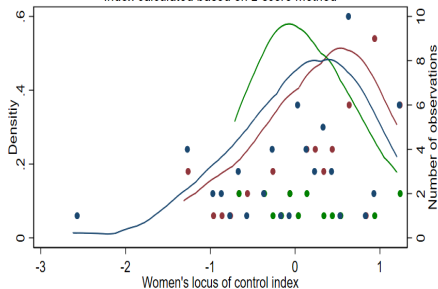
Treatment group, participated (N=55 firms)
Treatment group, absent (N=32 firms)
Control group (N= 89 firms)

Midline Distribution of Women's entrepreneurial effifacy index
Index calculated based on z-score method
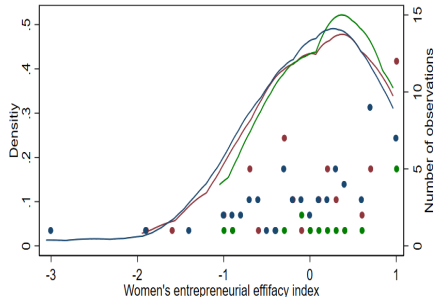
Treatment group, participated (N=55 firms)
Treatment group, absent (N=32 firms)
Control group (N=89 firms)

Positive and significant female entrepreneurs' self-perceived entrepreneurial control

	(1) Mean comparison	(2) Ancova	(3) Ancova	(4) DiD	(5) ATT	(6) ATT
Treatment	0.167 (0.126)	0.158 (0.117)	0.169 (0.116)	0.034 (0.113)		
L.Women's locus of control - z score		0.408*** (0.101)	0.327*** (0.096)		0.317*** (0.084)	0.322*** (0.085)
midline				0.105 (0.109)		
Treatment × midline				0.127 (0.140)		
take_up_per					0.232* (0.139)	
company decided to participate in consortium						0.221* (0.132)
Constant	0.076 (0.097)	0.062 (0.092)	-0.327 (0.240)	-0.350 (0.314)	-0.333 (0.203)	-0.316 (0.203)
Observations	134	129	129	299	129	129
Strata controls	No	No	Yes	Yes	Yes	Yes
Y0 control	No	Yes	Yes	Yes	Yes	Yes

Standard errors in parentheses

Column (1) presents estimates for a simple mean comparison between treatment and control group at midline.

Column (2) presents an ANCOVA specification without strata controls.

Column (3) presents an ANCOVA specification with strata controls.

Column (4) provides estimates from a difference-in-difference specification.

Column (5) estimates are based on 2SLS instrumental variable estimation where treatment assignment is the instrument for treatment participation.

(1) uses robust standard errors. In (2)-(5) standard errors are clustered at the firm level to account for multiple observations per firm

$^*\ p < 0.1,\ ^{**}\ p < 0.05,\ ^{***}\ p < 0.01$

List experiment - Regression

	(1) Mean comparison	(2) Ancova	(3) Ancova	(4) DiD	(5) ATT	(6) ATT
Treatment	0.074	0.109	0.039	-0.149		
	(0.125)	(0.124)	(0.155)	(0.108)		
list_group=1	0.134	0.164	0.057			
	(0.155)	(0.155)	(0.198)			
Treatment × list_group=1	-0.212	-0.251	-0.103			
	(0.211)	(0.210)	(0.253)			
L.list experiment		0.169**	0.274***		0.271***	0.271***
		(0.079)	(0.097)		(0.084)	(0.084)
midline				-0.122		
				(0.103)		
Treatment × midline				0.101		
				(0.147)		
take_up_per					-0.019	
					(0.139)	
company decided to participate in consortium						-0.018
						(0.132)
Constant	2.710***	2.196***	1.876***	2.860***	1.907***	1.906***
	(0.097)	(0.272)	(0.507)	(0.216)	(0.431)	(0.431)
Observations	134	129	129	299	129	129
Strata controls	No	No	Yes	Yes	Yes	Yes
Y0 control	No	Yes	Yes	Yes	Yes	Yes

Standard errors in parentheses

Column (1) presents estimates for a simple mean comparison between treatment and control group at midline.

Column (2) presents an ANCOVA specification without strata controls.

Column (3) presents an ANCOVA specification with strata controls.

Column (4) provides estimates from a difference-in-difference specification.

Column (5) estimates are based on 2SLS instrumental variable estimation where treatment assignment is the instrument for treatment participation.

(1) uses robust standard errors. In (2)-(5) standard errors are clustered at the firm level to account for multiple observations per firm

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

▶ Visualisation

Positive and significant female entrepreneurs' self-perceived entrepreneurial ability

	(1) Mean comparison	(2) Ancova	(3) Ancova	(4) DiD	(5) ATT	(6) ATT
Treatment	0.167 (0.126)	0.158 (0.117)	0.169 (0.116)	0.034 (0.113)		
L.Women's locus of control - z score		0.408*** (0.101)	0.327*** (0.096)		0.317*** (0.084)	0.322*** (0.085)
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Constant	0.076 (0.097)	0.062 (0.092)	-0.327 (0.240)	-0.350 (0.314)	-0.333 (0.203)	-0.316 (0.203)
Observations	134	129	129	299	129	129
Strata controls	No	No	Yes	Yes	Yes	Yes
Y0 control	No	Yes	Yes	Yes	Yes	Yes

Standard errors in parentheses

Column (1) presents estimates for a simple mean comparison between treatment and control group at midline.

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(1) uses robust standard errors. In (2)-(5) standard errors are clustered at the firm level to account for multiple observations per firm

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

Management practices question (baseline)

1. **man_br_obj** Do you define and analyze the achievement of performance indicators for each employee?

Never (= 0)	Yearly (=1)	Monthly (=2)	Weekly (=3)	Daily (=4)

2. **man_br_feed** Do you have regular feedback meetings with your employees?

Never (= 0)	Yearly (=1)	Monthly (=2)	Weekly (=3)	Daily (=4)

3. **man_pro_ano** How often do you measure and analyze anomalies in the production of goods (units produced, production time, resources used) or in the delivery of your service?

Never (= 0)	Yearly (=1)	Monthly (=2)	Weekly (=3)	Daily (=4)

4. **man_fin_per** How often do you review your company's financial performance?

Never (= 0)	Yearly (=1)	Monthly (=2)	Weekly (=3)	Daily (=4)

5. **man_fin_enr** Do you record every purchase and sale made by the company?

Never (= 0)	Yearly (=1)	Monthly (=2)	Weekly (=3)	Daily (=4)

▶ Results – regressions   ▶ Visualisation

Management practices question 1 (midline)

Management practices question 2 (midline)

13. **man_hr_ind** How often do you evaluate employee performance in your company? مناهكة الشركة في الموظفين أداء تراجع مرة من فائش

ONLY ONE POSSIBLE ANSWER.

Never جمدا	Annually مرة في العام	Quarterly كل ثلاثي	Monthly مرة في الشهر	Weekly (or more) (مرة في الجمعة (أو أكثر
0	0.25	0.5	0.75	1

14. **man_hr_obj** What is the main mode of motivation in your company? ؟ شنها الطريقة التي تستعملها بالش تشجع الموظفين في الشركة مناهك

ONLY ONE POSSIBLE ANSWER.

Compensation, bonus and promotion based on individual and company performance. المكافآت والترقيات على أساس الأداء الفردي للموظف وأداء الشركة	Remuneration, bonuses and promotion based on individual employee performance. المكافآت والترقيات على أساس أداء الموظف	Remuneration, bonuses and promotion are mainly based on on factors other than performance. المكافآت والترقيات على أساس عوامل اخرى غير الأداء	There is no particular system for motivating employees. ما تخدموش حاجة معينة لتشجيع الموظفين
(1)	(¾)	(1/4)	(0

15.

Management practices question 3 (midline)

16. **man_ind_awa** Who is aware of your company's production targets?

production targets ? Please tick one box.

1. الحالة تكون يعرف أهداف إنتاج الشركة ؟ ضع علامة في

Senior managers المسؤولين التنفيذين	Most managers and some employees أغلبية المديرين و بعض الموظفين	Most managers and most employees أغلبية المديرين والموظفين	All managers and employees جميع المديرين والموظفين
(¼)	(2/4)	(¾)	1

17. **man_source** Have you learned any new management strategies from the following sources?

تعلمت استراتيجيات تصرف جديدة من وحدة من المصادر التالية؟

SEVERAL POSSIBLE ANSWERS.

Consultant(ة مستشار)	1
Business contact , e.g. other CEO.(ة متنافس)	2
Employees الموظفين	3
Family العائلة	4
Participation in an event (conference or trade show) المشاركة في حدث (ندوة أو معرض تجار)	5
No new management strategies learned ما تعلمتش استراتيجيات تصرف جديدة	6
Other (please specify) (أخرى (حدد	7

Midline Distribution of Management Practices Index

Index calculated based on z-score method

Legend:
- Treatment group, consortium member (N=55 firms)
- Treatment group, drop-out (N=32 firms)
- Control group (N=89 firms)

▶ Results - regressions
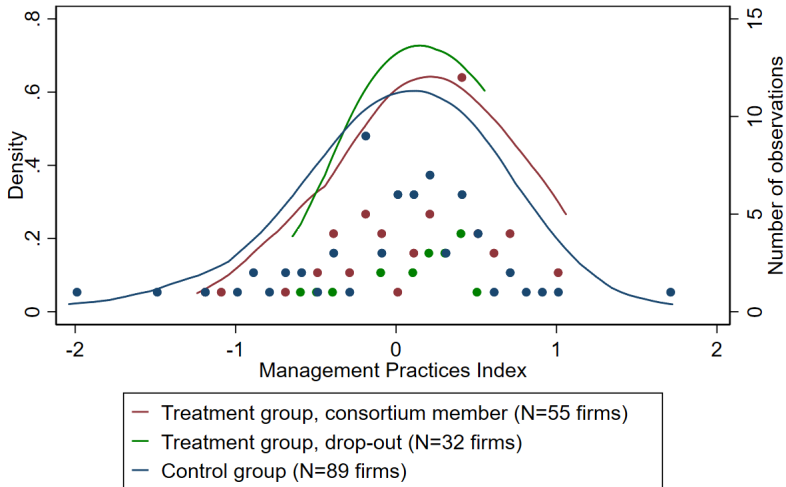
Questionnaire female entrepreneurs' confidence - index approach

(Female) Entrepreneurial confidence - Z Score: it is the average of standardized z-scores of outcomes measuring the following variables:

- Belief in own ability (self-efficacy)
- Sense of own initiative (excluded at midline)
- Sense of control over the business situation (locus of control)

Questionnaire female entrepreneurs' confidence - baseline

car_efi **To** what extent do you affirm the following sentences?

	1 = I do not affirm.	2	3	4	5 = I do affirm.
car_efi_fin1 I have the skills to access new sources of funding.					
car_efi_nego I negotiate my company's deals well.					
car_efi_conv I can convince employees and partners to agree with me.					

car_init **To** what extent do you affirm the following sentences?

	1 = I do not affirm.	2	3	4	5 = I do affirm.
car_init_conf I actively confront the company's problems whenever they arise.					
car_init_init I take the initiative immediately when others do not.					
car_init_oppo I identify and seize opportunities quickly to achieve my professional goals.					

loc **To** what extent do you affirm the following sentences?

	1 = I do not affirm.	2	3	4	5 = I do affirm.
car_loc_succ I am well able to determine the success of my business.					
car_loc_env I have a good understanding of what is going on in the internal and external environment of the company.					
car_loc_insp My example inspires other women to be better entrepreneurs.					

▶ Results - regressions

Questionnaire female entrepreneurs' confidence - midline

Introduction

In the next section, we'll look at your perception of your situation as an entrepreneur.

في القسم الجاي، باش نهتمو بتصورك لموقفك كرائدة أعمال.

25. **car_efi** On a scale of 1 to 5, where 1 means "strongly disagree" and 5 means "strongly agree", how much do you agree with the following statements?

على مقياس من 1 إلى 5 ، 1 تعني " موش موافقة بالكل " و 5 تعني "موافقة برشا" ، ما مدى موافقتك على العبارات التالية:

ONLY ONE POSSIBLE ANSWER per line.

	1 Strongly disagree مش موافقة بالكل	2	3	4	5 I couldn't agree more. موافقة برشا
car_efi_fin1 I have the skills needed to access new sources of financing. عندي المهارات اللازمة باش نوصل لمصادر التمويل جديدة.	1	2	3	4	5
car_efi_nego I'm very good at attracting customers to my business. نجم نجلب حرفاء لشركتي.	1	2	3	4	5
car_efi_conv I'm able to motivate my company's employees. نجم تحمس/تشجع الموظفين في شركتي.	1	2	3	4	5

28. **loc** On a scale of 1 to 5, where 1 means "strongly disagree" and 5 means "strongly agree", how much do you agree with the following statements?

على مقياس من 1 إلى 5 ، 1 تعني "مش موافقة جملا" و 5 تعني "موافقة برشا" ، ما مدى موافقتك على العبارات التالية:

ONLY ONE POSSIBLE ANSWER per line.

	1 Strongly disagree مش موافقة بالكل	2	3	4	5 I couldn't agree more. موافقة برشا
car_loc_succ I'm confident that I'll be able to present my company and its product internationally. أنا قادرة على تحديد نجاح اعمالي	1	2	3	4	5
car_loc_env I feel comfortable making new business contacts. نعرف كيفاش نحد الى يصير في البيئة الداخلية والخارجية للشركة.	1	2	3	4	5
car_loc_exp I know all the administrative and logistical procedures involved in exporting. عندي دراية بالإجراءات الإدارية واللوجستية المتعلقة بالتصدير.	1	2	3	4	5

▶ Results - regressions

Increased female entrepreneurs' self-perceived entrepreneurial confidence

Midline Distribution of Female Empowerment Index
Index calculated based on z-score method

Legend:
- Treatment group, participated (N=55 firms)
- Treatment group, absent (N=32 firms)
- Control group (N=89 firms)
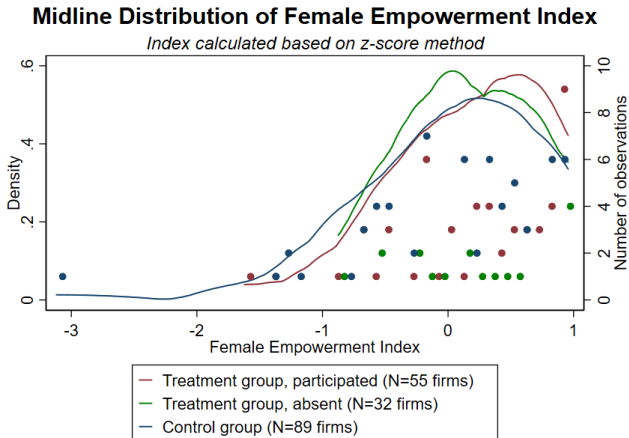
Female entrepreneurship coefficient plot
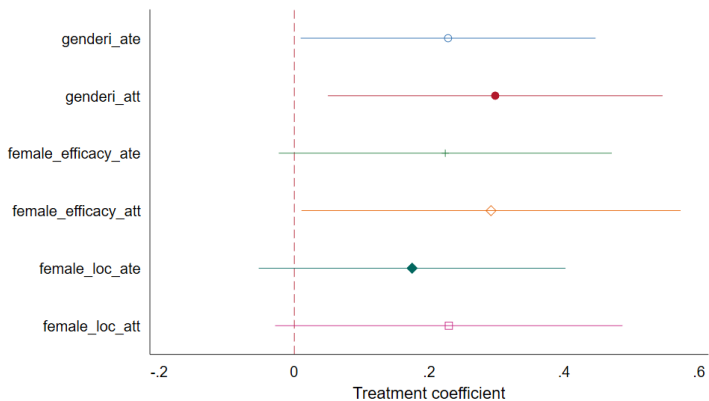
Treatment

- **Implementing partners:** The intervention is part of a larger PEMA II project, implemented by the German Development Agency GIZ and the Tunisian Export Promotion Agency (EPA) CEPEX.

- **Consultation hours:** 160 hours of support and interaction from consultants and project staff.

- **Current status:** End of Phase I which will be concluded with the legal registration of four consortia.

  - Highlight of Phase I: Presentation of the four groups at the COMESA Tunisia Businesswomen Days.

Budget allocated for the first phase of the treatment

Table: Cost for the first phase

	Activity	Budget spent (€)	Hours worked (h/d)	Hours worked (duration)
	1) Webinar launch	6,500€	33	6 months
	2) 3 First meetings	33,000 € accommodation fees & 30,000 € for consultants' mobilization	155	45 days (PEMA)
	3) Slack exchange and individual coaching	30,000€	150	30 days (PEMA)
Phase I: Forming Consortiums	4) 3 Intermediate meetings	33,000 € accommodation fees & 31,000 € for consultants mobilization	155	90 hours/day (PEMA)
	5) Operationalization meeting & decision of the executive office	8,000€	32	45 days (PEMA)
Total		171,500€		

▶ Treatment

Some pictures of the workshops

Some pictures of websites & trade fairs
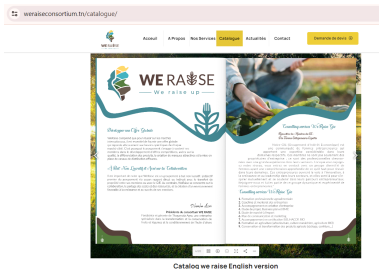
Catalog we raise English version
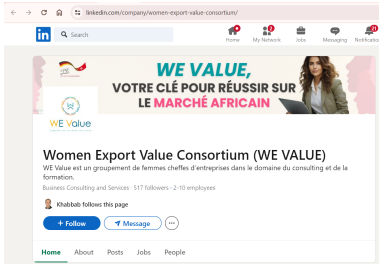
▶ Treatment
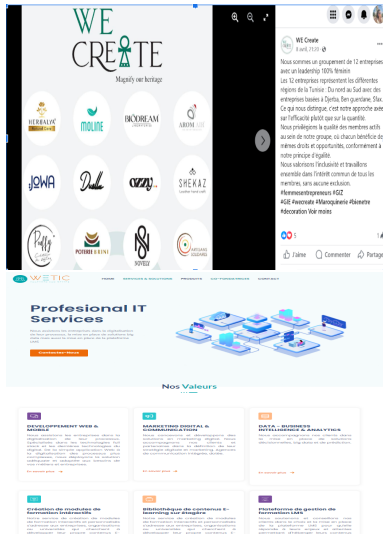
Take-up and firm characteristics across consortia

Variable	Agro-food, Handicraft, Business Service			Digital Services		
	(1)	(2)	T-test	(1)	(2)	T-test
	Drop-out	Participate	P-value	Drop-out	Participate	P-value
	Mean/SD	Mean/SD	(1)-(2) Variable	Mean/SD	Mean/SD	(1)-(2)
Export investment > 0	0.70	0.34	0.00***	0.00	0.71	0.00***
	(0.47)	(0.48)		(0.00)	(0.47)	
Sales	364,790.80	113,417.88	0.05**	189,000.31	486,001.52	0.21
	(634,830.34)	(153,604.64)		(184,640.71)	(774,453.07)	
Export sales	258,004.16	12,982.20	0.04**	69,510.94	283,624.55	0.19
	(612,340.75)	(31,955.24)		(111,704.33)	(545,488.92)	
Profit	57,683.20	23,219.02	0.14	19,558.75	57,713.93	0.39
	(109,927.78)	(58,453.61)		(21,594.03)	(154,832.54)	
Employees	10.19	5.88	0.11	5.75	10.93	0.13
	(13.39)	(4.76)		(3.10)	(10.73)	
Family business network	2.68	3.99	0.16	2.63	3.43	0.49
	(2.01)	(5.33)		(1.09)	(3.69)	
Outside family business network	6.57	11.03	0.14	11.13	15.79	0.42
	(5.94)	(17.59)		(5.57)	(18.29)	
N	27	41		4	14	
F-test of joint significance (F-stat)			5.70***			
F-test, number of observations			68			

Notes: Accounting variables are winsorized at the 99th percentile. One observation is not included, given it is an extreme outlier. The values displayed for t-tests are p-values. The value displayed for F-tests are the F-statistics. Standard deviations in squared brackets are robust. All missing values in balance variables are treated as zero. * significant at the 10% level. ** significant at the 5% level. *** significant at the 1% level.

▸ Peer effect

Theory of change
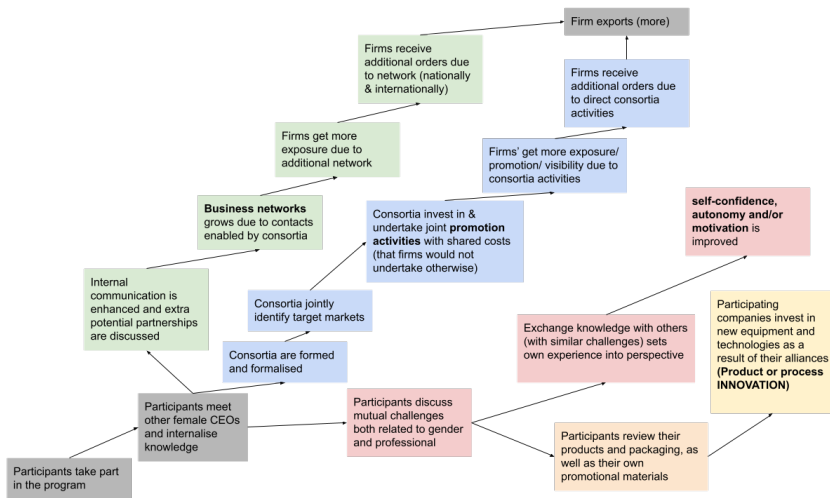
Virtual meetings and transport/accommodation are the most important participation support incentives among female CEOs in Tunisia

Number of firms

1: Virtual meetings
2: Transport or accomodation
3: Alternate location, e.g. by city
4: Time slot before or after work
5: Child care
6: No need for support
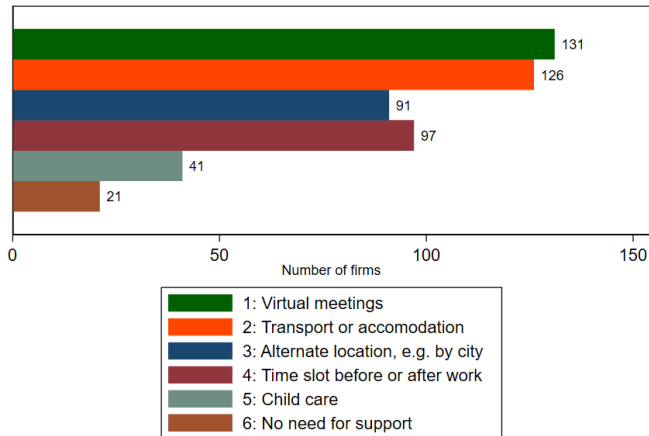
N = 176

Cooperativeness increased among female entrepreneurs

Perception of interactions between CEOs

Legend:
- Positive answers for the perception of interactions between CEOs
- Negative answers for the perception of interactions between CEOs

▶ Regression
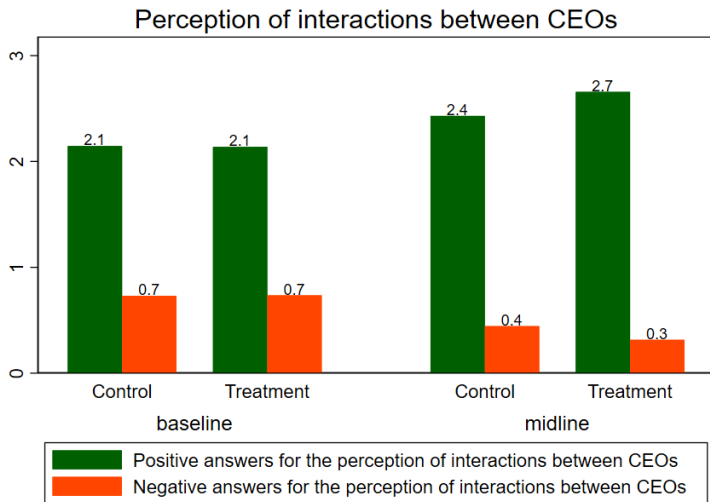
Increased cooperativeness thanks to changing view of other entrepreneurs as "partners"

Positive views of communication between CEOs
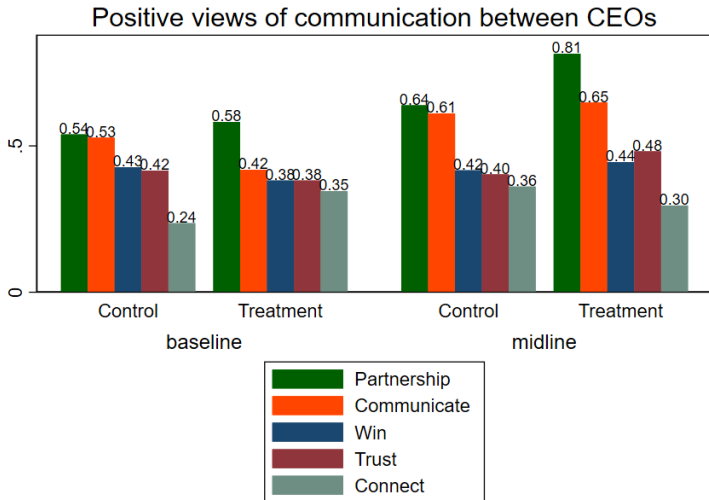
Most of female CEOs perceive positively interactions between CEOs

10. **net_coop** Choose the 3 words that best describe how you think CEOs interact with each other business.

3 POSSIBLE ANSWERS.

Win	1	Retreat	6
Communication	2	Partnership	7
Trust	3	Adversary	8
Beat	4	Connect	9
Power	5	Dominate	10

▸ Regression

Female CEOs show extremely high levels of confidence in their locus of control and initiative

Locus of control for female entrepreneur

Inspiring other women to become better entrepreneurs	4.25
Able to determine the success of her business	4.18
Control over the internal and external environment of the firm	3.83
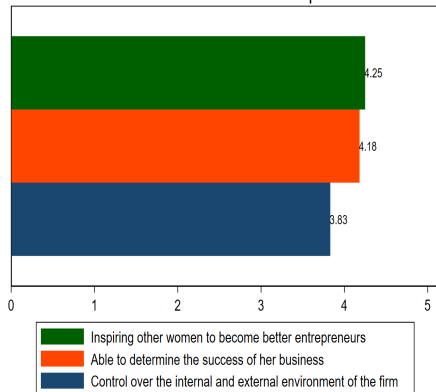
Locus of initiative for female entrepreneurs

Taking initiatives when others do not	4.41
Proactive problem confrontations	4.35
Identification and pursue of opportunities	4.28

No effect on contacts with male CEOs

	(1)	(2)	(3)	(4)	(5)
	Mean comparison	Ancova	Ancova	ATT	ATT
Treatment	0.258	0.258	0.106		
	(1.450)	(1.440)	(1.435)		
take_up_per				0.148	
				(1.772)	
company decided to participate in consortium					0.142
					(1.692)
Constant	4.797***	4.797***	2.280	2.277*	2.286*
	(1.003)	(0.995)	(1.393)	(1.249)	(1.197)
Observations	141	141	141	141	141
Strata controls	No	No	Yes	Yes	Yes
Y0 control	No	Yes	Yes	Yes	Yes

Standard errors in parentheses

Column (1) presents estimates for a simple mean comparison between treatment and control group at midline.

Column (2) presents an ANCOVA specification without strata controls.

Column (3) presents an ANCOVA specification with strata controls.

Column (4) estimates are based on 2SLS instrumental variable estimation where treatment assignment is the instrument for treatment participation.

(1) uses robust standard errors. In (2)-(5) standard errors are clustered at the firm level to account for multiple observations per firm

$* \ p < 0.1, \ ** \ p < 0.05, \ *** \ p < 0.01$

▸ Female CEO

Female-led firms seem to have difficulty accessing new sources of funding

Locus of entrepreuneurhsip for female entrepreuneurs

- Manage to convince employees and partners to agree
- Negotiate the affairs of the company well
- Have the skills to access new sources of funding
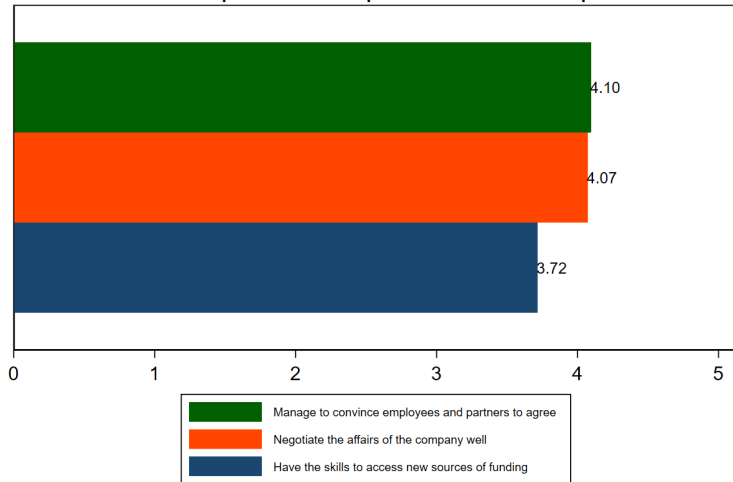
Networking question

9. **net_nb_qualite** On a scale of 1 to 10, where 1 means "not at all useful" and 10 means "very useful", how useful do you consider your personal network to be in running your business?

على مقياس من 1 إلى 10 ، وين 1 تعني "غير مفيد جملة" و 10 تعني "مفيدة برشا" ، الي أي درجة تشوف انو النصائح والمعلومات متع الشبكة الشخصية متاعك مفيدة في إدارة الشركة متاعك؟

ONLY ONE POSSIBLE ANSWER.

1 = Not at all useful غير مفيد جملة	2	3	4	5	6	7	8	9	10 = Very useful مفيدة برشا

▶ Regression

Increased female entrepreneurs network size
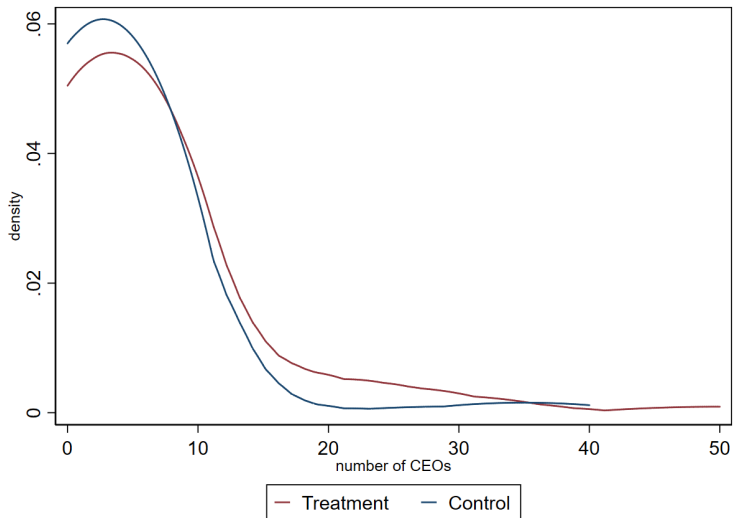
Female entrepreneurs network question (baseline)

net: Network(ing) size/business contacts

We're now going to ask you a few questions about your company's business contacts.

13. **net_nb** With approximately how many people do you discuss challenges or ideas related to your company's development?

Note that these are the people with whom you are close enough to ask for information, a favor, a contact, and so on.

ONLY ONE POSSIBLE ANSWER.
Only positive figures are accepted.

net_nb_fam People in your family	....
net_nb_outside People outside your family	......

▶ Visualisation

▶ Regression

Female entrepreneurs network question (midline)

10. **net_coop** Choose the 3 words that best describe how you think CEOs interact with each other in business.
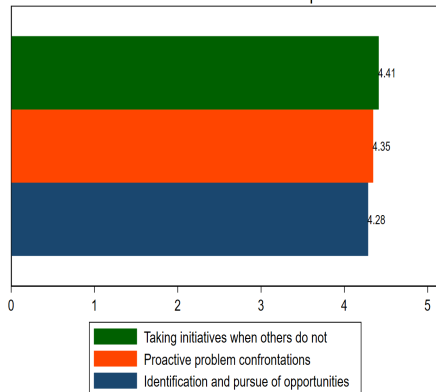
3 POSSIBLE ANSWERS.

Win	1	Retreat	6
Communication	2	Partnership	7
Trust	3	Adversary	8
Beat	4	Connect	9
Power	5	Dominate	10

▶ Regression

Network coefficient plot

Note: Confidence intervals are at the 95% level.

▸ Regression(size)   ▸ Regression(cooperation)
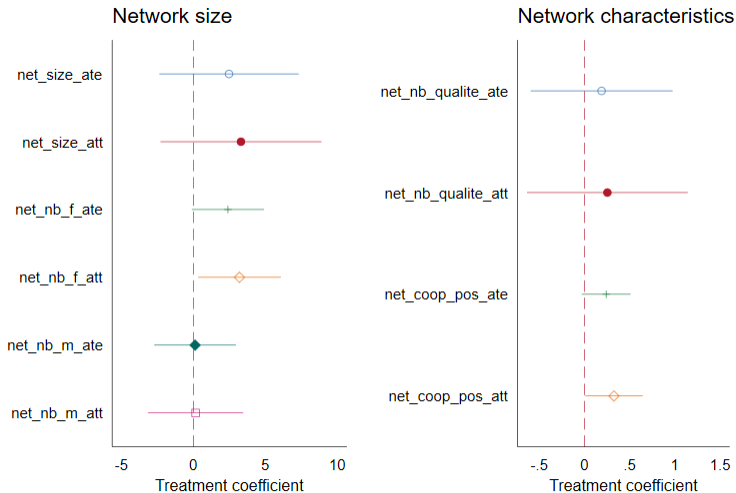
Export Readiness index question

22. **exp_pra** Have you undertaken any of the following activities in the last 12 months?

من بين الأنشطة هادي، اناهم الي قمت بيهم في ال 12شهر الي فاتو؟

ONLY ONE POSSIBLE ANSWER per line.

	Yes (1)	No (0)
exp_pra_fair Participate in international trade shows. تشارك في المعارض التجارية الدولية	1	2
exp_pra_sci Hire or work with an international trading company. الالتزام أو العمل مع شركة تجارية دولية	1	2
exp_pra_rexp Appoint an employee to handle export-related sales activities. تعيين موظف مسؤول عن الأنشطة التجارية المتعلقة بالتصدير	1	2
exp_pra_target Undertake an analysis of target export markets (identify a target market) . تعمل دراسة لأسواق التصدير المستهدفة (تحدد سوق هدف)	1	2
exp_pra_mission Undertake a trade mission/travel to one of your target markets. تقوم بمهمة تجارية/ سفر لإحدى الأسواق المستهدفة	1	2
exp_pra_douane Access the customs website. تدخل للموقع الإلكتروني للديوانة	1	2
exp_pra_plan Maintain or develop a plan or strategy strategy (specifying concrete steps to penetrate a foreign market) . تحافظ على خطة تصدير أو تقوم بتطويرها (تحديد خطوات ملموسة بش تدخل لسوق أجنبي)	1	2

▶ Visualisation

A slight improvement in the profit of the participating companies can be observed
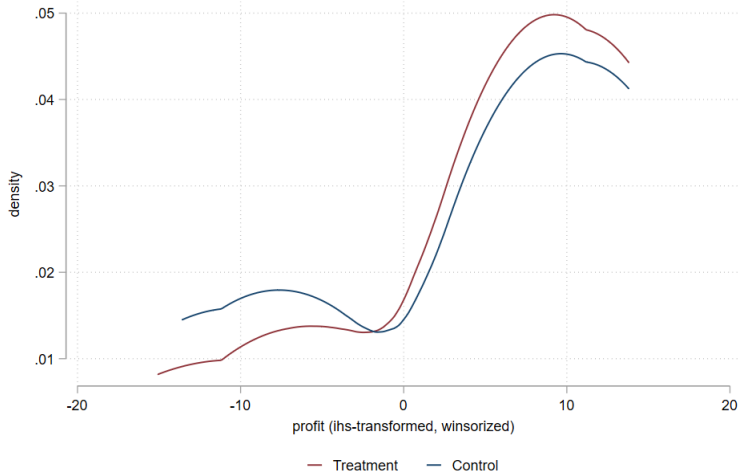
Business coefficient plot
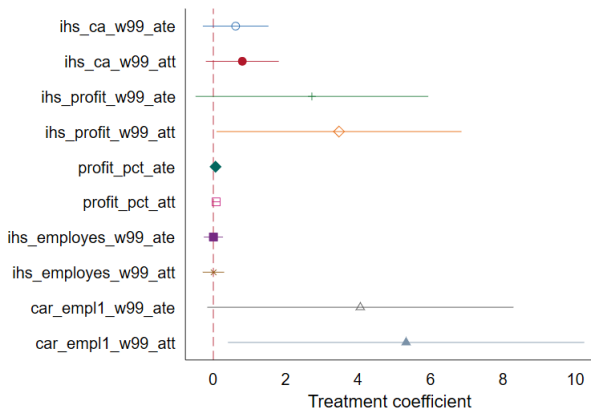
Note: Confidence intervals are at the 95% level.

▸ Regression

Network quality advice question

9. **net_nb_qualite** On a scale of 1 to 10, where 1 means "not at all useful" and 10 means "very useful", how useful do you consider your personal network to be in running your business?

على مقياس من 1 إلى 10 ، وين 1 تعني "غير مفيد جملة" و 10 تعني "مفيدة برشا" ، الي أي درجة تشوف انو النصائح والمعلومات متع الشبكة الشخصية متاعك مفيدة في إدارة الشركة متاعك؟

ONLY ONE POSSIBLE ANSWER.

1 = Not at all useful غير مفيد جملة	2	3	4	5	6	7	8	9	10 = Very useful مفيدة برشا

▶ Visualisation

Individual coaching session topics

Advice quality - Regression

	(1) Mean comparison	(2) Ancova	(3) Ancova	(4) DiD	(5) ATT	(6) ATT
Treatment	0.266	0.349	0.243	0.078		
	(0.392)	(0.396)	(0.406)	(0.319)		
L.quality advice of the business network		0.088	0.095		0.098	0.095
		(0.098)	(0.100)		(0.087)	(0.086)
midline				0.212		
				(0.370)		
Treatment × midline				0.124		
				(0.514)		
take_up_per					0.344	
					(0.488)	
company decided to participate in consortium						0.324
						(0.457)
Constant	7.764***	6.987***	7.032***	7.324***	7.002***	7.042***
	(0.308)	(0.807)	(1.233)	(0.589)	(1.060)	(1.040)
Observations	123	119	119	290	119	119
Strata controls	No	No	Yes	Yes	Yes	Yes
Y0 control	No	No	Yes	Yes	Yes	Yes

Standard errors in parentheses
Columns (1) - (4) present estimates based on logit models.
Column (1) presents estimates for a simple mean comparison between treatment and control group at midline.
Column (2) presents an ANCOVA specification without strata controls.
Column (3) presents an ANCOVA specification with strata controls.
Column (4) provides estimates from a difference-in-difference specification.
Column (5) estimates are based on 2SLS instrumental variable estimation where treatment assignment is the instrument for treatment participation.
(1) uses robust standard errors. In (2)-(5) standard errors are clustered at the firm level to account for multiple observations per firm
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

▶ Visualisation

Effect of peer quality on entrepreneurial confidence

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
distance to peer average management practices	-0.508 (0.314) 0.111									
distance to top-3 average management practices		-0.547* (0.317) 0.090								
distance to peer average entrepreneurial confidence			-1.011*** (0.006) 0.000							
distance to top-3 average entrepreneurial confidence				-1.002*** (0.003) 0.000						
distance to peer average export performance					0.239 (0.354) 0.504					
distance to top-3 average export performance						0.245 (0.375) 0.516				
distance to peer average business size							-0.422 (0.358) 0.244			
distance to top-3 average business size								-0.432 (0.369) 0.247		
distance to peer average profit									0.000 (0.000) 0.494	
distance to top-3 average profit										0.000 (0.000) 0.439
Take-up mean	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Take-up SD	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63
Observations	54	54	54	54	51	51	54	54	45	45
Strata controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Y0 controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: The dependent variable is the change in entrepreneurial confidence between baseline and midline. Each specification includes controls for randomization strata, baseline outcome, and a missing baseline dummy. The sample is restricted to companies that joined the consortium. Take-up mean and take-up SD refer to the outcome variable mean and SD at midline. Clustered standard errors by firms in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$ denote the significance level. P-values are reported below the standard errors.

▶ Peer effects

Effect of peer quality on entrepreneurial confidence

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
distance to peer average management practices	-0.508									
	(0.314)									
	0.111									
distance to top-3 average management practices		-0.547*								
		(0.317)								
		0.090								
distance to peer average entrepreneurial confidence			-1.011***							
			(0.006)							
			0.000							
distance to top-3 average entrepreneurial confidence				-1.002***						
				(0.003)						
				0.000						
distance to peer average export performance					0.239					
					(0.354)					
					0.504					
distance to top-3 average export performance						0.245				
						(0.375)				
						0.516				
distance to peer average business size							-0.422			
							(0.358)			
							0.244			
distance to top-3 average business size								-0.432		
								(0.369)		
								0.247		
distance to peer average profit									0.000	
									(0.000)	
									0.494	
distance to top-3 average profit										0.000
										(0.000)
										0.439
Take-up mean	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Take-up SD	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63
Observations	54	54	54	54	51	51	54	54	45	45
Strata controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Y0 controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: The dependent variable is the change in entrepreneurial confidence between baseline and midline. Each specification includes controls for randomization strata, baseline outcome, and a missing baseline dummy. The sample is restricted to companies that joined the consortium. Take-up mean and take-up SD refer to the outcome variable mean and SD at midline. Clustered standard errors by firms in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$ denote the significance level. P-values are reported below the standard errors.

▶ Peer effects

Effect of peer quality on management practices

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
distance to peer average management practices	-0.988***									
	(0.014)									
	0.000									
distance to top-3 average management practices		-0.993***								
		(0.007)								
		0.000								
distance to peer average entrepreneurial confidence			-0.205**							
			(0.093)							
			0.032							
distance to top-3 average entrepreneurial confidence				-0.215**						
				(0.097)						
				0.031						
distance to peer average export performance					-0.228					
					(0.195)					
					0.247					
distance to top-3 average export performance						-0.179				
						(0.209)				
						0.395				
distance to peer average business size							-0.281			
							(0.208)			
							0.182			
distance to top-3 average business size								-0.316		
								(0.220)		
								0.157		
distance to peer average profit									0.000**	
									(0.000)	
									0.011	
distance to top-3 average profit										0.000***
										(0.000)
										0.003
Take-up mean	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
Take-up SD	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48
Observations	54	54	54	54	51	51	54	54	45	45
Strata controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Y0 controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

The dependent variable is the change in the management practices index between baseline and midline. Each specification includes controls for randomization strata, baseline outcomes, and a missing baseline dummy. The sample is restricted to companies that joined the consortium. Take-up mean and take-up SD refer to the outcome variable mean and SD at midline. Clustered standard errors by firms in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$ denote the significance level. P-values are reported below the standard errors.

▶ Peer effects

Effect of peer quality on profit

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
distance to peer average management practices	4.695									
	(4.769)									
	0.330									
distance to top-3 average management practices		4.709								
		(5.165)								
		0.367								
distance to peer average entrepreneurial confidence			-2.253							
			(3.435)							
			0.515							
distance to top-3 average entrepreneurial confidence				-2.341						
				(3.478)						
				0.504						
distance to peer average export performance					-4.770					
					(5.294)					
					0.424					
distance to top-3 average export performance						-7.434				
						(8.179)				
						0.368				
distance to peer average business size							1.754			
							(5.126)			
							0.734			
distance to top-3 average business size								2.271		
								(5.480)		
								0.681		
distance to peer average profit									-0.000*	
									(0.000)	
									0.075	
distance to top-3 average profit										-0.000*
										(0.000)
										0.067
Take-up mean	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19	-0.19
Take-up SD	9.53	9.53	9.53	9.53	9.53	9.53	9.53	9.53	9.53	9.53
Observations	45	45	45	45	45	45	45	45	45	45
Strata controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Y0 controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: The dependent variable is the change in inverse hyperbolic sine transformed profits between baseline and midline. Each specification includes controls for randomization strata, baseline outcome, and a missing baseline dummy. The sample is restricted to companies that joined the consortium. Take-up mean and take-up SD refer to the outcome variable mean and SD at midline. Clustered standard errors by firms in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$ denote the significance level. P-values are reported below the standard errors.

▶ Peer effects