

Female Entrepreneurship and Professional Networks

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Gender Gap in Entrepreneurship

- ▶ Entrepreneurship widely recognized as a key driver of economic growth and innovation (Smith, 1776; Schumpeter, 1942; Lucas, 1978)
- ▶ Governments have implemented policies (i.e., tax incentives and training programs) to foster firm creation and growth
- ▶ Female entrepreneurs continue to be underrepresented
 - ▶ Women only make up 34% of self-employed people in the EU

Gender Gap in Entrepreneurship

- ▶ Sub-Saharan Africa is the only region in the world where there are more female entrepreneurs than male entrepreneurs
- ▶ However, female-owned businesses are smaller, 40% less profitable, more likely to be informal, and less likely to receive external financing (Jennings and Brush, 2013)
- ▶ Underperformance of their firms can be indicative of talent misallocation (Hsieh et al., 2019)
- ▶ Understanding barriers to growth of female-owned firms is critical



Role of Business Networks and Interfirm Relationships

Women tend to have

- ▶ Smaller professional networks and more likely to rely on friends and relatives (World Bank Group 2019)
- ▶ Weaker social positions to enforce contractual agreements (Ashraf, Delfino, and Glaeser 2019)

Open question on effectiveness of networking interventions for female entrepreneurs

- ▶ Network interventions shown to be effective for male-owned enterprises in manufacturing (Cai and Szeidl 2017; Fafchamps and Quinn 2016)
- ▶ Unclear if similar effects for women: Other barriers may be more relevant (e.g. credit constraints, time constraints - childcare and family responsibilities)

This Paper

Research Question: Can access to online networking opportunities improve business performance of women-led firms?

Field experiment in Ghana with 1,771 female entrepreneurs:

- ▶ Online Networking Groups: Provide women with networking opportunities through WhatsApp groups
- ▶ Legal Support: Legal advisory and information on how to negotiate and mitigate risks in collaborations

Sample:

- ▶ Growth-oriented female entrepreneurs
- ▶ Self-selection of women who applied to online competitive grant

Preview of Results

Main findings:

1. Positive impacts on business innovation (**25-31%**)
2. Positive impact on business practices
3. Positive impact on profits (**21%**)

Preview of Results

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1. Positive impacts on business innovation (**25-31%**)
 - ▶ Measured by likelihood of introducing changes to their businesses, such as new products or new ways of marketing
2. Positive impact on business practices
3. Positive impact on profits (**21%**)

Preview of Results

Main findings:

1. Positive impacts on business innovation (**25-31%**)
2. Positive impact on business practices
 - ▶ Esp. marketing and financial planning practices
3. Positive impact on profits (**21%**)

Preview of Results

Main findings:

1. Positive impacts on business innovation (**25-31%**)
2. Positive impact on business practices
3. Positive impact on profits (**21%**)
 - ▶ Null effect on sales
 - ▶ Efficiency gains through reduction in costs and improvements in business practices

Preview of Results

Main findings:

1. Positive impacts on business innovation (**25-31%**)
2. Positive impact on business practices
3. Positive impact on profits (**21%**)

Mechanisms:

- ▶ Shift in collaborator type: from friends and relatives to firms met through business network
- ▶ Peer effects: largest effects for those in groups with more-educated, higher-quality, and more diverse entrepreneurs (from different sectors)

Outline

Experimental Design

Effects on Business Outcomes

Effects on Labor Supply

Mechanisms

Conclusions

Sample

1,771 female entrepreneurs in Ghana

- ▶ Applicants of a competitive online grant opportunity application
 - ▶ Specifically targeting high-growth female-owned SMEs
 - ▶ Winners dropped from sample
- ▶ All regions of Ghana and from all sectors
- ▶ 39% with college degrees (compared to 5% in population)
- ▶ Baseline profits \$219 (4x more profitable than average female-owned firm in Ghana)

Jennifer - Founder of Dzordzoe Skincare



Dzordzoe
SKIN CARE

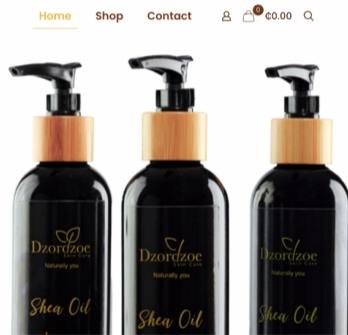
**High Quality All
Natural Skincare
Products**



100%
NATURAL



NON
TOXIC



Jennifer - Founder of Dzordzoe Skincare



- ▶ Home-based production
- ▶ Small-scale
- ▶ Limited capital
- ▶ Looking to expand to new markets and export

Field Experiment

- ▶ Treatment 1: Online Networking 40% ($N = 704$)
 - ▶ Online WhatsApp groups of 8 women each
 - ▶ “Virtual coffee chats:” assigned one-on-one meetings between group members
 - ▶ After everyone has met each other (8 weeks), re-assign into a second group
 - ▶ Access to business directory
- ▶ Treatment 2: Online Networking + Legal Support 35% ($N = 631$)
 - ▶ Same as Treatment 1
 - ▶ Legal advisory and weekly video lessons on how to negotiate and mitigate risks in business collaborations
- ▶ Control 25% ($N = 436$)
 - ▶ No additional support

Timeline



takeup

Empirical Strategy

$$Y_{it} = \beta_0 + \beta_1 T1 + \beta_2 T2 + \gamma X_i + \epsilon_{it} \quad (1)$$

- ▶ β_1 = effect of online networking groups only
- ▶ β_2 = effect of online networking groups and legal support
- ▶ X_i includes vector of randomization strata dummies (Bruhn and Mckenize, 2009) and baseline Y (or predicted index of Y selected using ML methods (Ludwig, Mullainathan, and Spiess, 2019))
- ▶ SE clustered at the WhatsApp group level

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Effect on Innovation

	(1) Any Changes to Business (Past 6 Months)	(2) Business Innovation Index
Networking	0.0829*** (0.0296)	0.159** (0.0673)
Networking and Legal	0.0661** (0.0333)	0.145* (0.0795)
Control Mean	0.267	0.000
T1 = T2 (p-value)	0.585	0.849
R^2	0.034	0.045
N	1520	1520

- ▶ 25-31%↑ introduction of new changes
- ▶ .15-.16 SD↑ innovation index

Effect on Business Practices

	(1) Business Practice Index	(2) Marketing Index	(3) Buying and Stock Control Index	(4) Record- Keeping Index	(5) Financial Planning Index
Networking	0.104 (0.0769)	0.119* (0.0698)	-0.00221 (0.0723)	-0.0477 (0.0742)	0.323*** (0.0778)
Networking and Legal	0.194*** (0.0698)	0.117* (0.0685)	-0.0575 (0.0668)	0.0597 (0.0670)	0.496*** (0.0780)
Control Mean	-0.000	-0.000	0.000	0.000	0.000
T1 = T2 (p-value)	0.193	0.984	0.349	0.102	0.021
R^2	0.076	0.042	0.043	0.082	0.086
N	1371	1371	1371	1370	1370

► .1-.19 SD↑ business practices index

Marketing

Buying and Stock

Record

Financial

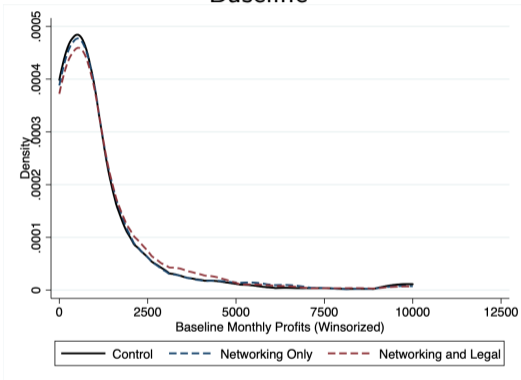
Effect on Sales and Profits

	(1) Sales and Profits Index	(2) Monthly Sales	(3) Monthly Sales Winsorized	(4) Monthly Profits	(5) Monthly Profits Winsorized
Networking	0.0162 (0.0668)	-55.82 (567.4)	66.56 (372.2)	266.1* (146.6)	162.8 (107.7)
Networking and Legal	0.0715 (0.0722)	441.2 (687.8)	662.3 (409.4)	264.1* (147.0)	245.4** (118.9)
Control Mean	0.000	3858.342	3482.297	1225.852	1200.712
T1 = T2 (p-value)	0.437	0.402	0.139	0.990	0.452
R^2	0.123	0.153	0.088	0.159	0.123
N	1520	1457	1457	1459	1459

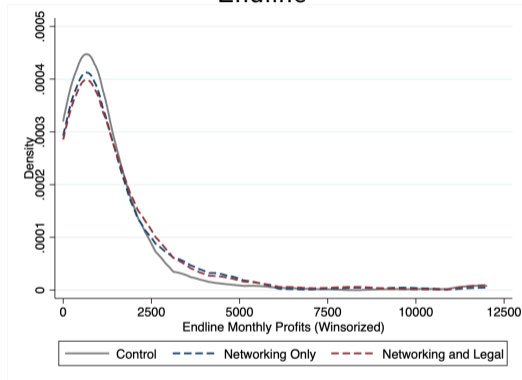
- ▶ 21%↑ in monthly profits
- ▶ Cai and Szeidl (2017): 35%↑ with monthly in-person meetings for one year
- ▶ Efficiency gains through reduction in costs and improvements in business practices (Dalton et al. 2018)

Kernel Density of Winsorized Monthly Profits

Baseline

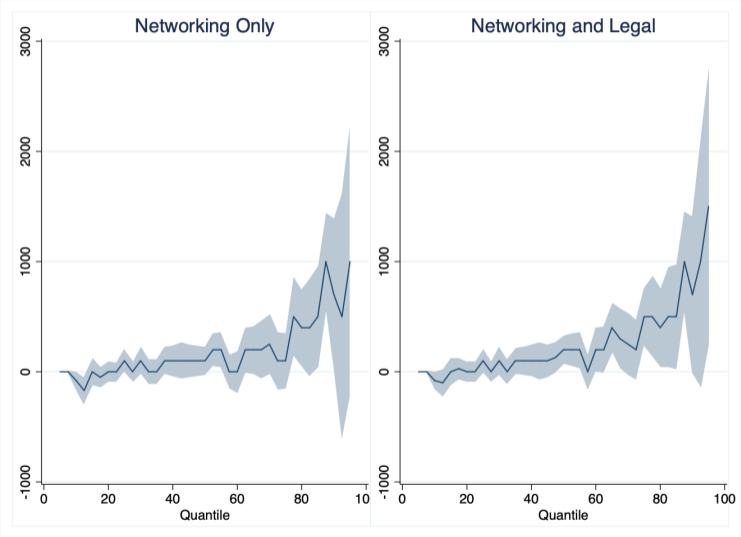


Endline



- ▶ Test of equality of distribution at endline (treated vs control) p-value: 0.083

Quantile Effects on Monthly Profits (Winsorized)



Effect on Firm Additional Outcomes

No significant effect on:

- ▶ Business financing
- ▶ Capital and labor
- ▶ Probability to be in operation

Additional Outcomes

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Effects on Labor Supply and Time Use

	(1) Hours Worked on Business	(2) Hours Worked Other Job	(3) Hours Spent on Childcare
Networking	2.275* (1.165)	0.411 (0.786)	0.377 (1.007)
Networking and Legal	2.878** (1.166)	0.157 (0.718)	-0.386 (1.152)
Control Mean	44.921	2.778	22.332
T1 = T2 (p-value)	0.586	0.730	0.440
R^2	0.077	0.048	0.067
N	1389	1389	1389

- ▶ 5%↑ hours worked on business

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- ▶ Change in composition of collaborators:
 - ▶ Shift away from friends and relatives; more likely to work with firms met through business network **Collaborator Type**
 - ▶ No change in number of collaborators **Collaboration Number**

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- ▶ Peer effects:
 - ▶ Largest effects for those in groups with:
 - ▶ more-educated **College**
 - ▶ higher-quality **Business Practices** **Profits**
 - ▶ and more diverse entrepreneurs (from different sectors) **Sector**

Mechanisms

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- ▶ Ruled out mechanisms:
 - ▶ No change in business ambitions, entrepreneurial self-efficacy, or get-ahead attitudes **Attitudes**
 - ▶ No impacts on female empowerment **Empowerment**

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Conclusions

- ▶ Field experiment in Ghana to study impact of online networking groups through WhatsApp and legal support
- ▶ Positive effects on business innovation, business practices, profits
- ▶ Mechanisms:
 - ▶ Shift in collaborator type: from friends and relatives to firms met through business network
 - ▶ Peer effects: largest effects for those in groups with more-educated, higher-quality, and more diverse entrepreneurs (from different sectors)
- ▶ Next steps: 3-year follow up survey in 2024 to measure long-run impacts and shed more light on mechanisms
- ▶ Takeaway: A low-cost, light-touch online intervention that increases networking opportunities can effectively improve outcomes of female-owned firms

Thank You!

Effects on Program Take-Up

	Treatment 1	Treatment 2	T1 - T2
Added to WhatsApp Group	0.84	0.80	0.04*
Contacted WhatsApp Group Member	0.62	0.57	0.04
Number of WhatsApp Group Members Contacted	1.78	1.54	0.24*
Contact Frequency			
Daily	0.01	0.00	0.01*
Once a Week	0.36	0.29	0.07*
Every Other Week	0.15	0.16	-0.00
Once a Month	0.14	0.15	-0.02
Never	0.34	0.40	-0.06*
Contacted Using Business Directory	0.12	0.07	0.05**
Contacted Through Enumerators	0.27	0.13	0.14**
Applied to Business Competition	0.17	0.15	0.01
T2 Only - Share of Videos Watched	0.00	0.30	-0.30
Still in Touch with WhatsApp Group Members (Midline)	0.25	0.22	0.03
Still in Touch with WhatsApp Group Members (Endline)	0.20	0.12	0.08**

Table: Effects on Frequency of Issues with Suppliers (1-4 Never)

	(1)	(2)	(3)	(4)	(5)
	Quality of Suppliers Index	Delays Receiving Goods	Receiving Lower Quality Goods	Higher Prices than Agreed	Supplier Not Respecting Original Agreement
Networking	-0.140* (0.0813)	-0.0758 (0.0562)	-0.0708 (0.0476)	-0.0787 (0.0533)	-0.0590 (0.0428)
Networking and Legal	-0.290*** (0.0874)	-0.169*** (0.0592)	-0.132*** (0.0506)	-0.168*** (0.0579)	-0.120*** (0.0451)
Control Mean	-0.000	3.406	3.701	3.579	3.740
T1 = T2 (p-value)	0.050	0.089	0.173	0.061	0.133
R^2	0.067	0.061	0.052	0.054	0.075
N	1008	1008	1008	1008	1008

Effect of Online Networking Groups on Other Firm Outcomes

	(1) Business Practice Index	(2) Business Financing Index	(3) Capital and Labor Index	(4) In Operation
Networking	0.104 (0.0769)	-0.100 (0.0644)	-0.0695 (0.0640)	-0.0244 (0.0194)
Networking and Legal	0.194*** (0.0698)	0.00853 (0.0747)	-0.0556 (0.0693)	-0.0295 (0.0207)
Control Mean	-0.000	0.000	-0.000	0.918
T1 = T2 (p-value)	0.193	0.106	0.816	0.794
R^2	0.076	0.050	0.099	0.034
N	1371	1520	1520	1521

Peer Effects Estimation

Linear-in-Means model:

$$Y_{i,t=1} = \alpha_0 + \alpha_1 T2 + \alpha_2 \bar{X}_{-i,t=0} + \alpha_3 \bar{X}_{-i,t=0} \times T2 + K_i' \phi + \epsilon_{i,t=1} \quad (2)$$

- ▶ Restricted to only treatment group
- ▶ $\bar{X}_{-i,t=0}$ is the average characteristic of the peers of i
- ▶ K_i : variables used in the group assignment and their interactions
- ▶ α_2 = effect of peer composition
- ▶ α_3 = difference in peer effects across arms

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Peer Effect: Share of Peers with College Degree

	Any Changes to Business (Past 6 Months)		Business Practice Index	
	(1) Group Assignment Controls I	(2) Group Assignment Controls II	(3) Group Assignment Controls I	(4) Group Assignment Controls II
Share of Peers with College Degree	0.0743 (0.0501)	0.0683 (0.0531)	0.399*** (0.103)	0.407*** (0.114)
Control Mean	0.267	0.267	-0.000	-0.000
R^2	0.051	0.079	0.151	0.172
N	1151	1151	1032	1032

back

Peer Effect: Share of Peers with College Degree

	Sales and Profits Index		Monthly Profits Winsorized	
	(1) Group Assignment Controls I	(2) Group Assignment Controls II	(3) Group Assignment Controls I	(4) Group Assignment Controls II
Share of Peers with College Degree	0.0616 (0.117)	0.0181 (0.112)	159.5 (193.6)	82.02 (187.4)
Control Mean	0.000	0.000	1200.712	1200.712
R^2	0.146	0.205	0.143	0.195
N	1151	1151	1099	1099

back

Peer Effect: Average Business Practice Index of Peers

	Any Changes to Business (Past 6 Months)		Business Practice Index	
	(1) Group Assignment Controls I	(2) Group Assignment Controls II	(3) Group Assignment Controls I	(4) Group Assignment Controls II
Average Business Practice Index of Peers	0.106** (0.0459)	0.117** (0.0501)	0.315*** (0.108)	0.339*** (0.114)
Control Mean	0.267	0.267	-0.000	-0.000
R^2	0.054	0.083	0.146	0.169
N	1153	1153	1034	1034

back

Peer Effect: Average Business Practice Index of Peers

	Sales and Profits Index		Monthly Profits Winsorized	
	(1) Group Assignment Controls I	(2) Group Assignment Controls II	(3) Group Assignment Controls I	(4) Group Assignment Controls II
Average Business Practice Index of Peers	0.0929 (0.0961)	0.134 (0.0969)	281.5* (151.6)	311.4** (156.3)
Control Mean	0.000	0.000	1200.712	1200.712
R^2	0.146	0.206	0.145	0.198
N	1153	1153	1101	1101

back

Peer Effect: Average Baseline Sales and Profits Index of Peers

	Any Changes to Business (Past 6 Months)		Business Practice Index	
	(1) Group Assignment Controls I	(2) Group Assignment Controls II	(3) Group Assignment Controls I	(4) Group Assignment Controls II
Average Sales and Profits Index of Peers	0.135** (0.0562)	0.134** (0.0555)	0.249** (0.117)	0.238** (0.115)
Control Mean	0.267	0.267	-0.000	-0.000
R^2	0.054	0.082	0.142	0.163
N	1153	1153	1034	1034

back

Peer Effect: Average Baseline Sales and Profits Index of Peers

	Sales and Profits Index		Monthly Profits Winsorized	
	(1) Group Assignment Controls I	(2) Group Assignment Controls II	(3) Group Assignment Controls I	(4) Group Assignment Controls II
Average Sales and Profits Index of Peers	-0.0599 (0.103)	-0.0690 (0.101)	-5.098 (172.9)	-42.75 (168.5)
Control Mean	0.000	0.000	1200.712	1200.712
R^2	0.146	0.205	0.143	0.195
N	1153	1153	1101	1101

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Peer Effect: Share of Peers from Same Industry

	Any Changes to Business (Past 6 Months)		Business Practice Index	
	(1) Group Assignment Controls I	(2) Group Assignment Controls II	(3) Group Assignment Controls I	(4) Group Assignment Controls II
Share of Peers from Same Industry	-0.126** (0.0635)	-0.0991 (0.0763)	-0.454*** (0.161)	-0.587*** (0.179)
Control Mean	0.267	0.267	-0.000	-0.000
R^2	0.052	0.078	0.145	0.169
N	1153	1153	1034	1034

back

Peer Effect: Share of Peers from Same Industry

	Sales and Profits Index		Monthly Profits Winsorized	
	(1) Group Assignment Controls I	(2) Group Assignment Controls II	(3) Group Assignment Controls I	(4) Group Assignment Controls II
Share of Peers from Same Industry	-0.293* (0.160)	-0.257 (0.199)	-400.6 (244.1)	-364.6 (292.5)
Control Mean	0.000	0.000	1200.712	1200.712
R^2	0.148	0.207	0.145	0.196
N	1153	1153	1101	1101

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Effect on Collaboration Formalization Index and Its Components

	(1) Collaboration Formalization Index	(2) Frequent communication between our company our collaborator	(3) Basic terms of relationship explicitly verbalized and discussed
Networking	-0.380* (0.209)	-0.702** (0.305)	0.103 (0.289)
Networking and Legal	0.120 (0.282)	-0.153 (0.428)	0.111 (0.396)
Control Mean	-0.000	1.761	1.326
T1 = T2 (p-value)	0.072	0.090	0.985
R^2	0.249	0.208	0.239
N	140	140	140

Effect on Collaboration Formalization Index and Its Components

	(1) Proprietary information shared with each other	(2) Include each other in formal business planning meetings	(3) Written agreement
Networking	-0.986* (0.524)	-0.984** (0.488)	0.0573 (0.384)
Networking and Legal	0.0504 (0.632)	0.0744 (0.648)	0.598 (0.498)
Control Mean	4.261	3.935	4.913
T1 = T2 (p-value)	0.079	0.093	0.269
R ²	0.248	0.259	0.226
N	140	140	140

back

Effect on Collaboration Trust Index and Its Components

	(1) Collaboration Trust Index	(2) Collaborator will keep promises	(3) Believe information from collaborator	(4) Collaborator has our best interests	(5) Not Necessary to be cautious with collaborator
Networking	0.191 (0.195)	0.109 (0.166)	0.0367 (0.144)	0.0921 (0.174)	0.388 (0.274)
Networking and Legal	0.103 (0.275)	-0.0169 (0.217)	-0.0534 (0.206)	0.133 (0.223)	0.320 (0.344)
Control Mean	-0.000	4.141	4.163	4.043	2.815
T1 = T2 (p-value)	0.717	0.497	0.617	0.822	0.827
R ²	0.226	0.191	0.279	0.213	0.252
N	140	140	140	140	140

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Effect on Quality of Collaboration Index and Its Components

	(1) Quality of Collaboration Index	(2) Expect relationship to continue	(3) Satisfied with coordination of activities	(4) Satisfied with participation in decision making	(5) Satisfied with participation in level of commitment
Networking	0.322* (0.177)	0.143 (0.149)	0.146 (0.154)	0.318** (0.156)	0.235 (0.152)
Networking and Legal	-0.0756 (0.258)	-0.202 (0.216)	-0.210 (0.228)	0.0400 (0.207)	-0.122 (0.203)
Control Mean	0.000	4.384	4.246	3.873	4.170
T1 = T2 (p-value)	0.069	0.065	0.074	0.123	0.035
R^2	0.273	0.283	0.255	0.273	0.277
N	140	140	140	140	140

Effect on Quality of Collaboration Index and Its Components

	(1)	(2)	(3)	(4)	(5)
	Satisfied with level of information sharing	Satisfied with management of activities	Satisfied with profitability and sales growth	Would recommend collaborator to other firms	Number of referrals to collaborator
Networking	0.321* (0.176)	0.133 (0.150)	0.268 (0.163)	0.592** (0.238)	-0.495 (1.226)
Networking and Legal	0.0618 (0.244)	0.0116 (0.186)	0.182 (0.204)	0.380 (0.276)	-2.966** (1.210)
Control Mean	3.909	4.011	3.938	3.859	4.967
T1 = T2 (p-value)	0.199	0.430	0.633	0.310	0.002
R ²	0.224	0.262	0.256	0.252	0.259
N	140	140	140	140	140

Effects on Types of Collaborations

	(1)	(2)	(3)	(4)
	Joint Marketing	Supplier/Client	Joint Input Purchase	Share Equipment, Employees, etc.
Networking	-0.00963 (0.0170)	-0.0104 (0.0158)	-0.00473 (0.00964)	-0.00757 (0.00691)
Networking and Legal	-0.0481*** (0.0163)	-0.0349** (0.0145)	-0.00680 (0.00954)	-0.00994 (0.00749)
Control Mean	0.079	0.061	0.020	0.015
T1 = T2 (p-value)	0.001	0.030	0.780	0.540
R^2	0.046	0.030	0.028	0.028
N	1388	1388	1388	1388

Effects on Types of Collaborations

	(1) Fill Bulk Order	(2) Share Profits	(3) Other
Networking	-0.00386 (0.0134)	0.00962 (0.00739)	-0.00472 (0.00576)
Networking and Legal	-0.0237** (0.0120)	-0.00392 (0.00592)	-0.00407 (0.00606)
Control Mean	0.041	0.009	0.009
T1 = T2 (p-value)	0.031	0.020	0.860
R^2	0.039	0.025	0.016
N	1388	1388	1388

back

Effect on Sales and Profits Index and Its Components

	(1)	(2)	(3)	(4)	(5)
	Sales and Profits Index	Monthly Sales	Monthly Sales Winsorized	Inverse Hyperbolic Sine of Monthly Sales	Weekly Customers
Networking	0.0162 (0.0668)	-55.82 (567.4)	66.56 (372.2)	-0.156 (0.186)	-6.930** (2.937)
Networking and Legal	0.0715 (0.0722)	441.2 (687.8)	662.3 (409.4)	-0.108 (0.198)	-4.040 (3.200)
Control Mean	0.000	3858.342	3482.297	7.595	25.646
T1 = T2 (p-value)	0.437	0.402	0.139	0.792	0.213
R^2	0.123	0.153	0.088	0.045	0.066
N	1520	1457	1457	1457	1520

Effect on Sales and Profits Index and Its Components

	(1)	(2)	(3)	(4)	(5)
	Monthly Profits	Monthly Profits Winsorized	Inverse Hyperbolic Sine of Monthly Profits	Monthly Profits in the Best Month	Monthly Profits in the Best Month Winsorized
Networking	266.1* (146.6)	162.8 (107.7)	-0.110 (0.163)	272.7 (254.3)	111.0 (177.6)
Networking and Legal	264.1* (147.0)	245.4** (118.9)	-0.0627 (0.174)	299.1 (237.8)	349.2* (190.2)
Control Mean	1225.852	1200.712	6.745	2296.877	2214.113
T1 = T2 (p-value)	0.990	0.452	0.768	0.921	0.191
R ²	0.159	0.123	0.048	0.159	0.108
N	1459	1459	1459	1432	1432

back

Effect on Any Business Change Index and Its Components

	(1)	(2)	(3)	(4)	(5)
	Any Changes to Business (Past 6 Months)	New or Improved Product (Past 6 Months)	New or Improved Process (Past 6 Months)	New Marketing or Selling Channels (Past 6 Months)	Entered New Markets (Past 6 Months)
Networking	0.0843*** (0.0298)	0.0617** (0.0241)	0.0744*** (0.0224)	0.0917*** (0.0234)	0.0544*** (0.0142)
Networking and Legal	0.0667** (0.0332)	0.0536** (0.0256)	0.0860*** (0.0227)	0.0578** (0.0254)	0.0537*** (0.0158)
Control Mean	0.267	0.153	0.082	0.120	0.027
T1 = T2 (p-value)	0.567	0.724	0.640	0.182	0.971
R^2	0.033	0.030	0.045	0.036	0.042
N	1520	1520	1520	1520	1520

Effect on Any Business Change Index and Its Components

	(1)	(2)	(3)	(4)	(5)
	New Pricing Method (Past 6 Months)	Changes to Hiring or Motivating Workers (Past 6 Months)	Changes to Relationships with Suppliers (Past 6 Months)	New Business Registrations (Past 6 Months)	Building Connections with Other Entrepreneurs (Past 6 Months)
Networking	0.0491** (0.0198)	0.0517*** (0.0143)	0.0438*** (0.0149)	0.0103 (0.00954)	0.0456** (0.0210)
Networking and Legal	0.0472** (0.0209)	0.0444*** (0.0156)	0.0523*** (0.0182)	0.0110 (0.0106)	0.0768*** (0.0242)
Control Mean	0.087	0.030	0.041	0.016	0.095
T1 = T2 (p-value)	0.928	0.658	0.642	0.946	0.183
R ²	0.033	0.039	0.029	0.028	0.036
N	1520	1520	1520	1520	1520

back

Effect on Innovation Index and Its Components

	(1) Business Innovation Index	(2) New Product (Past 6 Months)	(3) Improved Product (Past 6 Months)	(4) New or Improved Process (Past 6 Months)	(5) New Design or Packaging (Past 6 Months)
Networking	0.159** (0.0673)	0.00608 (0.0321)	0.0905*** (0.0292)	0.0665** (0.0276)	0.0110 (0.0277)
Networking and Legal	0.145* (0.0795)	-0.0180 (0.0355)	0.102*** (0.0325)	0.0633** (0.0278)	-0.0307 (0.0274)
Control Mean	0.000	0.360	0.313	0.166	0.213
T1 = T2 (p-value)	0.849	0.452	0.676	0.909	0.099
R^2	0.045	0.030	0.035	0.032	0.046
N	1520	1520	1520	1520	1520

Effect on Innovation Index and Its Components

	(1) New Pricing Method (Past 6 Months)	(2) New Advertising Method (Past 6 Months)	(3) New Work Organization (Past 6 Months)	(4) New Quality Control Standards (Past 6 Months)
Networking	0.0333 (0.0285)	0.0272 (0.0304)	0.0375* (0.0208)	0.0283* (0.0172)
Networking and Legal	0.000807 (0.0292)	0.00559 (0.0312)	0.0366 (0.0225)	0.0373** (0.0189)
Control Mean	0.245	0.324	0.112	0.074
T1 = T2 (p-value)	0.210	0.431	0.961	0.581
R ²	0.030	0.048	0.036	0.041
N	1520	1520	1520	1520

Effect on Innovation Index and Its Components

	(1)	(2)	(3)
	Use of Internet	Entrance in New Markets	Inputs Sourcing at Lower Costs or Higher Quality
Networking	-0.0698** (0.0317)	0.0434** (0.0219)	0.0860*** (0.0214)
Networking and Legal	-0.0936*** (0.0319)	0.0626** (0.0243)	0.130*** (0.0252)
Control Mean	0.401	0.101	0.090
T1 = T2 (p-value)	0.374	0.431	0.080
R^2	0.050	0.044	0.046
N	1520	1520	1520

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Effect on Business Practice: Broad Domains

	(1) Business Practice Index	(2) Marketing Index	(3) Buying and Stock Control Index	(4) Record- Keeping Index	(5) Financial Planning Index
Networking	0.104 (0.0769)	0.119* (0.0698)	-0.00221 (0.0723)	-0.0477 (0.0742)	0.323*** (0.0778)
Networking and Legal	0.194*** (0.0698)	0.117* (0.0685)	-0.0575 (0.0668)	0.0597 (0.0670)	0.496*** (0.0780)
Control Mean	-0.000	-0.000	0.000	0.000	0.000
T1 = T2 (p-value)	0.193	0.984	0.349	0.102	0.021
R^2	0.076	0.042	0.043	0.082	0.086
N	1371	1371	1371	1370	1370

[Marketing](#)
[Buying and Stock](#)
[Record](#)
[Financial](#)
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Effect on Business Practice Index: Marketing I

	(1) Marketing Index	(2) Visited competitor's businesses to see its prices	(3) Visited competitor's businesses to see its products	(4) Asked customers if other desired products
Networking	0.119* (0.0698)	-0.0297 (0.0320)	-0.000847 (0.0321)	0.0783** (0.0344)
Networking and Legal	0.117* (0.0685)	-0.0449 (0.0340)	0.0391 (0.0314)	0.0222 (0.0344)
Control Mean	-0.000	0.430	0.318	0.412
T1 = T2 (p-value)	0.984	0.543	0.121	0.059
R ²	0.042	0.027	0.030	0.038
N	1371	1371	1371	1371

Effect on Business Practice: Marketing II

	(1) Asked former customers why they stopped buying	(2) Asked supplier which products are selling well	(3) Attracted customers with special offer	(4) Advertised in any form (last 6 months)
Networking	0.0598* (0.0328)	-0.00150 (0.0343)	0.0936*** (0.0321)	0.0392 (0.0323)
Networking and Legal	0.0389 (0.0332)	0.00331 (0.0324)	0.0834*** (0.0281)	0.0956*** (0.0368)
Control Mean	0.380	0.389	0.208	0.499
T1 = T2 (p-value)	0.456	0.858	0.720	0.067
R ²	0.027	0.037	0.046	0.055
N	1371	1371	1370	1371

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Effect on Business Practice Index: Buying and Stock Control

	(1) Buying and Stock Control Index	(2) Compared prices or quality offered by alternate suppliers	(3) Attempted to negotiate with supplier for lower price	(4) Business not out of stock monthly or more
Networking	-0.00221 (0.0723)	0.0285 (0.0374)	-0.00639 (0.0364)	-0.0202 (0.0294)
Networking and Legal	-0.0575 (0.0668)	0.0148 (0.0336)	-0.0347 (0.0348)	-0.0299 (0.0287)
Control Mean	0.000	0.500	0.608	0.777
T1 = T2 (p-value)	0.349	0.657	0.387	0.702
R^2	0.043	0.041	0.046	0.041
N	1371	1369	1370	1368

Effect on Business Practice: Record-Keeping I

	(1)	(2)	(3)	(4)	(5)
	Record-Keeping Index	Keeps written business records	Records every purchase and sale	Use records to see how much cash the business has	Use records to know if product sales are increasing or decreasing
Networking	-0.0477 (0.0742)	0.00568 (0.0339)	-0.00337 (0.0344)	0.0229 (0.0343)	-0.00641 (0.0357)
Networking and Legal	0.0597 (0.0670)	-0.00494 (0.0349)	0.0236 (0.0335)	0.0423 (0.0326)	0.000913 (0.0350)
Control Mean	0.000	0.605	0.604	0.607	0.598
T1 = T2 (p-value)	0.102	0.730	0.378	0.504	0.821
R^2	0.082	0.057	0.068	0.067	0.064
N	1370	1370	1368	1368	1368

Effect on Business Practice: Record-Keeping II

	(1)	(2)	(3)	(4)
	Work out cost to business of each main product	Know which goods make the most profit	Has written budget which states every indirect costs to business	Has records showing enough money after business expenses to repay a hypothetical loan
Networking	-0.0272 (0.0345)	-0.0778*** (0.0259)	0.0235 (0.0332)	-0.0242 (0.0414)
Networking and Legal	0.0808** (0.0322)	-0.0436** (0.0214)	0.0734** (0.0372)	0.00556 (0.0407)
Control Mean	0.647	0.899	0.415	0.628
T1 = T2 (p-value)	0.000	0.147	0.142	0.397
R ²	0.060	0.063	0.077	0.064
N	1369	1368	1368	941

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Effect on Business Practice: Financial Planning

	(1)	(2) Review financial performance and analyze areas for improvement	(3) Has target for sales over next year	(4) Compares sales achieved to their target	(5) Has budget of likely costs to face next year
Networking	0.323*** (0.0778)	0.102*** (0.0349)	0.0805** (0.0369)	0.114*** (0.0261)	0.0889*** (0.0306)
Networking and Legal	0.496*** (0.0780)	0.211*** (0.0329)	0.107*** (0.0359)	0.158*** (0.0291)	0.123*** (0.0321)
Control Mean	0.000	0.378	0.384	0.143	0.261
T1 = T2 (p-value)	0.021	0.000	0.439	0.100	0.209
R ²	0.086	0.054	0.065	0.064	0.067
N	1370	1364	1367	1365	1370

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Definition of Collaboration

In the past six months, how many times have you engaged in the following with another business owner? [Endline: Some form of verbal or written agreement must have taken place prior to the collaboration activity]

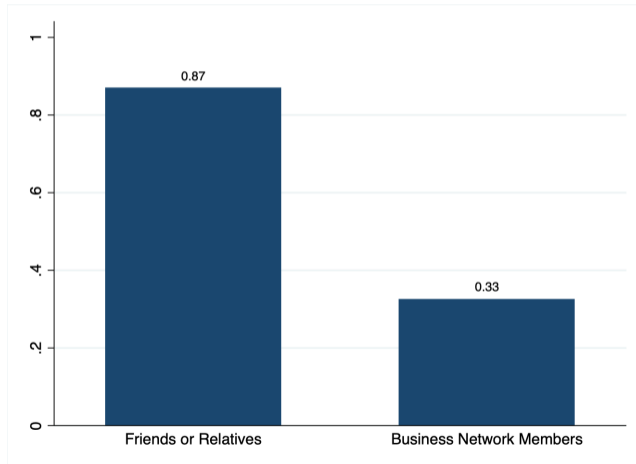
- ▶ *Work with another firm to promote/market each others' businesses or products*
- ▶ *Build a new ongoing working relationship with suppliers or business clients*
- ▶ *Purchase inputs or stocks wholesale with another firm*
- ▶ *Share tools, inputs, equipment or employees with another firm*
- ▶ *Work with another firm to fill a large order*
- ▶ *Start operating business together/sharing of profits with another firm*
- ▶ *Other forms of collaboration*

Collaboration Statistics (Control Group at Endline)

	Mean	SD
Any Collaboration	0.13	(0.34)
Types of Collaborations (if Collaborating):		
Joint Marketing	0.59	(0.50)
Supplier/Client	0.46	(0.50)
Purchase Inputs Together	0.15	(0.36)
Share Tools, Inputs, Equipment, Workers	0.11	(0.31)
Fill Larger Order Together	0.30	(0.47)
Operate Business Together	0.07	(0.25)
Other	0.07	(0.25)
Observations	343	

Types of Collaborators

Figure: Types of Collaborators (Conditioned on Collaborating)



Relationship between Business Collaborations and Monthly Profits

	(1)	(2)	(3)	(4)	(5)
Any Collaboration	444.2* (255.4)				
Any Collaboration with Friends or Relatives		186.9 (283.3)	154.7 (290.2)	119.0 (292.5)	-137.1 (287.9)
Any Collaboration with Business Network		1053.4** (440.0)	960.3** (453.7)	896.5* (458.5)	895.8** (447.7)
Business Practice Index			306.6*** (87.44)	289.0*** (89.31)	205.9** (88.12)
Business Networking Index				91.46 (94.28)	94.21 (92.13)
1-4 Employees					282.7 (183.4)
5+ Employees					1083.3*** (296.8)
Education	Yes	Yes	Yes	Yes	Yes
Industry Fe	Yes	Yes	Yes	Yes	Yes
Mean	1200.712	1200.712	1200.712	1200.712	1200.712
R^2	0.329	0.340	0.372	0.374	0.428
N	334	334	328	328	318

Effects on Collaborator Types

	(1) Collaboration with Friends or Relatives	(2) Collaboration with Business Network Members (Non-UG)	(3) Collaboration with Business Network Members (UG)
Networking	-0.0369* (0.0204)	-0.00948 (0.0138)	0.0131*** (0.00466)
Networking and Legal	-0.0708*** (0.0198)	-0.0266** (0.0124)	0.00604* (0.00365)
Control Mean	0.117	0.044	0.000
T1 = T2 (p-value)	0.014	0.073	0.156
R^2	0.043	0.028	0.050
N	1388	1388	1388

- Driven by change in beliefs about collaborator quality

Perception

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Effects on Collaborations

	(1) Steps Towards Collaboration Index	(2) Any Collaboration	(3) Number of Collaborations
Networking	0.320*** (0.0769)	-0.0198 (0.0228)	-0.172 (0.269)
Networking and Legal	0.233*** (0.0744)	-0.0695*** (0.0212)	-0.533** (0.210)
Control Mean	0.000	0.134	0.781
T1 = T2 (p-value)	0.239	0.002	0.061
R^2	0.043	0.042	0.026
N	1389	1388	1388

► Legal arm: 52% ↓ likelihood of collaboration

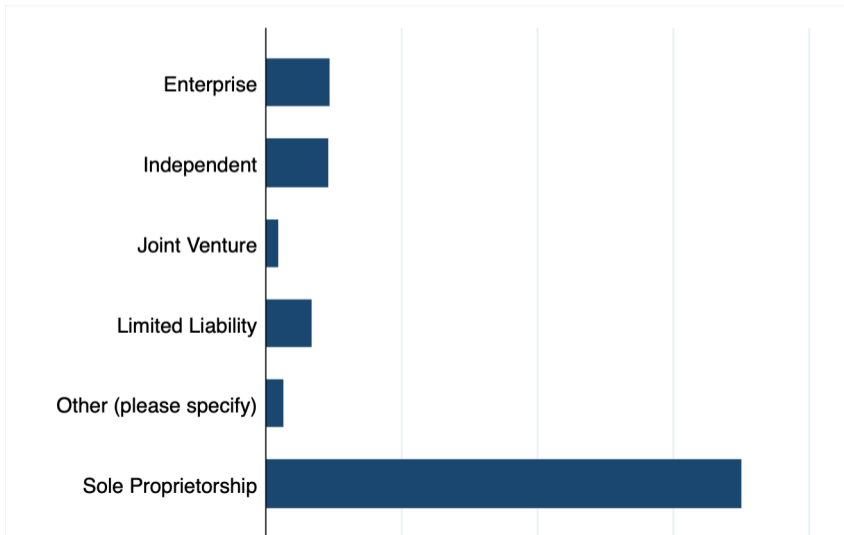
Collaboration Types

Steps

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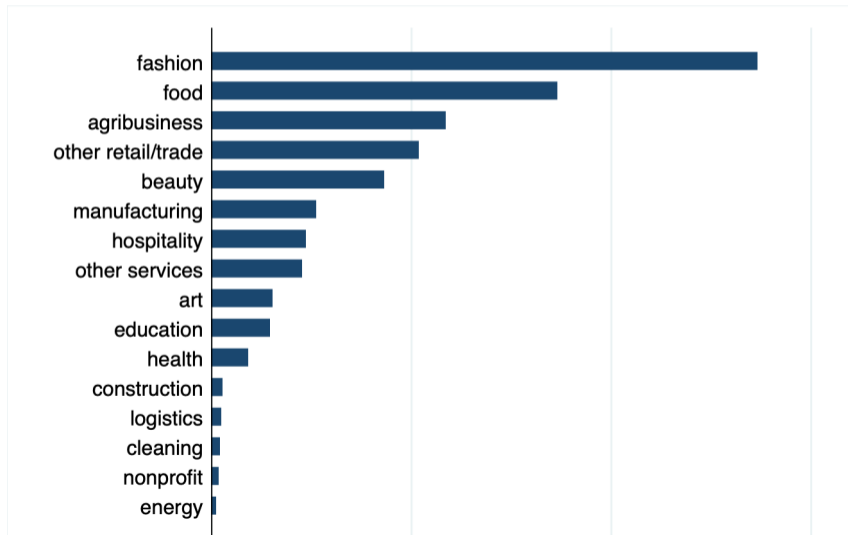
Business Classification

Figure: Business Classification



Industry Distribution

Figure: Industries



Online Application Open-Ended Questions

- ▶ State reasons why your business should be considered for this investment?
- ▶ How does your business positively impact the Ghanaian economy? (societal impact, CSR etc)
- ▶ What sustainability procedures do you apply in and to your business?
- ▶ What problem(s) does your business solve?
- ▶ How has COVID-19 impacted your business?

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Experiment II: Selection Criteria

- ▶ Independently owned business
- ▶ Max 20 employees
- ▶ Organized for profits
- ▶ Located in Ghana
- ▶ Significant contribution to Ghanaian economy
 - ▶ Paying taxes or
 - ▶ Using African manufactured products, materials, or labor
- ▶ Business must be at least for 50% owned by a woman
- ▶ Hold financial statement
- ▶ At least 3 years in operation
- ▶ Sustainable and with record of social impact
- ▶ Negatively affected by COVID-19

Effects on Step Towards Collaboration Index and Its Components

	(1)	(2)	(3)	(4)
	Steps Towards Collaboration Index	Identified Area for Collaboration	Considered Collaboration	Conducted Search
Networking	0.320*** (0.0769)	-0.0253 (0.0349)	0.0262 (0.0188)	0.237*** (0.0238)
Networking and Legal	0.233*** (0.0744)	-0.0166 (0.0315)	-0.00232 (0.0201)	0.266*** (0.0246)
Control Mean	0.000	0.332	0.079	0.044
T1 = T2 (p-value)	0.239	0.775	0.103	0.355
R^2	0.043	0.037	0.031	0.090
N	1389	1388	1388	1389

Effects on Step Towards Collaboration Index and Its Components

	(1) Contacted Firm	(2) Multiple Conversations	(3) Any Collaboration
Networking	0.0327** (0.0147)	0.0306* (0.0164)	-0.0198 (0.0228)
Networking and Legal	0.00580 (0.0146)	0.000576 (0.0156)	-0.0695*** (0.0212)
Control Mean	0.041	0.050	0.134
T1 = T2 (p-value)	0.049	0.042	0.002
R^2	0.038	0.035	0.042
N	1388	1388	1388

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Balance Checks

	Controls	Treatment 1	Treatment 2	C - T1	T1 - T2
Owner's Age	36.62 (9.37)	37.01 (9.32)	36.61 (9.22)	-0.39 (0.49)	0.40 (0.43)
Firm Age	7.19 (6.59)	7.67 (7.19)	7.41 (6.73)	-0.49 (0.25)	0.27 (0.48)
Education					
Less than JHS	0.07 (0.26)	0.08 (0.45)	0.07 (0.46)	-0.01 (0.81)	0.01 (0.82)
JHS Degree	0.29 (0.46)	0.28 (0.58)	0.32 (0.60)	0.01 (0.74)	-0.04 (0.25)
HS Degree	0.23 (0.42)	0.18 (0.53)	0.19 (0.54)	0.05 (0.11)	-0.00 (0.95)
College Degree	0.40 (0.49)	0.40 (0.61)	0.37 (0.61)	-0.00 (0.97)	0.04 (0.24)
Women-Only Firm	0.93 (0.25)	0.94 (0.23)	0.94 (0.25)	-0.01 (0.51)	0.01 (0.54)
Predicted Collaboration	0.40 (0.30)	0.37 (0.30)	0.38 (0.30)	0.03 (0.17)	-0.00 (0.78)
Total Employees	3.83 (8.08)	3.63 (6.18)	3.25 (4.42)	0.20 (0.64)	0.37 (0.21)
Monthly Sales (USD)	894.46 (1869.85)	820.45 (1640.01)	850.53 (1541.93)	74.01 (0.49)	-30.08 (0.73)
Monthly Profits (USD)	212.35 (332.28)	214.59 (318.86)	232.00 (325.64)	-2.24 (0.91)	-17.41 (0.33)
Observations	436	704	632	1140	1336

Effects on Business Formalization and Other Legal outcomes

	(1) Use of Written Agreements	(2) Business Formalization Index	(3) Trust in Legal System
Networking	0.0550* (0.0286)	0.0849 (0.0698)	0.178** (0.0792)
Networking and Legal	0.0356 (0.0297)	0.0798 (0.0831)	0.321*** (0.0772)
Control Mean	0.202	0.000	3.697
T1 = T2 (p-value)	0.494	0.949	0.023
R^2	0.052	0.126	0.037
N	1520	1389	1389

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[Written Agreements](#)

Effects on Written Agreements

	(1)	(2)	(3)	(4)	(5)
	Suppliers	Clients	Employees	Collaborations	Business Partners
Networking	0.0707** (0.0316)	0.0595*** (0.0193)	0.0137 (0.0187)	0.0573 (0.384)	0.0779 (0.129)
Networking and Legal	0.101*** (0.0365)	0.0864*** (0.0230)	0.0144 (0.0208)	0.598 (0.498)	0.0255 (0.152)
Control Mean	0.126	0.059	0.080	4.913	0.556
T1 = T2 (p-value)	0.394	0.251	0.972	0.269	0.681
R^2	0.060	0.044	0.061	0.226	0.156
N	1008	1360	1513	140	111

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Effect on Business Financing

	(1) Business Financing Index	(2) Received any loan from any source	(3) Total amount loans received (past six months)	(4) Has business bank account
Networking	-0.100 (0.0644)	-0.0295 (0.0189)	-80.05 (261.2)	-0.0312 (0.0308)
Networking and Legal	0.00853 (0.0747)	-0.00861 (0.0217)	256.3 (324.4)	0.00283 (0.0324)
Control Mean	0.000	0.106	624.891	0.292
T1 = T2 (p-value)	0.106	0.250	0.348	0.247
R^2	0.050	0.038	0.049	0.046
N	1520	1517	1514	1520

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Effect on Capital and Labor

	(1) Capital and Labor Index	(2) Number of paid workers	(3) Value of inventories	(4) Capital stock	(5) Value of capital purchases in endline
Networking	-0.0695 (0.0640)	-0.142 (0.261)	-296.6 (598.1)	-412.6 (628.6)	-0.0316 (0.0195)
Networking and Legal	-0.0556 (0.0693)	-0.363 (0.255)	73.33 (637.2)	139.5 (691.6)	-0.0257 (0.0213)
Control Mean	-0.000	2.918	4114.320	4535.019	0.117
T1 = T2 (p-value)	0.816	0.358	0.437	0.323	0.742
R^2	0.099	0.147	0.055	0.058	0.038
N	1520	1520	1458	1520	1517

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Effect on Business Expectations Index

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Business Expectations Index	Number of workers in 5 Years	Number of workers in 5 Years (truncated)	Highest Monthly Sales in 5 Years	Highest Monthly Sales in 5 Years (truncated)	Expect Increase in Sales Outside of Current Market in 5 Years	Expect to Export in 5 Years
Networking	0.552 (0.592)	37.58 (38.81)	-1.343** (0.651)	-16649.0 (22923.8)	1943.8 (2346.4)	0.00698 (0.0162)	0.0176 (0.0289)
Networking and Legal	-0.145 (0.162)	-0.864 (9.582)	-2.090*** (0.625)	-19502.8 (22265.5)	-294.9 (2239.3)	-0.0283 (0.0185)	0.000610 (0.0296)
Control Mean	0.000	11.120	9.775	41124.599	17732.787	0.939	0.240
T1 = T2 (p-value)	0.192	0.283	0.130	0.574	0.290	0.031	0.497
R ²	0.057	0.057	0.076	0.024	0.037	0.036	0.076
N	1388	1350	1350	1350	1350	1350	1333

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Effect on Get-Ahead Attitude Index I

	(1)	(2) Always	(3)	(4)
	Get-Ahead Attitude Index	Looking to Improve Business	Usually Can Find Solution	Customer Shoud Not Wait
Networking	-0.0251 (0.0656)	0.0195 (0.0451)	0.0818 (0.0514)	-0.0853 (0.0644)
Networking and Legal	0.0291 (0.0651)	-0.00561 (0.0478)	0.0166 (0.0508)	-0.119* (0.0679)
Control Mean	-0.000	4.648	4.374	2.275
T1 = T2 (p-value)	0.307	0.517	0.135	0.557
R^2	0.038	0.029	0.034	0.025
N	1389	1384	1388	1387

Effect on Get-Ahead Attitude Index II

	(1)	(2)	(3)	(4)
	Will Try Unless 100% Success	Need to Risk Money to Make Money	Not Plan Week-to-Week	Just Do It
Networking	-0.341*** (0.0860)	0.129** (0.0629)	-0.313*** (0.0927)	0.249*** (0.0902)
Networking and Legal	-0.239*** (0.0911)	0.146** (0.0614)	-0.444*** (0.0969)	0.360*** (0.102)
Control Mean	2.886	3.968	3.440	2.655
T1 = T2 (p-value)	0.154	0.710	0.135	0.188
R ²	0.037	0.036	0.049	0.047
N	1381	1379	1388	1386

Effect on Get-Ahead Attitude Index III

	(1)	(2)	(3)	(4)
	Can Convince Others	Always Try to Meet New People	Need to Make Business Better	Will Try Even if Not Succeed
Networking	0.114* (0.0590)	0.158** (0.0702)	-0.287*** (0.0907)	-0.0275 (0.0735)
Networking and Legal	0.159*** (0.0612)	0.244*** (0.0673)	-0.296*** (0.0962)	0.202*** (0.0732)
Control Mean	3.850	3.929	3.907	3.927
T1 = T2 (p-value)	0.329	0.122	0.923	0.000
R ²	0.033	0.041	0.050	0.040
N	1384	1382	1386	1384

Effect on Entrepreneurial Self-Efficacy Index I

	(1)	(2)	(3)	(4)	(5)
	Entrepreneurial Self-Efficacy Index	Idea for New Product	Accurately Estimate Costs of New Business Venture	Estimate Customer Demand for New Product	Sell Product First Time Customer
Networking	0.0637 (0.0723)	-0.0567 (0.0355)	0.0251 (0.0317)	0.0231 (0.0348)	0.0173 (0.0346)
Networking and Legal	0.0488 (0.0777)	-0.0113 (0.0387)	0.0315 (0.0329)	-0.0116 (0.0333)	-0.0268 (0.0342)
Control Mean	0.000	0.461	0.300	0.338	0.399
T1 = T2 (p-value)	0.836	0.202	0.826	0.254	0.151
R ²	0.032	0.035	0.037	0.031	0.034
N	1389	1389	1389	1389	1389

Effect on Entrepreneurial Self-Efficacy Index II

	(1)	(2)	(3)	(4)	(5)
	Identify Good Employees	Inspire, Encourage, and Motivate Employees	Find Suppliers Who Sell at Best Price	Persuade Bank to Lend Money for Business Venture	Correctly Value Existing Business
Networking	0.0568* (0.0310)	0.0248 (0.0329)	0.0183 (0.0307)	0.0268 (0.0291)	0.0426 (0.0280)
Networking and Legal	0.0408 (0.0336)	-0.0203 (0.0349)	0.00808 (0.0331)	0.0439 (0.0309)	0.0697** (0.0290)
Control Mean	0.268	0.394	0.294	0.213	0.192
T1 = T2 (p-value)	0.589	0.127	0.723	0.542	0.298
R^2	0.026	0.033	0.033	0.034	0.033
N	1389	1389	1389	1389	1389

Effect on Female Empowerment Index

	(1) Female Empowerment Index	(2) Free to Spend Money on Husband or Family	(3) Only Person with Access to Firm Money	(4) Sole Control on Some Money
Networking	-0.0346 (0.0643)	-0.0786** (0.0339)	0.00805 (0.0222)	0.00771 (0.00906)
Networking and Legal	0.0164 (0.0652)	-0.0808** (0.0342)	0.0305 (0.0210)	0.0162** (0.00788)
Control Mean	0.000	0.515	0.854	0.983
T1 = T2 (p-value)	0.317	0.942	0.162	0.079
R^2	0.071	0.047	0.067	0.061
N	1389	1382	1389	1389

Effect on Female Empowerment Index

	(1) No Need Permission to Visit Friend	(2) No Need Permission to Sell Business Asset	(3) No Need Permission to Travel to Work	(4) No Need Permission to Stay Overnight in Different Town
Networking	-0.0213 (0.0292)	-0.0117 (0.0294)	0.0615* (0.0337)	0.0173 (0.0314)
Networking and Legal	-0.0107 (0.0300)	-0.00249 (0.0315)	0.0196 (0.0340)	0.0291 (0.0351)
Control Mean	0.738	0.738	0.513	0.469
T1 = T2 (p-value)	0.674	0.735	0.147	0.669
R^2	0.060	0.046	0.053	0.068
N	1389	1386	1388	1386

Effect on Female Empowerment Index

	(1)	(2)	(3)
	No Need Permission to Work Later than Usual Hours	No Need Permission to Take Out a Loan	No Need Permission to Spend Money on Investment for Business
Networking	-0.100*** (0.0292)	0.0231 (0.0336)	-0.0196 (0.0253)
Networking and Legal	-0.0498* (0.0300)	0.0281 (0.0364)	0.0107 (0.0261)
Control Mean	0.763	0.603	0.816
T1 = T2 (p-value)	0.050	0.872	0.148
R ²	0.042	0.034	0.046
N	1388	1386	1389

Effect on Business Relationships with Friends and Relatives

	(1)	(2)	(3)	(4) Any Suppliers Met Through Friends or Relatives
	New Idea from Friends or Relatives	Any Loan from Friends or Relatives	Any Employees who are Relatives	
Networking	-0.0197 (0.0296)	0.176* (0.1000)	0.0351 (0.0405)	-0.0326 (0.0386)
Networking and Legal	0.0134 (0.0311)	0.0622 (0.0807)	-0.0241 (0.0368)	-0.0495 (0.0420)
Control Mean	0.183	0.122	0.144	0.669
T1 = T2 (p-value)	0.201	0.216	0.088	0.640
R ²	0.033	0.213	0.094	0.053
N	1094	129	574	1008

Effect on Perception of Quality of Potential Collaborators

	(1) Quality of Potential Collaborator Among Friends and Relatives (1-10 Ideal)	(2) Quality of Potential Collaborator Among Business Network (1-10 Ideal)	(3) Network - Personal Difference
Networking	0.0720 (0.120)	0.317*** (0.112)	0.245** (0.116)
Networking and Legal	-0.0471 (0.119)	0.180 (0.113)	0.227* (0.120)
Control Mean	5.601	5.726	0.125
T1 = T2 (p-value)	0.237	0.118	0.866
R^2	0.055	0.043	0.039
N	1389	1389	1389

Effects on Business Attitudes

Table: Effect of Online Networking Groups on Attitudes

	(1) Business Expectations Index	(2) Entrepreneurial Self-Efficacy Index	(3) Get-Ahead Attitude Index
Networking	0.552 (0.592)	0.0637 (0.0723)	-0.0251 (0.0656)
Networking and Legal	-0.145 (0.162)	0.0488 (0.0777)	0.0291 (0.0651)
Control Mean	0.000	0.000	-0.000
T1 = T2 (p-value)	0.192	0.836	0.307
R^2	0.057	0.032	0.038
N	1388	1389	1389

Effects on Female Empowerment

Table: Effect of Online Networking Groups on Female Empowerment Index

	(1) Female Empowerment Index
Networking	-0.0346 (0.0643)
Networking and Legal	0.0164 (0.0652)
Control Mean	0.000
T1 = T2 (p-value)	0.317
R^2	0.071
N	1389

Effects on Collaborations

	(1) Steps Towards Collaboration Index	(2) Any Collaboration	(3) Number of Collaborations
Networking	0.320*** (0.0769)	-0.0198 (0.0228)	-0.172 (0.269)
Networking and Legal	0.233*** (0.0744)	-0.0695*** (0.0212)	-0.533** (0.210)
Control Mean	0.000	0.134	0.781
T1 = T2 (p-value)	0.239	0.002	0.061
R^2	0.043	0.042	0.026
N	1389	1388	1388

► Legal arm: 52% ↓ likelihood of collaboration

Collaboration Types

Steps

Effects on Collaborator Types

	(1) Collaboration with Friends or Relatives	(2) Collaboration with Business Network Members (Non-UG)	(3) Collaboration with Business Network Members (UG)
Networking	-0.0369* (0.0204)	-0.00948 (0.0138)	0.0131*** (0.00466)
Networking and Legal	-0.0708*** (0.0198)	-0.0266** (0.0124)	0.00604* (0.00365)
Control Mean	0.117	0.044	0.000
T1 = T2 (p-value)	0.014	0.073	0.156
R^2	0.043	0.028	0.050
N	1388	1388	1388

- Driven by change in beliefs about collaborator quality perception