Stronger Together: Promoting Export through Female-only SME Consortia

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

[1]Technische Universität Berlin, Berlin, Germany
[2]Mediterranean School of Business, South Mediterranean University, Tunis, Tunisia

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Abstract

Exporting provides business opportunities with high returns but requires high managerial knowledge and skills, the network and confidence to create international contacts, and the scale to overcome fixed costs. All of which female entrepreneurs tend to lack. We conduct an RCT to test an intervention that tackles these problems simultaneously. Over two years, export-interested female entrepreneurs in complementary sectors receive support to establish a consortium, a legally connected group of firms, to cooperate in exporting. In addition, firms receive business and export consulting. At midline, two-thirds of the female entrepreneurs decided to become a member of a consortium. Consortia members doubled their regular contact with other female entrepreneurs, gained entrepreneurial confidence, improved management practices, and increased their companies' profit. While export (readiness) did not increase yet, consortia members are more likely to know Tunisia's trade agreements, have potential foreign clients, and invest in their export.

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1 Introduction

Export-led growth has become the dominant contemporary developmental strategy and governments worldwide operate programs to help firms enter global value chains and access foreign markets. Yet, there is a fierce debate and limited, robust empirical evidence about the contribution of governmental policies to promote export (Dollar and Kraay, 2004; Krueger, 1997; Panagariya, 2011; Wade, 2018; Lane, 2020; Comi and Resmini, 2020) and small and medium-sized enterprises (SMEs) (McKenzie et al., 2021) and female-owned firms more generally (Jayachandran, 2021)

In this study, we examine one specific policy to help small firms export: export consortia. Export consortia are legal entities created through voluntary agreements between companies to share the fixed costs of exporting their products, such as market access research, client acquisition, advertising activities, establishing logistics abroad, etc. (UNIDO, 2003). The core rationale is that pooling resources enables firms to overcome the fixed costs of export (Melitz, 2003).

Export consortia may also offer secondary benefits, particularly important for small and female-owned companies. Firstly, trade works through international networks (Chaney, 2014; Gereffi et al., 2005), which female entrepreneurs tend to lack (World Bank and World Trade Organization, 2020; World Bank Group, 2019), and requires trust in trading partners and legal frameworks, which female entrepreneurs are more sensitive about (**?**). Export consortia, by construction, increase female entrepreneurs' network by its members and potentially their networks. They also provide women with a safe space and a legal, formal organization to do business abroad. Secondly, exporting is particularly difficult as it requires knowledge of international management practices, high levels of productivity, and the confidence to convince international buyers. All of which female-led companies in low-and middle-income countries tend to lack (World Bank and World Trade Organization, 2020; World Bank Group, 2019; Campos et al., 2018; de Mel et al., 2008; Ackah et al., 2020; Essers et al., 2021). Export consortia members can learn from each other network members (Cai and Szeidl, 2018) and, in this orchestrated consortia creation, from consultants who support the process (Iacovone et al., 2021). Moreover, meeting other female entrepreneurs may encourage and strengthen female entrepreneurs' self-confidence (Campos et al., 2018; Alibhai et al., 2017).

To study these hypotheses, we set up a randomized controlled trial (RCT) in cooperation with the Tunisian export promotion agency and international donors. Thanks to a nationwide, multiple media communication campaign, we recruit 176 eligible and interested female-led SMEs. 87 out of 176 are randomly invited to become a member of one of four consortia, with the remaining firms serving as a pure control group. The consortia are created based on three shared characteristics: the interest to export, sectoral membership, and the CEO's gender. Each consortium has 15 to 25 members. In the first year, staff from political partners and business and export consultants work with the firms to establish the consortium, a legal entity that connects its members. In the second year, the

treatment focuses on developing consortia (members') capacity to export. We evaluate firms' performance in terms of export, export readiness, management and marketing practices, innovation, network size and composition, and female CEOs' self-confidence and independent decision-making based on three firms' surveys and administrative export transaction data from the Tunisian export promotion agency.

We contribute to the existing literature in the following ways. Firstly, we provide the first experimental evidence on the effectiveness of export consortia for export promotion, relating to the recent literature that calls for a more rigorous assessment of industrial policy (Lane, 2020) and debates about the contribution of government policy to export success (Dollar and Kraay, 2004; Krueger, 1997; Panagariya, 2011; Wade, 2018; Rodrik, 2011). Forte and Oliveira (2019) conduct a review of the export consortia literature and find less than 10 articles that are *"mostly (qualitative) case studies"*. The only two quantitative quasi-experimental studies we could identify find positive and significant effects on firms' probability of exporting in Chile (Alvarez, 2004; Álvarez et al., 2000), but say little about mechanisms. While Kim et al. (2018) and Breinlich et al. (2017) find general information treatments are not effective in promoting exporting, Munch and Schaur (2018) illustrate that more actionable information in the form of market intelligence can promote exporting, especially for firms with 25 employees or less. McKenzie et al. (2021) find no or in some specifications even negative effects of management practices training for exporting on exporting of SMEs in Colombia. Furthermore, Atkin et al. (2017) show that selling to international buyers can lead to quality and productivity improvements in response to more demanding international clients, and Makioka (2021) provides evidence that subsidized visits to geographically distanced trade fairs can help firms enter new export markets. Given most positive results come from quasi-experimental studies, given there are mixed results, and given many studies are unable to disentangle the independent effect of bundled measures, there remains concern about self-selection bias and lacking understanding of which export support policies work why and how.

Secondly, we contribute to a small but growing literature regarding the promotion of female entrepreneurs. While export promotion programs for women and the expansion of women's linkages to business networks have been identified recently as two policy interventions with a high potential and high societal benefit from further impact assessment (World Bank and World Trade Organization, 2020; World Bank Group, 2019), we know very little about whether and why some firm support programs may work for female entrepreneurs (Jayachandran, 2021; McKenzie et al., 2021).

In the following, section 2 provides information about female entrepreneurship in Tunisia, including evidence from focus group interviews, section 3 outlines the research design, section 4 describes characteristics of the firms in the sample and the main outcomes, section 5 details the regression specifications and section 6 lays out results and mechanisms.

2 Context

Less than 25 percent of global entrepreneurs are women (Figure 1). Their enterprises tend to be smaller in terms of capital, sales, and employees, less productive, concentrated in trade and services, and less in manufacturing (World Bank and World Trade Organization, 2020; World Bank Group, 2019; Campos et al., 2018; de Mel et al., 2008; Ackah et al., 2020; Essers et al., 2021). Women in the Middle East and North Africa have the lowest rates of female entrepreneurship among global regions, with only around 10 percent of all firms being managed by women. In Tunisia, 19 percent of formal businesses are headed by women and only 5.3 percent of corporate board members are women (Ben Mohamed et al., 2022). Women's labor force participation rate in Tunisia is roughly 27 percent, 42 percent among women in lower-income households, even though two-thirds of university graduates are women (Hattab, 2012).

2.1 Female entrepreneurship in Tunisia

We further document the following stylized facts about female entrepreneurship in Tunisia based on focus group interviews. The first recurrent thread documented in the interviews and existing literature (Jayachandran, 2021) is the tension between the role of an entrepreneur and the traditional role of women as mothers and wives, caretakers of the household, and family members. Despite their enterprise, many female entrepreneurs maintain responsibility over private household matters, in particular child care. Female entrepreneurs described in several ways how such traditional role models act as an additional barrier or tax on their business and exporting.

Self-confidence Many female entrepreneurs have encountered opposition to their decision to become an entrepreneur, which lowered their confidence, was emotionally draining, including even divorcing partners, and limited their ability to operate their business (e.g., one entrepreneur kept her entrepreneurship a secret from family members). Several female entrepreneurs describe cases of discrimination in business conduct, such as access to funding, dealing with public authorities, and interactions with clients, competitors, and employees. For example, several female entrepreneurs expressed they had difficulty accessing bank loans. On the one hand, this is due to unequal inheritance causing women to hold smaller capital, both fluid and physical, e.g., home ownership titles that could act as a mortgage (Hattab, 2012). At the same time, female entrepreneurs felt lower regard and trust of male bank employers in their capability to develop a profitable business. In a similar realm, female entrepreneurs described how some civil servants or clients doubted their competence (while granting it to less competent male entrepreneurs without doubt), causing them a disadvantage in winning contracts and receiving licenses.

Networks Female entrepreneurs report difficulty to network after work due to their sole responsibility for household work. After-work networking in Tunisia takes place primarily in coffee shops (cafés) and restaurants, which are regularly either male-dominated or gender-separated, making it difficult to enter male

business circles. As a result, female entrepreneurs are less informed, e.g., about public support programs or business opportunities.

Entrepreneurial skills Several female entrepreneurs feel they lack business management skills (which is confirmed in our surveys). Existing research has shown that female entrepreneurs, in particular at the early stage of business development, are less likely to have benefited from formal training in entrepreneurship (Drine and Grach, 2012).

Exporting Female entrepreneurs explain they are hesitant to travel abroad to identify business partners for export as they feel obligated to look after their children and are concerned about their personal security. International travel requires women to find childcare, which is often only provided by family members, absent professional service provision. Finally, some female entrepreneurs also express that the uncertainty and risk related to exporting discourage them.

We asked focus group participants to rate the relative importance of each barrier for operating their business on a scale from one, not so important, to seven, very important (Table 9.2). The lack of access to funds is the most important barrier. The second most important perceived barrier is the risk, such as high costs, uncertainty, and competition, related to operating a business and exporting. Overall, the large heterogeneity reflects that the relative salience of each barrier depends on the individual entrepreneur.

3 Research design

Table 2 provides an overview of the research design and project implementation. The treatment intervention was designed with the various challenges in mind female entrepreneurs face in Tunisia presented in the previous section (section 2). The intervention was co-designed and implemented with the German Development Agency, GIZ, and Tunisia's export promotion office (CEPEX). The GIZ and CEPEX had already created three (majority-male) export consortia during the prior cooperation period (2018-2020). Prior to the intervention, we interviewed business owners and consultants who participated in this first phase as well as female industry association representatives. Based on these interviews, we co-designed the intervention in cooperation with CEPEX and the GIZ.

3.1 Treatment

The treatment takes place over two years and is roughly divided into two periods, each taking about one year.

Consortia Creation The first period, *Consortia Creation*, focuses on creating the consortium and strengthening the entrepreneurial self-confidence, business and exporting skills, and networks of the female entrepreneurs. Female entrepreneurs receive a bundle of workshops, personal coaching, and networking events. The core part is a series of three two-day long workshops mixing knowledge inputs, e.g., regarding general and export-specific business management,

gender awareness and communication training, and team building and information about different formats of cooperation and mentorship between companies (e.g., joint ventures, co-contracting, informal and formal business associations, consortia). Each workshop is facilitated by business consultants and implementing partners, takes place either in a neutral location in Tunis or at the Tunisian export promotion offices headquarters, and participants are offered accommodation (but no mobility support). Beyond the emphasis on strengthening female entrepreneurs' business management and exporting skills, this part focused on fostering a group spirit, a sense of mutual help and empowerment based on the joint experience as female entrepreneurs and the mutual objectives to build profitable enterprises and seize export opportunities.

The workshops are complemented by up to three personal coaching sessions, two networking events with entrepreneurs in sub-Saharan countries, and a Slack channel via which the women can exchange and receive the inputs used for the workshops. We categorized and analyzed the topics that female entrepreneurs discussed during their coaching based on administrative project documents. The majority of issues, 52 percent, were related to core business management fields, such as business development (23 percent), product/service development (16 percent), and marketing (13 percent). Two other frequent issues, reflecting the analysis of the context in section 2, were access to funding sources (8 percent) and access to government support programs (13 percent), in particular, Tunisia's start-up label (which offers several advantages for firms beyond the positive signaling effect). What is more, 10 percent of the entrepreneurs used the coaching sessions to discuss issues related to personal development, such as a lack of self-confidence.

At the end of the first period, the firms could decide what format of cooperation they wanted to pursue. All four groups decided to establish a consortium as the entrepreneurs appreciated the commitment and certainty offered by the existing legal framework.[1] The signature of the legal agreements was celebrated at a public event at the national export promotion agency, establishing a consortium as a legal entity with its own organizational structure, such as a president and joint decision-making processes.

Export Promotion The second period, *consortia export promotion*, focuses on making the consortia operational and promoting their export. During this period, implementing partners and consultants work with the consortia on establishing a consortia-level product matrix, developing export plans for target markets, and subsidize export promotional activities for each consortium (e.g., travel to target markets, export fares etc.). As shown in Figure 2, in the first four months, consultants work with the consortia to develop export plans and consortia product catalogs. In the following eight months, the consultants and project staff work with the consortium and its members on two axes: 1) consultancy, coaching, and workshops for entrepreneurship and export, 2) administrative and logistic support for consortium development, e.g. related to

[1] In Tunisia there exists a specific legal type of entity for such cooperation "Groupement d'Intérêt Economique", which all four consortia chose as their legal format.

recruitment of a consortium coordinator (first consortium specific job), policy for recruitment of new members (cannot come from the control group) and internal organization of consortium in work committees. Moreover, each consortium receives financial support to conduct joint promotional export activities, such as organizing a trip to trade faires abroad etc.

3.2 Sampling and Randomisation

Female entrepreneurs across Tunisia were invited to sign up for the export consortia program in a nationwide communication campaign. Several communication and marketing channels were used to attract companies, including an e-mailing campaign, face-to-face or hybrid promotion workshops in Tunis and Sfax, social media and conventional media, such as TV, radio, and press, and implementation partners' own communication channels as well as those of the Tunisian Federation of Female Entrepreneurs. Interested firms could register online via the Tunisian export promotion offices website.

These recruitment efforts led to 263 applications. Among the 263 applications, 181 fulfilled the eligibility criteria: having the intention to export within the next 12 months, having an exportable product (self-reported) that fitted into one sector with sufficient other firms interested to establish a consortium. Project managers called up companies that did not provide sufficient information and excluded firms without registration and in financial distress.

The final sample of eligible firms used for randomization consists of the 176 firms that responded to the baseline survey. We conduct firm-level stratified randomization using STATA 15. We stratify first by one of the four sectors, agro-food, handicraft and cosmetics, professional business and digital services. Within sectors, we rank firms and form quadruplets of firms with similar export sales given export is the primary outcome. In addition, we put outlier firms with extremely high sales values into separate strata. As a result, we randomize 87 eligible companies to the treatment group and 89 companies to the control group (see Figure 2).

Based on gender coding of the Tunisian national registry of industrial firms, we estimated that the total population of female-owned or managed companies with 6 or more employees was only 1000 in the whole country. Note that the sample corresponds approximately to 18 percent of the total population of female-owned firms in Tunisia, excluding micro-enterprise.

4 Data

4.1 Data collection and processing

The primary data source is firm surveys. We conduct a baseline, midline, and endline survey. The midline survey takes place after the first period of the treatment ("consortia creation") has been completed. The endline survey takes place at the end of the second treatment period ("consortia export promotion").

Surveys are conducted in cooperation with a Tunisian survey firm. Respondents can reply online or on the phone. Contact information stems from registration, when we collected several contact details (several telephone numbers and email addresses of two firm representatives). Firms are called up to 12 times or more until they are declared as non-respondents. Surveys are conducted in the local language (Tunisian Arabic) and French. We train enumerators in cooperation with the survey institute for several days, including simulations, pilots, role plays etc. We conduct daily high-frequency checks, random spot checks, and automatized logical checks of consistency, and listen to recordings of at least 20 percent of the sample.

Moreover, we collect at least three other types of data. The implementation partner collects administrative data, such as attendance in workshops for consortia creation or reports of individual coaching. We collect administrative data on firms' export transactions from the customs office based on a unique tax identifier. Lastly, we conduct focus groups and interviews with selected consortia participants.

4.2 Sample characteristics

The sample of the study consists of 176 female-led firms that responded to the baseline.[2] Among the 176 companies, 25.6 percent (45) operate in the agro-food sector, 30.7 percent (54) are handicraft producers, 23.3 percent (41) provide professional services and 20.5 percent (36) digital services. The median company has five employees and 80 percent have 10 or fewer employees, implying that only 35 firms have more than 10 employees. Overall, the companies tend to be quite "young", as half of the companies in the sample did not exist for more than four years. Interestingly, a majority, or 60.6 percent of the female CEOs, have one family member who has a company. Half of the firms in the sample regularly discuss business ideas or challenges with seven or fewer other people and 90 percent with 25 or fewer. In contrast to our expectation based on the existing literature, women discuss business ideas or challenges only with three family members but 10 outsiders on average. Hence, many entrepreneurs in the sample seem to have a relatively small network, while some also dispose of very extended networks, mostly made up of business contacts outside rather than within families.

The business performance of the sample firms is quite heterogeneous. The median company has total sales of around 74,000 Tunisian dinars (roughly equivalent to 24,666€). The heterogeneity in revenue in the sample is high, even after removing one strong outlier: the standard deviation in total sales is 1,077,435 Tunisian dinars and the baseline mean (434,854 Tunisian dinars) is approximately 5 times as large as the median [3] At baseline, companies have relatively

[2] Among the 263 applicants, 176 were eligible and invited to the baseline. The eligibility criteria were sectoral affiliation, registration as a company in Tunisia, the intention to export within the next year and having an exportable product.

[3] Without removing the outlier, the baseline mean is 625,031 and the standard deviation is 2,668,589 Tunisian Dinar.

poor formal management practices as defined in previous research (Bloom et al., 2013, 2020). The average company has around 7.4 and the median company has 8 points on a 25 points management practices indicator based on five questions each providing up to 5 points. The companies perform worst on average in the frequency of examining the firm's financial performance and in monitoring employees' performance via indicators. Finally, 108 firms or 61.4 percent of the sample did not yet export. Among the 68 firms that realized revenue from export, firms exported to 2.5 (2) other countries on average (median), and the top 25 percent exported to three and up to 15 countries.

Overall randomization led to two balanced groups. Table 9.2 provides a balance table summarizing the mean and standard deviation in the treatment and control group, and p-values for t-tests of statistically significant differences between the two groups as well as F-Tests for joint independence between treatment status and all major outcome variables. While there are no statistically significant differences, modest sample size and high heterogeneity between the firms, lead to insignificant but notable differences, in particular, in variables with a high variance, such as sales. As a result, we cannot reject the null hypothesis of joint insignificance of all outcome variables from treatment status for the untransformed variables. However, table 9.2 in the appendix shows that after correction for outliers via winsorization and inverse hyperbolic sine transformation of accounting variables, treatment status is completely independent of all outcome variables. It is also noteworthy that the insignificant but notable differences are sporadic in the sense that they do not favor consistently either the treatment or the control group. In contrast, the differences are driven by large outliers in either group that affect the average.

In total, the 87 firms in the treatment group came from four sectors, two of which are manufacturing sectors (agro-food (23) and handicrafts (26)) and the two others are service sectors (professional services (20) and digital services (18)). The 14 firms that decided to become part of the agro-food consortium are either agricultural producers (e.g., olive oil, orange, almonds), produce processed food products (e.g., digestive crackers or jam/spread), or offer agro-food services (e.g., plant nursery, catering, import-export/trade logistics specifically for food products). The companies employ on average 7 and up to 25 employees in various locations across Tunisia. 12 among the 14 firms (85 percent) have not exported in 2020, the lowest share of exporters among all three consortia. The 17 firms in the handicraft consortium offer a range of lifestyle products, such as cosmetics (e.g., various natural oils, beauty, and baby care products), leather and textile products (e.g., leather belts, bags, or bracelets), and furniture (e.g., tables, tableware, and decorations). Seven among the 17 firms in the handicraft consortium have already exported. Almost all export to France, one to Libya, and one to Algeria. In terms of their characteristics, the firms in the handicraft consortium are very similar to the firms in the agro-food consortium.

The other two consortia consist of firms that offer services. The smaller one is made up of ten female entrepreneurs whose companies offer professional business services, such as consulting, training, coaching, audits, management certification, or environmental feasibility studies. The larger one consists of

14 firms that offer digital services, such as website development and digital marketing, online education, data analytics, cloud storage, 3D printing, and digital strategy consulting. The firms from both service consortia are more concentrated in the metropolitan area of Tunis than the firms in the other two consortia. 60 percent, 10 out of the 14 companies in the digital services consortia, are in the larger Tunis area. The same applies to 40 percent of the firms in the professional service consortia. The rest of the firms are in different regions of Tunisia. Half of the firms in the digital service consortium have already exported, the highest value among all consortia, and 40 percent in the professional service consortium. The firms' main export destinations are European countries, such as Germany, France, Italy or Belgium. A few firms also export to neighboring countries, such as Libya, and francophone African countries, such as Senegal or Benin.

4.3 Main outcome variables

In the theory of change, we identified four different outcome dimensions. The first outcome dimension is female entrepreneurs' networks. We think about the consortia as a new network of business contacts, independent of family and existing contacts. To quantify and qualify female entrepreneurs' networks, we use the following indicators based on survey questions. First, we ask female entrepreneurs about the number of female and male entrepreneurs that they meet regularly to discuss business challenges. This provides us with a proxy for the size of female entrepreneurs' business networks. We also differentiate between contacts related and unrelated to family and between male and female contacts. Secondly, we ask respondents to rate the quality of their network on a scale from 1 to 10.

The second outcome dimension concerns female entrepreneurs' entrepreneurial confidence or empowerment. Exporting requires traveling abroad, negotiating and attracting international customers, and investing in export readiness while uncertain about potential returns. Moreover, existing literature has shown that an entrepreneurial mindset is important for entrepreneurial achievement (Frese and Gielnik, 2014; Campos et al., 2017). We measure entrepreneurs' confidence through three conceptual proxies of "confidence" used in the existing literature (Alibhai et al., 2019), namely "locus of control", "self-efficacy", and "sense of initiative". For each dimension, we ask female entrepreneurs to affirm on a 5-point Likert scale a series of statements. Each statement asks about a different dimension of firm and export management. We normalize each question to a z-score and build the average of the z-scores for each dimension as well as across all three dimensions as in Kling et al. (2007).

Moreover, we conduct a list experiment as an additional source of evidence of female entrepreneurs' confidence. One crucial part of (female) empowerment is independent decision-making, which is defined as independent decision-making in intra-household bargaining power toward male partners. This paper is interested in female entrepreneurs' independence in business decision-making. Existing research has shown that male role models, e.g., fathers or other close family

members, such as uncles or partners, are important predictors for women's choice to engage in entrepreneurship. In our sample, 60 percent of the female entrepreneurs have one family members that is an entrepreneur. In the list experiment, we ask female entrepreneurs how many of the following statements apply to them, emphasizing that we do not know which of the statements apply to them. All female entrepreneurs see the same three initial, non-sensitive options.[4] A randomly selected half of the respondents also see the sensitive option: "I consult my husband (or another man in the family) before making strategic decisions for the company". At midline, we re-randomized half of the treatment and half of the control firms to receive the question with and without the sensitive option. In response to early feedback that consulting one's partner before taking important decisions can also be a sign of a functioning relationship rather than a lack of independence, we made the statement stronger at midline: "I feel obliged to consult my husband (or another man in the family before making decisions for the company."

The third outcome dimension is knowledge transfer. Consortia participants may benefit from knowledge transfers from other consortia members (peers, horizontal transfers) or consultants who supported the consortia creation process (vertical transfers). Exchange with peers or consultants about specific problems related to general business or export management could lead to the adoption of new, improved management or export practices or inspire new ideas leading to innovation. We measure management practices based on selected key outcomes indicators that were found to correlate strongly with the indicator used in Bloom et al. (2013, 2020). We measure export readiness based on selected questions used in export readiness assessments of export promotion agencies as well as applied in Kim et al. (2018); Breinlich et al. (2017). Finally, we measure innovation based on the Oslo Manual definition as significant improvements in product, process, marketing, or organizational innovation (Cai and Szeidl, 2018).

The fourth outcome dimension consists of firms' business and export performance. We measure business performance through the standard self-reported survey indicators, such as annual sales in Tunisia, total annual sales, the annual number of employees (including differentiation between young and female workers), and annual profits. We measure export performance based on firms' export sales, the number of export countries, and the income level of the main exporting destination. In the following section (section 5), we describe how we analyze this data.

5 Methodological framework

To analyze the effect of the consortia intervention, we conduct the following regression analysis.

[4]The three answer options are "I always encourage and support my team", "I dreamed of being a successful woman when I was a child" and "I try to do my best job"

5.1 Estimation of Treatment Effects

We estimate average treatment effects based on intention-to-treat in an ANCOVA model as defined in McKenzie (2012):

$$Y_{i,t} = \beta_0 + \beta_1 Treatment_i + \Pi Y_{i,t=0} + \gamma M_{i,t=0} + X_s\theta + \varepsilon_i \quad (1)$$

where $Y_{i,t}$ is the given outcome variable measured post-treatment, $Y_{t=0}$ is its baseline value, and $M_{i,t=0}$ a dummy variable indicating whether or not the baseline value is missing, $Treatment_i$ is an indicator for being assigned to treatment, X_s is a vector of randomization strata dummy variables, and ε_i is the error term. Since we randomized at the individual level, Huber-White standard errors will be used. β_1 provides the intent-to-treat or average treatment effect, which is the effect of being selected to receive the intervention among the experimental sample of 176 participants. Given the small size of the firms in the sample and the focus on export, it is unlikely that the stable unit treatment value assumption (SUTVA) is violated, e.g., by treated firms stealing business from firms in the control group.

Based on the invited firms' decision to participate in the consortium and their participation in the project's consortium creation activities, we instrument treatment with the former take-up variables to estimate the treatment effect on the treated:

$$Y_{i,t=1} = \beta_0 + \beta_1 C_i + \Pi Y_{i,t=0} + \gamma M_{i,t=0} + X_s\theta + \varepsilon_i \quad (2)$$

where C_i is an indicator for firm i's treatment status as instrumented by firms' participation in project activities or their decision to become part of the consortium. β_1 measures the impact for firms having decided to become a member of an export consortium.

To estimate how the quality of firms' peers affects their performance, we estimate the following equation:

$$D(Y_i) = \beta_0 + \beta_1 \overline{dpeer}_{-i,t=0} + \Pi Y_{i,t=0} + \gamma M_{i,t=0} + X_s\theta + \varepsilon_i \quad (3)$$

where we limit the sample to all the companies that decided to join a consortium, $D(Y_i)$ is the difference in the outcome variable between midline and baseline, $Y_{t=0}$ is its baseline value, and $M_{i,t=0}$ a dummy variable indicating whether or not the baseline value is missing, $\beta_1 \overline{peer}_{-i,t=0}$ is the distance of each firm to the average of all other or the top three firms in the same consortium in terms of either baseline entrepreneurial confidence, management practices, export performance, business size measured as a z-score of total sales and employees, or winsorized and inverse hyperbolic sine transformed profits, X_s is a vector of randomization strata dummy variables, and ε_i is the error term. Since we randomized at the individual level, Huber-White standard errors will be used. We only consider this regression for outcomes where we detect a treatment effect.

5.2 Dependent variable transformations

We handle outliers and dispersion due to the significant heterogeneity among SMEs as follows. Firstly, we back-checked all values equal to and above (beyond) the 95th (5th) percentile via audio recordings and phone calls as extreme values may reflect measurement error or outliers. Secondly, we winsorize skewed continuous outcomes at the 99th percentile (to reduce the impact of the very largest outcomes), and, in case of negative variables (e.g., profits), at the bottom one percentile. Thirdly, transform numerical variables that exhibit significant dispersion, such as annual (export) sales or profits, using the inverse hyperbolic sine or a percentile transformation. Given recent work has shed light on significant issues with the inverse hyperbolic sine transformation in the presence of zeros in outcomes, such as sales (Aihounton and Henningsen, 2021; Bellemare and Wichman, 2020; Brauw and Herskowitz, 2021; Chen and Roth, 2022; Delius and Sterck, 2020; Mullahy and Norton, 2022), we conduct the following analysis. Firstly, we examine the severity of zeros within each numerical variable. If a variable has less than 5 percent of zeros, we will not rescale it (k = 1) before ihs-transforming it. In case the variable has more than 5 percent of zero values, we will separately run a regression on a binary outcome, e.g., a dummy of having exported based on annual export sales, and a regression on a winsorized, optimally scaled ihs-transformed outcome variable. We select an optimal scaling factor k for each outcome based on R-squared (Aihounton and Henningsen, 2021); where "optimal" also includes the consideration that, if we have already examined the extensive margin effect in the binary regression, we select the optimal scaling factor that puts more weight on the intensive margin or in other words reduces the gap between zero and positive values while maximizing R-squared. If we are not interested in binary variables, such as in the case of total sales (we are not interested in total sales > 0), we select k based on the R-square only. Finally, transform highly dispersed negative outcomes that also have negative values, such as profit, also to their percentile distribution Delius and Sterck (2020).

5.3 Multiple hypotheses testing

We account for multiple hypotheses testing in two ways. Firstly, we develop indices based on z-scores as in Kling et al. (2007) to test only one hypothesis instead of several. Secondly, we report also Romano-Wolf adjusted p-values that control for the family-wise error rate ().

5.4 Attrition and Take-up

We use several approaches to attempt to mitigate attrition. Firstly, we collect detailed contact information at baseline and contact participants 12 times or more using different telephone numbers at different times of the day. Secondly, we offer firms to respond online or via phone, which we find more effective given CEOs' little time. Despite the above, there is considerable attrition. At

baseline, 91 percent of the registered and eligible firms respond. This number drops to 74 percent during the midline.

Take-up is a second concern. If too few female entrepreneurs join the consortium, the intervention could fail. We targeted a group size of 8-15 companies per consortium but invited 50-100 percent more companies depending on the number of eligible applicants per sector. In addition, project staff contacted firms before randomization to verify whether firms would be a good fit. We measure take-up as firms' participation in the program activities (stage 1), and their decision to participate legally (stage 1), and engage in and continue to be a member of the consortium (stage 2).

6 Results

We expected the consortia would affect female entrepreneurs through at least four different channels: being exposed to other women entrepreneurs should strengthen their entrepreneurial confidence (section 6.2) and enlarge their network (section 6.1), provide opportunities for learning about better management and export practices and inspire innovation (section 6.3), and ultimately create new business opportunities between members and outside clients, in particular abroad, once female entrepreneurs would invest in and share the costs of exporting (section 6.5).

6.1 Business Networks

At midline, treated female entrepreneurs have enlarged their networks considerably. Treated female entrepreneurs meet regularly two, and those who decided to participate in the consortium, even three additional female entrepreneurs to discuss business on average (Table 9.2). Accordingly, consortia participation has doubled the number of female CEOs that treated firms regularly meet relative to the control group. The effects are statistically significant at the 10 percent level for the treatment group and at the 5 percent level, considering firms' actual decision to participate in the consortium. The network expansion is entirely driven by the number of other female rather than male CEOs that female entrepreneurs regularly meet to discuss business. The consortia intervention has tilted the balance in treated female entrepreneurs' networks from being slightly majority-male to majority-female. While entrepreneurs in the control group meet 3.7 other female and 4.8 other male entrepreneurs on average, entrepreneurs in the treatment group now meet 5.7 other female and 5.05 other male entrepreneurs regularly to discuss business. Importantly, the consortia treatment has established first, new contacts between female entrepreneurs. For example, 22 female entrepreneurs, or about one-quarter of the firms in the control group, meet zero other female entrepreneurs regularly to discuss business. The same applies to less than half or 9 firms in the treatment group, out of which 8 did not take up the consortia intervention. Figure **??** illustrates how the intervention has shifted the number of regular contacts with other female

entrepreneurs along the whole distribution of network size.

What is more, we were interested in (female) entrepreneurs' view of cooperation between entrepreneurs (Dimitriadis and Koning, 2019). Tunisian stakeholders and local (female) business consultants were skeptical about entrepreneurs' willingness to cooperate with other entrepreneurs due to cultural and business reasons. Female entrepreneurs invited to the consortia choose on average 0.3 more positive words than the control group when asked about their view of the cooperation with other entrepreneurs, a 12.5 percent increase (table **??** and figures 6 and 7). The increase is driven by firms that took up the intervention and, in particular, an increased view of other CEOs as *partners* (81 percent in the treatment group vs. 62 percent in the control group). Treated female entrepreneurs also choose fewer negative words when asked about the interaction between CEOs, although the effect is not statistically significant.

Consortium participants do not rate the quality of their network significantly higher than the control group (Table 9.2). The positive point estimate, which suggests 0.6 points increase on a scale from zero to 10, is statistically insignificant with a large confidence interval ranging from -.64 to 1.14 points. Figure 5) shows that more firms in the treatment group now give their network the highest possible score of ten, but many firms in the control group also score the quality of their networks' advice very high. At endline, we plan to improve our measurements for network quality, implementing more objective measures, e.g., by asking whether a network provides specific functions and advantages to the company.

In sum, the consortia have enabled female entrepreneurs to meet twice as many other female entrepreneurs as they would have met otherwise. These contacts have changed their view about cooperating with other entrepreneurs towards an augmented sense of partnership. In the following, we examine whether the consortia have strengthened female entrepreneurs' confidence and feeling of empowerment.

6.2 Entrepreneurial empowerment

The treatment significantly increased female entrepreneurs' confidence and sense of empowerment. Treated female entrepreneurs feel 0.228 standard deviations more empowered than female entrepreneurs in the control group (Table 9.2). The effect is even 0.07 standard deviations more pronounced for women who decided to legally take part in the consortium. Recall that we measure entrepreneurial confidence and empowerment as a series of self-affirmations about one's capacity to access finance, attract foreign clients, motivate employees, present the company abroad, and master administrative and logistic processes for export on a 5-point Likert scale. In terms of magnitude, a 0.228 increase is about equivalent to moving from the median to the 75 percentile in the control group distribution of the entrepreneurial empowerment and confidence index. We further disaggregate the entrepreneurial confidence and empowerment index in its indicators related to efficacy (ability) and locus of control. The results suggest that the effect is rather driven through improvements in female en-

trepreneurs' perception of their own ability than in the control of their external business environment given the magnitude and statistical significance are lower for the latter measure.

Moreover, we measured another dimension of empowerment, namely women's independence in entrepreneurial decision-making. Given the substantial risk of misreporting due to the privacy of the issue, we used a list experiment. At baseline and before randomization, about 12 percent of the female entrepreneurs indicated consulting a male family member before taking strategic business decisions (Figure 8a). At midline, we re-randomized half the firms in the treatment and control group to being exposed to the sensitive option and strengthened its formulation to "feel obliged to consult a male family member". [5] While firms in the treatment group exposed to the sensitive option selected even fewer options on average than unexposed firms in the treatment group, the same percentage of women in the control group (13 percent) as at baseline confirm feeling obliged to consult their husbands or other male family members before taking strategic business decisions (Figure 8b). The list experiment regression results reported in table 9.2 in the appendix show that this difference is not statistically significant, which is, at least to a certain extent, due to the small sample size given we had to divide the sample into 2x2 groups, with each group having only around 30-40 firms.

Overall, we interpret the results as strong evidence that the first stage of consortia construction has strengthened female entrepreneurs' self-confidence and sense of empowerment.

6.3 Knowledge transfer: management practices, innovation, and export readiness

A key outcome and mechanism is knowledge transfer. Knowledge transfer could occur between members of the same consortia (Cai and Szeidl, 2018) or between consultants/experts and consortia participants (Iacovone et al., 2021).

The midline results suggest that knowledge transfer occurred mostly from consultants to female entrepreneurs in terms of general management practices for business administration and export knowledge. Treated firms have about a fifth of a standard deviation better score in a management practice index (Table 9.2). However, the result is only statistically significant at the 10 percent level. Treated entrepreneurs learned about new management practices from consultants (55 percent in the treatment group vs. 32 percent in the control group) and through events (71 percent in the treatment vs. 51 percent in the control group, Figure 10). Z-score management practices index captures small, accumulated changes across several dimensions of management practices. Measured in total points, management practices increased by 0.1 points or 5 percent relative to the control group's mean of 1.8 points on a scale from 0-4. The difference between the treatment and the control group does not seem to be

[5] We strengthened the formulation in response to early feedback that consulting with a partner before taking strategic decisions can be considered an essential part of a partnership rather than a sign of a lack of independence.

driven by one singular management dimension. Instead, treatment group firms provide more promotion incentives for employees and exhibit a higher awareness among employees about company goals, as well as evaluate slightly more key performance indicators more frequently (figure 9).

In contrast to previous studies that reported firms increased their (product) innovation when being invited to regular group network sessions with other firms (Cai and Szeidl, 2018), we find no statistically significant effect on firms' likelihood to innovate or their total number of innovations. Moreover, we find that treated firms are significantly less likely to make significant changes to the organization of their workplace. One reason for the absence of any positive effects on innovation may be that the firms in each consortium come from the same sector, while firms in came from different sectors. Another reason may be that, as mentioned above, the first treatment period focused more on participation-consultant vs. participant-participant interaction, which may have prevented innovation thanks to learning from other participants.

6.4 Export readiness and export performance

While the treatment does not (yet) seem to have significantly improved firms' export performance, there are a few indications that consortia participants are in the process to develop their export. On the positive side, consortia members are more likely to have invested in export activities (Table 9.2), to know Tunisia's major trade agreements (Figure 11 with and be in contact with potential clients in other sub-Saharan African countries (Table 9.2).[6]. In the following, we look at each point in more detail.

Firstly, consortia members are 19 percentage points more likely to report positive export investments. However, the effect is only marginally significant at the 10 percent level and the p-values are not robust to Romano-Wolf adjustment for multiple hypothesis testing. At the same, a large part of the confidence intervals, which range from -2 to 37 percentage points, suggest an effect size larger than zero. Secondly, 87 percent of the firms in the treatment group vs. 42 percent in the control group know about the Common Market for Eastern and Southern Africa (COMESA) trade agreement. Similarly, 66 percent in the treatment vs. 24 percent in the control group know about the African Continental Free Trade Area (ACFTA). Given consultants introduced both free trade agreements during the workshops, there is a direct causal link between the strong differences. The low level of knowledge about these major trade agreements and the opportunities that they bring to firms may suggest a lack of public communication or a lack of interest in exporting to other African countries. Finally, consortia members are 18 percentage points more likely to have contact with a potential client in other sub-Saharan African countries. While the confidence interval is largely positive (- 2 to 40 percentage points), the effect is only marginally statistically significant at the 10 percent level and

[6]The overarching objective of the political implementation partners was to promote exports to sub-Saharan African countries

the significance does not survive controlling for multiple hypothesis testing. All consortia members could meet firms from Eastern Africa at the COMESA Tunisia Business Women days and representatives of each consortia participated in an official trade mission of the Tunisian export promotion agency to Kenya.

Despite these positive indications that consortia members started to develop their export performance, treated firms have not yet significantly improved in their export readiness, as measured by a series of good export practices, and their export performance, measured in export sales (Table 9.2).

6.5 Business and export performance

The ultimate aim of an export consortium is to increase its members' economic performance, in particular their sales, exports, and profit. At midline, we cannot expect direct effects, e.g., through common promotional or market exploration activities as the consortium has just been formally created. However, a consortium is equally a network, and as documented in the literature (Cai and Szeidl, 2018), new networks may help firms find new business partners or learn about cheaper suppliers.

Table 9.2 suggests that treated firms, in particular those that decided to become consortium members, have increased their profit. Column (2) documents that treated firms have seen their profit increase by 2.7 ihs-units, significant at the 10 percent level, and consortia members have increased profits by 3.46 ihs-units, significant at the 5 percent level. However, we take these results with a grain of salt. While this is the result for our preferred specification (in line with the pre-analysis plan) and the ihs-transformation is widely applied (Bellemare and Wichman, 2020), several recent papers have pointed out that ihs-(or log-)transformed variables can be sensitive to the unit of outcome variable if the variable has many zeros (Chen and Roth, 2022; Aihounton and Henningsen, 2021; Mullahy and Norton, 2022). Hence, we also estimate the effect on a percentile transformed profit variable as suggested by Delius and Sterck (2020) and examine the sensitivity of the significance and effect size (Table 9.2). Three among the potential six profit transformations show a significant TOT-estimate, one at the five and two at the ten percent level. Moreover, the confidence intervals of all TOT-estimates are to a large extent above zero. For example, the percentile transformed profit estimate, which we could consider the most reliable alternative ranges between a minus two percentile decrease and a 18 percentile increase. Similarly, the confidence interval for reporting positive profits ranges between minus three percentage points and up to a 33 percentage points increase. Accordingly, we would interpret the results as suggestive, but not yet conclusive evidence, that consortia membership has increased firms' profits. Qualitative interviews with the consultants responsible for implementing the consortia and project documents suggest the former encouraged women to search for business opportunities within and across consortia and several examples, such as joint product offerings or joint ventures, document that members have started exploring common business synergies.

6.6 Take-up

Two-thirds of the invited female entrepreneurs legally joined a consortium. Joining the consortium is highly correlated (0.8) with showing up to the treatment workshops. 18 among the 32 dropouts, 56 percent, only showed up to two or fewer of the workshops dedicated to establishing the consortia. Only four of the dropouts had participated in at least seven of the 10 workshops. Across the four consortia, the share of firms that joined varied. While 78 percent in the digital technology consortia joined, the highest share, only 50 percent of the invited firms in the professional business services consortia joined. 61 percent and 66 percent of the invited among the agro-food and handicraft firms joined. What drives firms' decision to join? While the following stylized facts apply to three among the four - the agro-food, the handicraft, and the business service consortium - the fourth consortium, digital services, presents an opposite selection dynamic.

Consortia participation seems to be driven by more sociable female entrepreneurs with twice as many business contacts outside families who felt more negative about the prevalent interaction among CEOs in their environment. Joiners have almost twice as many, 11 vs. 6.5, business contacts outside their families with whom they met 50 percent more often in the past three months to discuss business. At the same time, joiners also felt ex-ante considerably more negative about the interaction between CEOs as they selected 0.3 or 57 percent more negative words to describe it. Joiners were unambiguously motivated by "becoming part of a female business network to learn from other female CEOs".

These female entrepreneurs predominantly own and manage much younger and smaller firms with only half as many employees and a third of the domestic sales of those who did not join the consortium. Joiners manage or own firms created four years before program participation, while dropout firms existed already for eight years, four years more. Joiners count 6 employees, 4 employees less than drop-outs on average. In a similar realm, joiners generate roughly 113 thousand Dinar in domestic sales on average, which is less than a third of the 364 thousand Dinar that the dropouts generate on average. This is reflected in proportionally smaller profits among joiners.

What is more, consortia participants are much less experienced and performing in terms of export than those that dropped out. Roughly a third of the joiners exported or invested in exporting in 2021, while about half of the drop-outs exported and seventy percent invested in export. This is reflected in the below (above) average export readiness scores among joiners (dropouts) and resulted in starkly different average export sales of 13 thousand Dinar among joiners vs. 260 thousand among drop-outs. While true across the three consortia, this pattern is particularly pronounced for the agro-food consortia where the largest 20 percent of invited firms or all firms with more than 400.000 Tunisian Dinar in sales in Tunisia dropped out. The drop-outs were also much more performing in terms of export: 63 percent reported positive export sales (vs. 14 percent among the takers) and 88 percent positive export investments (vs. 29 percent among takers).

As mentioned above, the selection dynamic in the digital consortium defies and reverses the above pattern. The firms that opted to join the digital services consortium outperform the dropouts in all dimensions. Joiners are more likely to report positive investment in exports (71 vs. 0 percent), have 300 thousand Dinar more domestic and 210 thousand Dinar higher export sales on average, resulting in roughly three times as much generated profit and almost double the number of employees (11 vs. 6). What is more, the joiners are considerably older (9 vs. 5 years), have larger networks, report more innovations and better management practices.

In conclusion, we observe two opposite selection dynamics. In three consortia, younger and smaller firms decide to cooperate in setting up a joint consortium to market their products jointly, and larger, more established firms quit. In the fourth group, smaller and less export-oriented companies dropped out and larger, more export-experienced companies joined. These selection dynamics suggest that companies prefer to cooperate with peers of the same caliber and performance. For example, the standard variation in a z-score size index[7] is nine times smaller among the joiners than those invited to join the agro-food, handicraft, or professional business service consortia. In the following, we examine how the quality of those firms that took up the intervention defined their treatment effect.

6.7 Peer-effects

The quality of the peers in a consortium may condition its overall impact and utility for each individual firm. We anticipated female entrepreneurs from established, larger, and more productive firms may lift up younger and smaller firms. To test this hypothesis, we constructed the distance of each firm to the average value of the group and to the top three firms in its consortia at baseline for several key characteristics of firm performance. We expected a positive relationship: the more distance, the more empowering and insightful contact with better-performing peers should be.

However, the selection dynamics described in the previous section (section 6.6), suggest that female entrepreneurs selected to cooperate with similar peers. In line with this dynamic, we find that the change in entrepreneurial confidence and management practices between midline and baseline is negatively correlated with firms' baseline distance to the group or the top three average entrepreneurial confidence or management practices (Table 9.2 and Table 9.2). In other words, among the more similar firms that decided to join the consortium, firms with lower entrepreneurial confidence or management practices have experienced smaller increases in either variable at the midline. As a result, it seems that the positive effects of the intervention in terms of increasing entrepreneurial confidence and improving management practices materialize more the better a firm performed in either dimension at baseline relative to its similar peers. Finally, note that we do not find any effects of peers' on the change in

[7] The size index is an average of the z-scores of employees, total sales, and profits

profit (Table 9.2).

7 Conclusion

At midline, we document that the export consortia have significantly enlarged female entrepreneurs' networks and entrepreneurial confidence. Participating in the consortia doubled female entrepreneurs' regular contact with other female CEOs and changed their perception of other CEOs and their network - they now see other CEOs more as partners. Consortia membership strengthened female entrepreneurs' self-confidence and independent decision-making as participants report significantly higher levels of entrepreneurial and export-related self-efficacy and locus of control and seem less likely to feel obliged to consult male authorities before taking strategic entrepreneurial decisions.

Moreover, consortia participants have benefited from knowledge transfers, albeit in a more limited and different way than expected (and desired) based on similar network interventions (Cai and Szeidl, 2018; Iacovone et al., 2021). On the positive side, consortia participants report using more key management practices (Bloom et al., 2013, 2020) (but the result is only weakly statistically significant), seemingly acquired from the consultants accompanying the consortia creation process. On the contrary and against our expectation, consortia participants learned less from each other, which might either be due to the small size and low initial capacity of a majority of the firms in the sample or to a focus on consultant-member vs. member-member interaction in the first stage of the intervention. Accordingly and in contrast to Cai and Szeidl (2018), we find no evidence for knowledge transfer leading to (product) innovation.

Finally, the export consortia creation process did not induce firms to improve or invest in their export readiness yet and, accordingly, we do not find an effect on firms' export performance at midline. This is not too surprising given that, as outlined, consortia have just been created and the second stage of the treatment will focus on joint export (promotion) activities. Having said this, there is some encouraging evidence that some of the networking activities offered to consortia members, such as the participation at the Tunisia-COMESA trade fair, have led to an increase in potential clients from sub-Saharan African countries among consortia participants (which is in line with the project's overall objective to focus on exports to sub-Saharan African countries).

Overall, supporting firms to organize in a legal network, such as a consortium, with a common goal, e.g. exporting, and a shared identity, here the same gender, has proven successful in expanding (female) entrepreneurs' networks and confidence, and a lesser extent diffusing better management practices and creating profitable business synergies between some of the consortia members. It remains to be seen whether the legal connection enables firms to substantially grow their businesses and even export.

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9 Appendices

9.1 Figures

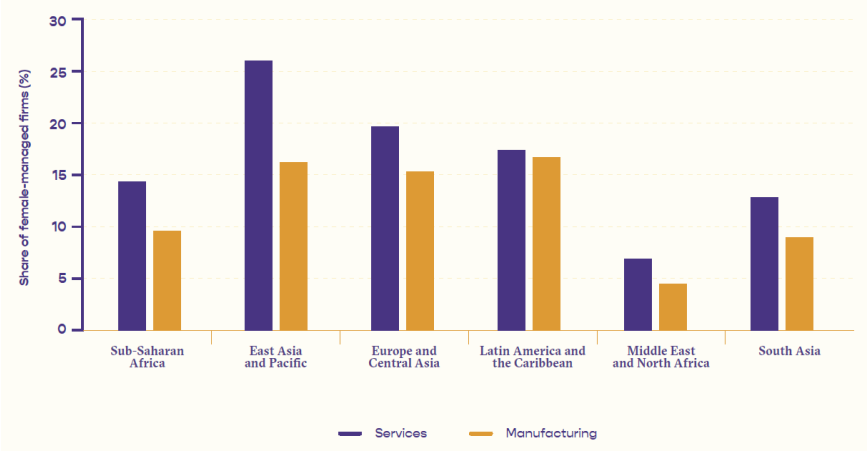


Figure 1: Female-managed firms, by region
World Bank (2019, p.123)

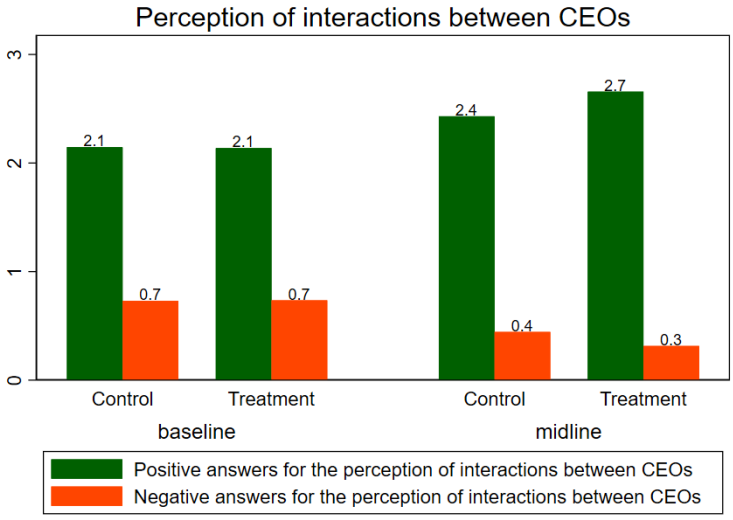


Figure 6: Perception of interactions

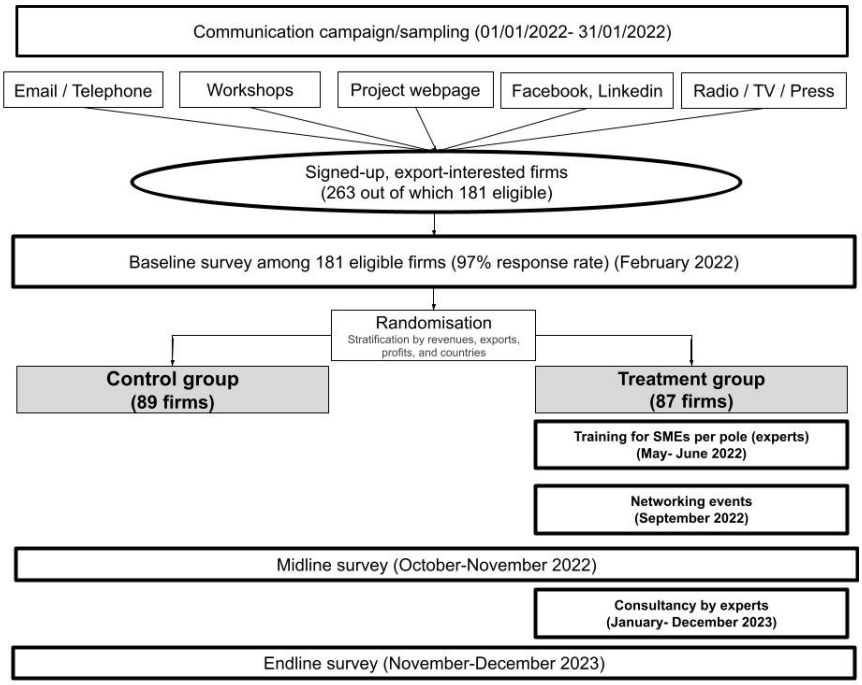


Figure 2: Study design flow chart and timeline

Questions	About
	Introduction
Q1-3	Essence of the enterprise
Q4-7	Knowledge exchange & innovation
Q8-12	Networking size / business contacts
Q13-19	Management practices
Q20	Marketing practices
Q21-27	Export management readiness /export outcomes
Q28-31	Accounting
Q32-38	Characteristics of the enterprise including the gender aspect
Q39-45	Expectations of the enterprise
Q46-47	Contact information

Figure 3: Baseline Questionnaire

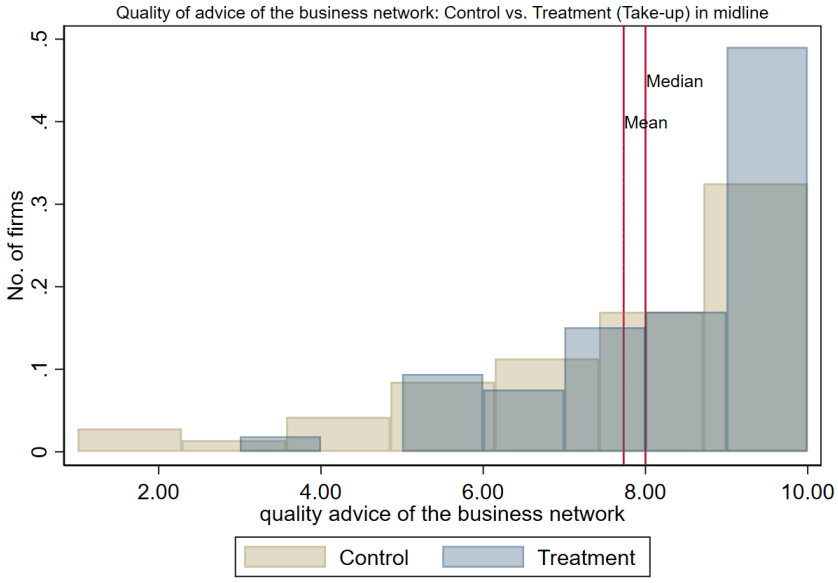


Figure 4: Self-rated quality of the entrepreneur's business network. Scale 0-10, higher values correspond to a better network.

13. net_coop Choisissez les 3 mots qui décrivent mieux votre perception des interactions entre PDG dans le cadre du business.

اختر أكثر ثلاث كلمات توصف تصورك للتفاعلات (أو العلاقات) الي تصير بين الرؤساء المديرين العامين فيما يخص الأعمال.

3 REPONSES POSSIBLES.

Gagner الربح	**1**	Éloigner تباعد	**6**
Communication التواصل	**2**	Partenariat الشراكة	**7**
Confianceالثقة	**3**	Adversaireالمنافس	**8**
Abattre يقضي عليها/يعيقها	**4**	Connecter ترابط/ تشابك	**9**
Pouvoir قوة	**5**	Dominer السيطرة	**10**

Figure 5: Survey question regarding female entrepreneurs perception of the interaction between CEOs in business.

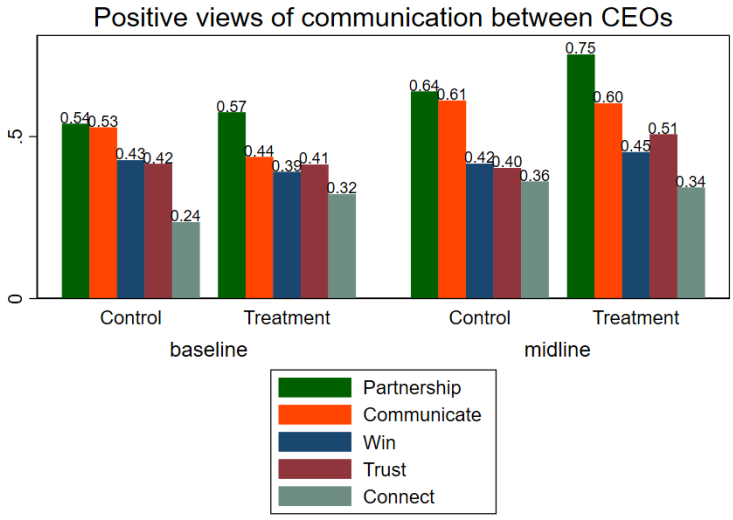
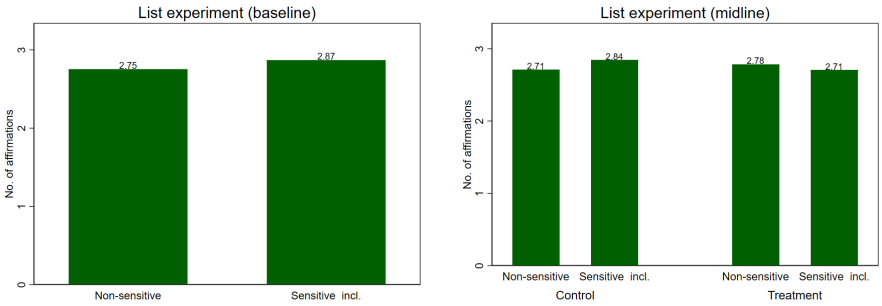


Figure 7: Most common word selected in positive interactions



(a) Baseline (b) Midline

Figure 8: List experiment

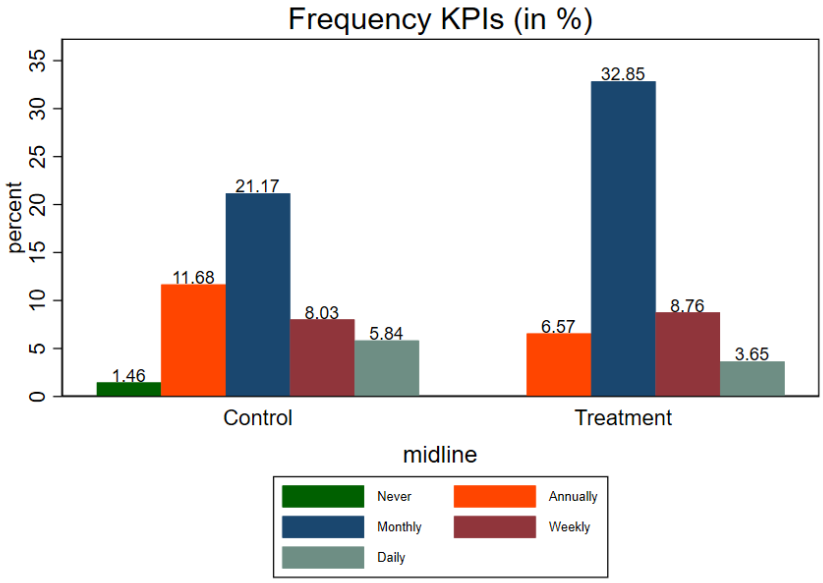


Figure 9: Frequency of key performance indicators evaluation

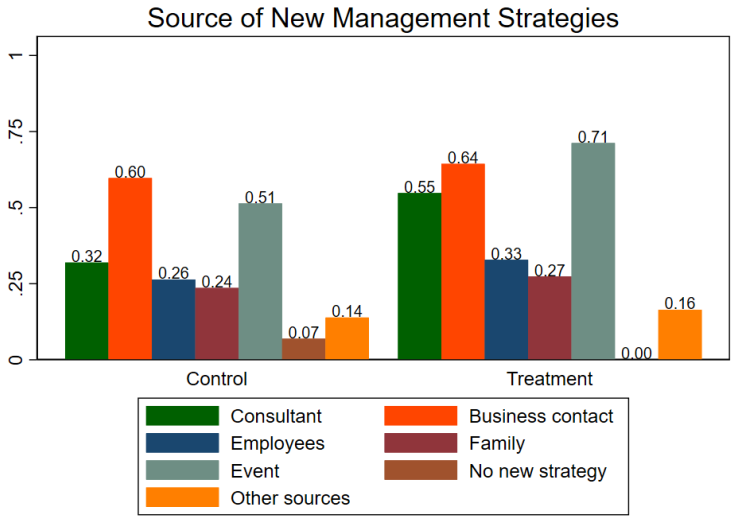


Figure 10: Sources of new management strategies

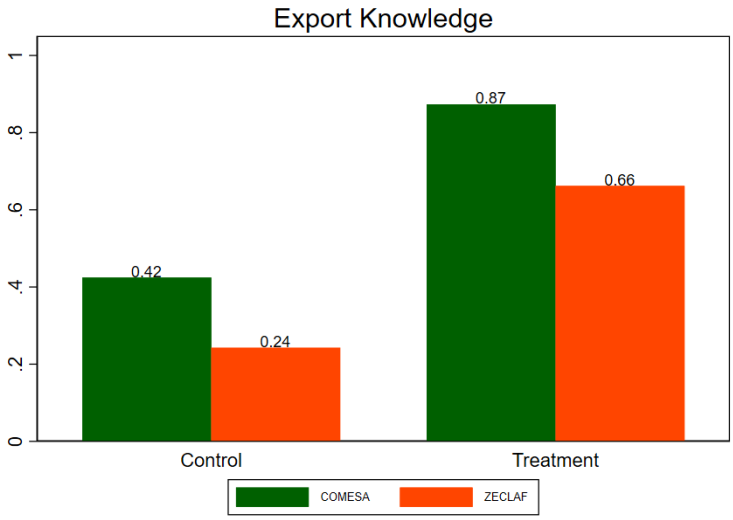


Figure 11: Knowledge about African Trade Agreements

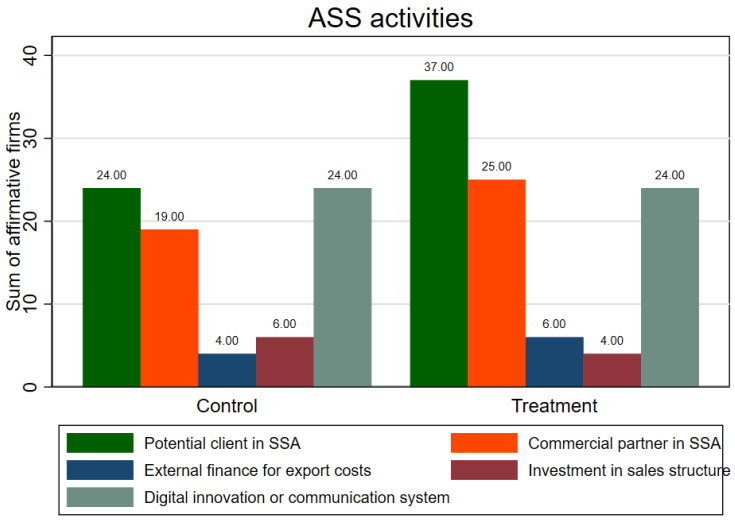


Figure 12: Actions done in Sub-Saharan African markets

9.2 Tables

Table 1: Summary of the results for the focus groups

Company	Social norms and family commitments	Lack of funds and resources	Lack of business and export knowledge	Regulatory and administrative barriers	International barriers: travel, language, culture	Important Risks: high costs, uncertainty, competition
Company 1	4	6	3	3	4	6
Company 2	6	4	4	3	5	3
Company 3	3	5	5	5	1	3
Company 4	2	4	2	5	1	1
Company 5	3	7	2	2	2	5
Company 6	7	7	7	7	6	7
Company 7	3	1	1	1	2	1
Company 8	7	7	7	7	7	7
Company 9	4	7	7	5	4	7
Company 10	7	7	7	6	7	7
Company 11	1	7	5	7	5	7
Mean:	**4,27**	**5,64**	**4,55**	**4,64**	**4,00**	**4,91**

Table 2: Description of main outcome variables

Outcome dimension	**Indicators**	Source
Network	Network size Network advice quality Perception of interaction between CEOs	Firm survey
Entrepreneurial confidence	Female Empowerment Index Locus of control Efficacy Initiative List experiment	Firm survey
Knowledge transfer	Management Practices Innovation Export readiness	Firm survey
Business Performance	Sales (domestic, total) Profit Number of Employees	Firm survey
Export	Export sales Export countries Investment in export Perception of export costs	Firm survey & admin data

Table 3: Baseline balance: Untransformed variables

Variable	(1) Control Mean/SD	(2) Treatment Mean/SD	T-test P-value (1)-(2)
Network size	12.33	13.21	0.73
	(16.02)	(17.62)	
Quality business network	7.11	7.31	0.62
	(2.61)	(2.68)	
Positive view interactions between CEOs	2.15	2.14	0.94
	(0.78)	(0.73)	
Negative view interactions between CEOs	0.73	0.74	0.95
	(0.64)	(0.60)	
Entrepreneurial confidence, z-score	-0.01	-0.08	0.44
	(0.66)	(0.60)	
Entrepreneurial effifacy, z-score	0.00	-0.10	0.36
	(0.76)	(0.72)	
Locus of control, z-score	-0.05	-0.03	0.85
	(0.73)	(0.72)	
Management practices, z-score	-0.00	0.05	0.53
	(0.48)	(0.51)	
Total innovations, max. 4	1.69	1.68	0.97
	(1.40)	(1.38)	
Innovated, binary	0.74	0.72	0.80
	(0.44)	(0.45)	
R&D expenditure in TND	53,044.41	18,825.96	0.32
	(318,164.24)	(36,859.08)	
Total sales in TND in 2021	391,879.33	624,609.70	0.54
	(856,501.52)	(3,419,255.86)	
Profit in TND in 2021	29,258.93	17,594.97	0.66
	(106,668.96)	(219,209.12)	
Employees in 2021	7.94	14.68	0.21
	(10.44)	(48.49)	
Export readiness index, z-score	-0.04	0.01	0.60
	(0.53)	(0.52)	
Costs of export activities	5.74	5.54	0.62
	(2.60)	(2.82)	
Investment in export activities	9,341.69	23,619.08	0.18
	(22,645.19)	(97,287.85)	
Export sales > 0	0.37	0.40	0.67
	(0.49)	(0.49)	
Export sales in TND in 2021	96,287.29	127,063.70	0.65
	(465,104.02)	(419,091.85)	
N	89	87	
F-test of joint significance (F-stat) untransformed variables (used for descriptive statistics)			7.12***
F-test of joint significance (F-stat) transformed variables (used for analysis)			1.26
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.

Table 4: Baseline balance: transformed variables

Variable	(1) Control Mean/SD	(2) Treatment Mean/SD	T-test P-value (1)-(2)
Network size	12.00	12.76	0.74
	(14.23)	(15.32)	
Network quality of advice	7.11	7.33	0.60
	(2.61)	(2.69)	
Pos. view CEO interaction	2.15	2.14	0.95
	(0.78)	(0.74)	
Neg. view CEO interaction	0.73	0.73	0.98
	(0.64)	(0.60)	
Entrepreneurial confidence, z-score	-0.01	-0.09	0.42
	(0.66)	(0.60)	
Entrepreneurial effifacy, z-score	0.00	-0.10	0.35
	(0.76)	(0.72)	
Locus of control, z-score	-0.05	-0.03	0.84
	(0.73)	(0.73)	
Management practices, z-score	-0.00	0.05	0.54
	(0.48)	(0.51)	
Total innovations, max. 4	1.69	1.70	0.95
	(1.40)	(1.37)	
Innovated	0.74	0.73	0.89
	(0.44)	(0.45)	
R&D exp., Tunisian Dinar	21,985.04	18,064.82	0.54
	(47,898.69)	(36,877.56)	
Age (in years)	7.13	6.38	0.58
	(9.85)	(7.97)	
Domestic sales, ihs-trans. & wins.	1.02	0.97	0.79
	(1.22)	(1.03)	
Profits, Tunisian Dinar	30,128.14	39,115.32	0.56
	(106,663.40)	(96,394.04)	
Employees	7.94	11.37	0.42
	(10.44)	(37.64)	
Export readiness, z-score	-0.04	0.00	0.62
	(0.53)	(0.52)	
Export sales, ihs-trans. & wins.	0.27	0.41	0.28
	(0.74)	(0.91)	
Export countries	1.14	1.36	0.50
	(2.11)	(2.26)	
Export investment, ihs-transf. & wins.	0.09	0.15	0.19
	(0.20)	(0.39)	
Perceived cost of export	5.74	5.49	0.54
	(2.60)	(2.79)	
N	89	86	
F-test of joint significance (F-stat) untransformed variables (used for descriptive statistics			1.61*
F-test, number of observations			175

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.

Table 5: Firm characteristics by economic activity

Variable	(1) agro-alimentaire Mean/SD	(2) artisanat & cosmétique Mean/SD	(3) service Mean/SD	(4) TIC Mean/SD	T-test P-value (1)-(2)	(1)-(3)	(1)-(4)	(2)-(3)	(2)-(4)	(3)-(4)
Gender index -Z Score	-0.05	0.02	-0.03	-0.17	0.63	0.91	0.36	0.72	0.18	0.32
	(0.58)	(0.72)	(0.61)	(0.58)						
Women's entrepreneurial efffacy - z score	-0.05	0.01	-0.07	-0.12	0.68	0.90	0.64	0.61	0.37	0.76
	(0.74)	(0.74)	(0.82)	(0.68)						
Women's locus of control - z score	-0.08	0.06	0.02	-0.22	0.34	0.46	0.38	0.78	0.08*	0.12
	(0.68)	(0.82)	(0.63)	(0.72)						
total sales in TND	525,790.65	204,894.61	320,982.90	798,336.58	0.06*	0.26	0.43	0.20	0.05*	0.13
	(1,093,526.27)	(338,162.35)	(498,322.78)	(1,799,212.50)						
profit in TND in bl = 2021, ml = 2022, el = 2023	40,839.53	18,230.54	52,462.24	30,916.15	0.26	0.58	0.71	0.06*	0.60	0.40
	(107,481.35)	(84,648.97)	(87,086.93)	(129,271.25)						
nombre d'employés de l'entreprise	14.82	7.22	5.83	11.22	0.34	0.26	0.66	0.31	0.14	0.05**
	(52.02)	(6.83)	(6.31)	(15.03)						
export sales in TND in bl = 2021, ml = 2022, el = 2023	161,649.55	26,537.04	58,352.37	241,280.11	0.09*	0.22	0.59	0.34	0.09*	0.16
	(516,418.59)	(96,838.26)	(195,457.25)	(745,559.18)						
export sales ¿ 0	0.39	0.31	0.41	0.47	0.47	0.79	0.45	0.32	0.14	0.62
	(0.49)	(0.47)	(0.50)	(0.51)						
costs of export activities	5.98	6.09	5.15	5.00	0.83	0.17	0.08*	0.11	0.05**	0.81
	(2.61)	(2.74)	(2.89)	(2.37)						
investment in export activities	32,710.23	7,960.37	7,867.07	19,294.72	0.22	0.22	0.52	0.98	0.13	0.10*
	(131,680.76)	(27,890.11)	(17,686.67)	(37,652.42)						
N	44	54	41	36						
F-test of joint significance (F-stat)					5.29***	5.70***	2.73***	4.32***	6.69***	1.93*
F-test, number of observations					98	85	80	95	90	77

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.

Table 6: Business Networks

	(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

Notes: Each specification includes controls for randomization strata, baseline outcome, and a missing baseline dummy. The only exception are columns 2 and 3 for which we did not collect baseline data. The number of observations for network quality is only 123 as all other 18 firms reported zero contacts with other entrepreneurs. The total of female, male and all other CEOs met are winsorized at the 99th percentile. Coefficients display absolute values of the outcomes. 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.

Table 7: Entrepreneurial empowerment

	(1) Entrepreneurial empowerment	(2) Effifacy	(3) Locus of control
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

Notes: Each specification includes controls for randomization strata, baseline outcome, and a missing baseline dummy. All outcomes are z-scores calculated following Kling et al. (2007). Coefficients display effects in standard deviation units of the outcome. Entrepreneurial empowerment combines all indicators used for locus of control and efficacy. 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.

Table 8: List experiment: Independent entrepreneurial decision-making

	(1) Baseline	(2) Midline
Sensitive option=1	0.110	0.030
	(0.151)	(0.185)
	0.467	0.871
Treatment		0.021
		(0.152)
		0.891
Treatment × Sensitive option=1		-0.059
		(0.243)
		0.809
Observations	176	134
Strata controls	Yes	Yes
Y0 controls		Yes

Notes: Column (1) presents baseline results with strata controls. Column (2) presents an ANCOVA specification with strata controls. Clustered standard errors by firms in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$ denote the significance level.

Table 9: Knowledge transfer: Management practices, Innovation, Export readiness

	(1) Management practices	(2) Total innovations	(3) Innovated	(4) Export readiness	(5) Export readiness SSA	(6) SSA client
Panel A: Intention-to-treat (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)
	0.118	0.572	0.140	0.841	0.837	0.135
	.176	.607	.007	.959	.858	.176
	-0.04,0.32	-0.69,0.21	-0.29,-0.04	-0.18,0.22	-0.18,0.22	-0.04,0.33
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)
	0.073	0.532	0.106	0.819	0.814	0.083
	.145	.559	.002	.959	.854	.176
	-0.02,0.40	-0.85,0.20	-0.44,-0.09	-0.20,0.25	-0.20,0.25	-0.02,0.40
Control group mean	0.01	1.27	0.60	0.06	0.00	0.39
Control group SD	0.60	1.35	0.49	0.69	0.69	0.49
Observations	139	176	176	136	131	131
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 and ihs-transformed. The units for ihs-transformation are chosen based on the highest R-square, ten thousand for all variables, as described in Aihounton and Henningsen (2020). 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.

Table 10: Innovation

	(1) Product innovation	(2) Process innovation	(3) Organizational innovation	(4) Marketing innovation
Panel A: Intention-to-treat (ITT)				
Treatment	0.042	-0.051	-0.184**	-0.075
	(0.079)	(0.079)	(0.077)	(0.082)
	0.594	0.526	0.019	0.365
	.58	.58	.039	.58
Panel B: Treatment Effect on the Treated (TOT)				
Consortium participant	0.057	-0.069	-0.250***	-0.101
	(0.094)	(0.095)	(0.093)	(0.098)
	0.546	0.469	0.008	0.303
	.58	.58	.023	.556
Control group median				
Control group SD	0.45	0.48	0.50	0.50
Observations	142	142	142	142
Strata controls	Yes	Yes	Yes	Yes
Y0 controls	Yes	Yes	Yes	Yes

Notes: Each specification includes controls for randomization strata, baseline outcome, and a missing baseline dummy. All outcomes dummy variables, coded equal to 1 if the firm does a type of innovation and zero otherwise. 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) are reported below the standard errors.

Table 11: Business performance

	(1) Domestic sales	(2) Total sales	(3) Profit, k=1	(4) Profit, pct.	(5) Employees	(6) Female employees
Panel A: Intention-to-treat (ITT)						
Treatment	0.115	0.081	2.719*	0.061	-0.005	0.041*
	(0.127)	(0.150)	(1.619)	(0.049)	(0.015)	(0.021)
	0.367	0.588	0.096	0.215	0.740	0.060
	.649	.689	.412	.649	.768	.133
Panel B: Treatment Effect on the Treated (TOT)						
Consortium participant	0.150	0.106	3.467**	0.077	-0.006	0.053**
	(0.142)	(0.166)	(1.724)	(0.051)	(0.017)	(0.025)
	0.291	0.525	0.044	0.134	0.702	0.034
	.628	.673	.367	.628	.765	.133
Control group mean	1.29	1.33	4.86	0.49	0.08	0.05
Control group SD	1.52	1.53	9.47	0.30	0.12	0.09
Observations	118	117	103	103	132	132
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 and ihs-transformed. The units for ihs-transformation are chosen based on the highest R-square, thousands for employee variables and ten thousand for all other variables, as described in Aihounton and Henningsen (2020). The only exception is the percentile-transformed profit variable in column (4) (Delius and Sterck, 2020). 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.

Table 12: 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	.822	.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

Notes: Each specification includes controls for randomization strata, baseline outcome, and a missing baseline dummy. All variables are winsorized at the 99th percentile and ihs-transformed. The units for ihs-transformation are chosen based on the highest R-square, ten thousand for all variables, as described in Aihounton and Henningsen (2020). 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.

Table 13: 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 (10^4), 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.

Table 14: Heterogeneous effects: Entrepreneurial Confidence and Empowerment

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Small firms	Large firms	Small network	Large network	Small fam. network	Large fam. network	Rural	City	No children	Children
Treatment	0.196	0.487*	0.314*	-0.075	0.361**	-0.210	0.255	0.192	0.457	0.228**
	(0.134)	(0.265)	(0.160)	(0.133)	(0.172)	(0.186)	(0.258)	(0.131)	(0.345)	(0.111)
	0.147	0.079	0.054	0.578	0.039	0.264	0.328	0.146	0.190	0.041
Observations	112.00	23.00	74.00	61.00	77.00	58.00	51.00	84.00	56.00	135.00
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: Each specification includes controls for randomization strata, baseline outcome, and a missing baseline dummy. All outcomes are z-scores calculated following Kling et al. (2007). Coefficients display effects in standard deviation units of the outcome. Entrepreneurial empowerment combines all indicators used for locus of control and efficacy. 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) are reported below the standard errors.

Table 15: Take-up and firm characteristics across consortia

	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
Variable	Mean/SD	Mean/SD	(1)-(2) Variable	Mean/SD	Mean/SD	(1)-(2)
Export sales > 0	0.52	0.29	0.07*	0.50	0.50	1.00
	(0.51)	(0.46)		(0.58)	(0.52)	
Export investment > 0	0.70	0.34	0.00***	0.00	0.71	0.00***
	(0.47)	(0.48)		(0.00)	(0.47)	
Export to SSA	0.23	0.20	0.77	0.16	0.36	0.22
	(0.42)	(0.40)		(0.18)	(0.50)	
Export readiness	0.18	-0.08	0.04**	-0.29	-0.00	0.19
	(0.52)	(0.52)		(0.35)	(0.49)	
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)	
Profit > 0	0.78	0.80	0.79	0.50	0.43	0.81
	(0.42)	(0.40)		(0.58)	(0.51)	
Employees	10.19	5.88	0.11	5.75	10.93	0.13
	(13.39)	(4.76)		(3.10)	(10.73)	
Online presence	0.93	0.90	0.74	1.00	0.93	0.34
	(0.27)	(0.30)		(0.00)	(0.27)	
HQ in Tunis	0.56	0.46	0.46	0.75	0.64	0.69
	(0.51)	(0.50)		(0.50)	(0.50)	
Age	8.00	4.44	0.09*	5.00	9.36	0.21
	(10.48)	(3.83)		(3.16)	(10.97)	
Capital	51,397.41	29,170.88	0.41	33,750.00	54,785.71	0.56
	(135,722.38)	(41,315.34)		(57,575.31)	(86,478.26)	
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)	
Network quality	7.04	7.88	0.19	4.50	7.07	0.32
	(2.82)	(2.18)		(5.26)	(2.59)	
Meetings with other CEOs, past 3 months	6.45	9.42	0.31	10.28	9.36	0.83
	(6.67)	(16.65)		(7.40)	(9.21)	
Neg. view CEO interaction	0.56	0.88	0.03**	0.25	0.79	0.05*
	(0.58)	(0.64)		(0.50)	(0.43)	
R&D expenditure	13,596.91	19,102.85	0.51	13,651.25	24,774.29	0.26
	(17,859.45)	(48,583.84)		(10,791.61)	(29,442.94)	
Total innovations	1.37	1.88	0.15	0.75	2.07	0.03**
	(1.42)	(1.40)		(0.96)	(1.14)	
Innovated	0.63	0.78	0.19	0.50	0.86	0.23
	(0.49)	(0.42)		(0.58)	(0.36)	
Management practices	0.01	0.08	0.59	-0.34	0.11	0.13
	(0.52)	(0.52)		(0.56)	(0.46)	
Marketing practices	0.01	0.09	0.56	-0.17	0.16	0.42
	(0.57)	(0.51)		(0.84)	(0.33)	
Entrepreneurial empowerment	-0.06	-0.08	0.90	-0.31	-0.10	0.60
	(0.60)	(0.65)		(0.84)	(0.43)	
N	27	41		4	14	
F-test of joint significance (F-stat)			5.70***			
F-test, number of observations			68			

Notes: Sample limited to treatment group. 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 and 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.

Table 16: 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 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.

Table 17: 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.

Table 18: 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					-4.270					
					(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			
							(5.128)			
							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 hyperbolice 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.