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# **The Moderation Effect of Entrepreneurship Development Programs on the Economic and Political Empowerment Association. Empirical Evidence from Post-revolution rural Tunisia**

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## **Abstract:**

**Purpose:** The paper explores individuals' economic empowerment and political empowerment association and the moderation role of entrepreneurship development programs on this relationship in the context of post-revolution Tunisia, which is a newer developing democracy.

**Design/methodology/approach:** The study uses a quantitative approach based on econometric modeling. A questionnaire was designed and administrated to a stratified random sample of 343 participants in the Entrepreneurship for the Participation and Inclusion of Vulnerable Youth in Tunisia program, funded by the United Nations Democracy Fund and implemented in rural north-western Tunisia between 2017 and 2021. A coarsened exact matching method is also applied for robustness analysis.

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**Findings:** The analysis shows that when individuals have enhanced economic decision-making agency and are involved in economic networks, they are more likely to demonstrate higher political empowerment. It also shows that expanding rural individuals' economic opportunities by providing entrepreneurial resources, such as entrepreneurial training and microcredit, strengthens individuals' economic empowerment and political empowerment association.

**Originality:** The research attempts to contribute to the ongoing debates linking entrepreneurship, economic empowerment, and political/citizen empowerment. It focuses on a Middle East and North Africa (MENA) country, Tunisia, characterized by socioeconomic issues and low civic participation.

**Practical implications:** The study provides practical implications for policymakers in newer developing democracies. Citizens' political empowerment and inclusion in rural areas could be promoted by developing entrepreneurship development programs, which could help reinforce the citizens-state relationship and establish more stable social contracts. The research also provides practical implications for the international development community, donor agencies and program designers through duplicating similar programs in other countries with weak central government structures (i.e., post-conflict environments, post-revolution).

**Keywords:** Entrepreneurship development program; Economic empowerment; Political empowerment; Citizen empowerment; Post-revolutionary Tunisia; MENA region.

## 1. Introduction

A growing body of literature is attempting to make sense of the seismic events that swept across much of the Middle East and North Africa (MENA) region, the Arab Spring and its key drivers (Loewe et al., 2021; Mansouri, 2022). The complementarity of two critical drivers is identified, first, the socio-economic dimension, in particular, the chronic unemployment amongst youth and, second, the genuine yearning for freedom and democracy. The Arab uprisings in 2010-2011 were an expression of discontent with a situation in which governments provided neither participation in political decision-making processes nor social benefits, like employment (Loewe et al., 2021; Mansouri, 2022). Entrepreneurship and democracy have consequently become burning public policy issues in recent years and the conversation around this relationship is gaining momentum in the public debates that testify "*Democracy needs business and business needs democracy*" (Farè et al., 2023). An emerging set of theoretical literature tends to link entrepreneurship to democracy (Audretsch and Moog, 2020; Bellone and Goerl, 1992; Bjorn G, 2007; Greenwood,

2008; Vivona, 2023) and assumes that entrepreneurs, by exercising their economic freedom and agency, are likely to be key players in promoting political freedom and participation in political decision-making processes in their communities. In democracies, individuals are expected to participate in the affairs of their community, i.e. civic engagement (Mansouri, 2022). The greater the citizens' civic and political engagement, the more society may claim to be democratic. However, engagement in the democratic process and civic participation may be affected by individuals' economic resources (Levin-Waldman, 2013). A democratic society requires individuals to be autonomous, and those with greater resources are likely to enjoy greater autonomy, so more empowered to be engaged in the democratic process.

A relationship between entrepreneurship, economic empowerment (EE), and political empowerment (PE) may, thus, exist but is still poorly explored in the empirical literature. This might be true mainly in rural areas where the barriers to entrepreneurship are more pronounced, especially in the agricultural sector (Bruton et al., 2021; Pindado and Sánchez, 2017; Ranjan, 2019). In the specific context of rural zones, agricultural entrepreneurship remains an engine for rural growth and development (Alkire et al., 2013; Ashley and Maxwell, 2002; Dias et al., 2019a). The agricultural sector provides interesting avenues of research to investigate its impact at community and societal levels (Dias et al., 2019a). The association between agricultural entrepreneurial activity and community must be explored in the literature. Despite the importance of studies on agricultural entrepreneurship in rural areas (Arafat et al., 2020; Dias et al., 2019b, 2019a; Salau et al., 2017), further studies are needed to address the potential of agricultural entrepreneurship for social development based on community empowerment.

Furthermore, the empowerment theoretical literature highlights EE as an essential underpinning of PE (e.g., Kabeer, 1999), especially for marginalized individuals in marginalised areas (e.g. rural). However, the empirical literature investigating individuals' EE-PE association is still an emerging area. The empowerment literature mainly examines the relationships between socioeconomic empowerment and socioeconomic outcomes (Cherayi and Jose, 2016; Karimli et al., 2021; Peled and Krigel, 2016; Raj et al., 2018; Sanyal, 2009; Stark et al., 2018; Yount et al., 2018) while few studies investigate EE and political outcomes relationships (e.g., Bleck and Michelitch, 2018; Prillaman, 2017). The recent empowerment literature reports that PE is a multifaceted concept based on three interrelated components: political choice, political agency, and political and citizen participation (Sundström et al., 2017). Considering these three dimensions to explore individuals' EE-PE association would therefore contribute to filling a gap in the empirical literature.

Besides, the entrepreneurship literature reports that various entrepreneurship programs have evolved over the years to combine entrepreneurial training and microfinancing (e.g., Huis et al., 2019). Such programs aim to promote marginalized individuals' EE by strengthening their financial and human capital (Gine and Mansuri, 2014). The effectiveness of such programs on the empowerment of the beneficiaries is an evolving research area. With regards to EE, the literature shows the relevance of access to microfinance for individuals' decision-making agency (Hashemi et al., 1996; Holvoet, 2005; Pitt et al., 2006; Weber and Ahmad, 2014) and economic networks (Hansen, 2015; Pitt et al., 2006; Sanyal, 2009). Entrepreneurial training is also been observed to increase individuals' EE by enhancing their economic decision-making agency and economic networks (Bulte et al., 2016, 2018; Gine and Mansuri, 2014; Hansen, 2015; Holvoet, 2005; Huis et al., 2019). With regards to PE, some studies displayed that access to microfinance improves political awareness (Datta, 2015; Hashemi et al., 1996; Pitt et al., 2006), participation in public campaigns, protests and meetings (Hashemi et al., 1996) and capacity for collective actions (Sanyal, 2009). However, the empirical literature lacks exploring the potential role of entrepreneurial programs on the EE-PE relationship.

The study aims to fill the above-mentioned gaps in the empirical literature and, thus, explores EE-PE association and the contribution of entrepreneurship development programs on it. To address these issues, we surveyed participants in the Entrepreneurship for Participation and Inclusion of Vulnerable Youth in Tunisia (EPIVYT) program implemented in rural northwestern Tunisia between 2017 and 2021. The program was funded by the United Nations Democracy Fund (UNDEF) and aimed to promote individuals' economic and citizen empowerment in rural areas in Tunisia by promoting agricultural entrepreneurship. The political change in Tunisia revealed citizens' low involvement in political life (Mansouri, 2022), which is particularly the case in north-western Tunisia which displays the highest poverty rate of 28.4% and high unemployment (20.3%), especially among youth, women, and graduates (Mansouri, 2022). The unfavourable socioeconomic conditions, coupled with the lack of civic education and limited opportunities for democratic participation, have led to low civic and political engagement in rural areas (The World Bank, 2014). Such low engagement raises important issues for the sustained success of Tunisia's continued transition toward democracy (Mansouri, 2022). Entrepreneurship is also observed to be nearly twice as high in urban areas as in under-developed regional and rural areas of the country (Mansouri, 2022; The World Bank, 2014).

The results enhance the understanding of how, in post-revolutionary Tunisia, individuals' EE could shape their PE. The findings also reveal a positive moderation effect of the

entrepreneurship program on the EE-PE association. We contribute to the literature on entrepreneurship and empowerment in newer developing democracies in the Middle East and North Africa (MENA) region in different ways. First, the study joins the emerging studies in examining socioeconomic empowerment and political outcomes (Bleck and Michelitch, 2018; Prillaman, 2017) and complements it by providing a positive EE-PE association by considering an extensive measure of empowerment in the political domain as suggested by Sundström et al. (2017). Second, we complement the literature on entrepreneurship in the MENA region, mainly in North Africa, by shedding light on the entrepreneurship programs' contribution to vulnerable individuals' economic and political empowerment. Entrepreneurship research in the MENA region is still immature (Aljuwaiber, 2021) as a result of the political and economic conditions in the region (Berbegal-Mirabent et al., 2018), particularly with regard to low economic development and socio-political instability (e.g. the Arab Spring). The majority of entrepreneurship research within the MENA region comes from Gulf Cooperation Council (GCC) countries, particularly the UAE and Saudi Arabia, which have more stable economies and governments (Aljuwaiber, 2021). We extend this literature by shedding light on the future of citizens' political inclusion in political decision-making processes in post-revolution Tunisia, through developing entrepreneurship.

The remainder of the paper is organised as follows. In section 2, the literature is reviewed and the hypotheses are stated. Section 3 describes the research design. Sections 4 and 5 present and discuss the findings, and section 6 concludes the paper.

## **2. Literature Review and Hypotheses Development**

### **2.1. The EE-PE association**

In the empowerment literature, EE definitions underline the multidimensional concept of agency (Laszlo et al., 2020). Yount et al. (2018) argue that being economically empowered requires full and effective participation at all levels of decision-making in economic life. For Hahn and Postmus (2014), EE is a process whereby individuals acquire knowledge, skills, and motivation to achieve economic control, power, and well-being and a say in the financial decisions affecting an individual's life. Several indicators have been developed to assess individuals' EE comprising mainly the decision-making agency in economic life and involvement in economic communities (e.g., Alkire et al., 2013; Po and Hickey, 2020; Seymour and Peterman, 2018). Regarding PE, it represents a process of increasing individuals' capacity, leading to greater choice, agency, and

participation in societal and democratic decision-making processes (Sundström et al., 2017). Being an empowered and contributing citizen requires being able to make choices over areas of life, being an active agent of change who can engage freely in public debates, and effectively participating in the civic and political world.

Individuals' EE has the potential to affect the level of PE. First, when individuals have agency in decision-making, they may manifest greater perceived self-efficacy and feel capable of affecting change in different aspects of life (Bandura, 1977), thus promoting civic and political behaviours. Furthermore, the decision-making process allows individuals to gain capacities to search for information, evaluate and discern knowledge, articulate ideas, reason, argue, and negotiate their own interests (Bleck and Michelitch, 2018), which can thus increase political and citizen empowerment and involvement in the societal decision-making process. Bleck and Michelitch (2018) explain that when rural women have decision-making agency, for instance, regarding what to buy in the market or what agricultural projects to invest in, they may become interested in markets or business-related information at the village level or national level, thus increasing their political knowledge and opinions. Furthermore, Seymour and Peterman (2018) find that individuals reporting greater economic decision-making agency experience a stronger sense of autonomy. A democratic society requires individuals to be autonomous and one cannot be active in the civic and political world if one is not autonomous (Levin-Waldman, 2013).

Second, the literature emphasizes the importance of economic networks in enhancing the political behaviour of community members. Networks facilitate interactions with a broader circle of people and a wider set of experiences, enhancing the power of acting as a group and strengthening engagement in collective action (Hansen, 2015; Levin-Waldman, 2013; Prillaman, 2017; Sanyal, 2009). Economic groups, whether formal or informal, are also critical sources of relevant information and expose members to progressive ideas about their rights, laws and access to government resources and legal institutions, which help them form opinions and protest against authorities' misbehaviour. Al-Shaikh (2013) states that business networking can create synergy and help entrepreneurs learn from the experience of others. Prillaman (2017) and Bleck and Michelitch (2018) argue that economic networks allow the transfer of knowledge and information, which exposes members to new information, independent of the hierarchical information dissemination in the village and on which members draw on when forming political opinions. Therefore, community members who belong to economic networks could be more informed and opinionated, making it easier for them to discuss politics among their peers, interact effectively in the public sphere, or engage freely in public debate. Economic networks, therefore,

provide space to exert voice, build confidence in speaking freely and, as a result, engage in collective action and strengthen the civic skills needed in the political world (Prillaman, 2017; Stolle and Howard, 2008). For Krishna (2002), networks provide the glue that binds community members together for collective action and the gear that directs community members toward participating in democracy building.

We expect, thus, that:

H1: Greater EE is associated with greater PE

H1a: Greater economic decision-making agency is associated with greater PE

H1b: Involvement in economic networks enhances individuals' PE

## **2.2.The moderation effect of the Entrepreneurship Development Programs (EDP) on the EE-PE association:**

From a development perspective, the capability approach states that greater access to resources provides vulnerable people with higher capabilities and enhances their ability to help themselves and influence the world (Sen, 2001). Equipping people with the requisite knowledge, skills, and resilient self-beliefs of efficacy help alter aspects of their lives over which they can exercise some control (Bandura, 1989, 1994). Thus, empowering vulnerable people through the expansion of their economic opportunities and building their capabilities, through entrepreneurship development programs (EDPs), for instance, seems to increase individuals' empowerment. For Fischer and McKee (2017), the empowerment of individuals in rural contexts is often seen to be linked to their capacities (e.g., social, personal) and to the types of capital the community can access (e.g., human, financial, and physical).

Entrepreneurship plays an important role in reducing economic inequality in emerging economies (Bruton et al., 2021). In the specific context of rural areas, agricultural entrepreneurship remains an engine for rural growth and development (Alkire et al., 2013; Ashley and Maxwell, 2002; Dias et al., 2019a). However, rural entrepreneurs often lack access to critical resources for creating new ventures (Bruton et al., 2021; Ranjan, 2019), mainly agricultural entrepreneurs who seem to have less entrepreneurial skills than other sectors (Pindado and Sánchez, 2017). There is a concern about the improvement of those skills namely through the implementation of entrepreneurship programs, targeted not only to farmers but also to agricultural students (Dias et al., 2019a). Furthermore, Young farmers are a particular group that



benefits from these entrepreneurship programs since, contrary to other sectors, younger people are less likely to become an entrepreneur in the agricultural sector (Pindado and Sánchez, 2017). Various EDPs have evolved over the years to offer entrepreneurial education, business, and technical training, and microfinancing to build vulnerable populations' capacities and promote entrepreneurship (Gine and Mansuri, 2014; Huis et al., 2019; McKenzie and Woodruff, 2014), mainly in rural contexts. Entrepreneurial capabilities can be learned through education and training (Kuratko, 2005). Rosairo and Potts (2016) argue that entrepreneurial attitudes are determined more by education than age and gender in the agricultural sector. The EDPs help improve entrepreneurs' financial literacy, business knowledge, and technical skills (Gine and Mansuri, 2014) and help acquire entrepreneurial attitudes and develop practical entrepreneurial skills (Al-awlaqi et al., 2021; Liu et al., 2021). In practice, institutional intermediaries, such as microfinance institutions and non-governmental organisations (NGOs), provide access to finance (e.g., microfinancing) and human capital (e.g., training) to empower marginalized individuals and promote entrepreneurial activities through various forms of economic strengthening frameworks (Karimli et al., 2021; Laszlo et al., 2020; Mair et al., 2012).

The empowerment literature predominantly investigates the relevance of access to microfinance for entrepreneurs' EE, mainly in the rural context. Microfinance is regarded as a mean to empower developing countries by supporting entrepreneurship (Weber and Ahmad, 2014). A rich literature provides evidence regarding the impact of microfinance on economic decision-making agency regarding loans, income use, and financial asset control (e.g., Holvoet, 2005; Weber and Ahmad, 2014), about implementing and using household borrowing (e.g., Pitt et al., 2006), and about major household decisions (Hashemi et al., 1996). The studies also show that access to microfinance promotes the development of entrepreneurs' social capital and economic networks (Hansen, 2015; Pitt et al., 2006; Sanyal, 2009).

More recently, the empowerment literature has also started to focus on the beneficial role of entrepreneurial education and training in altering individuals' EE in terms of economic decision-making agency and membership in economic networks (Bulte et al., 2016, 2018; Gine and Mansuri, 2014; Hansen, 2015; Holvoet, 2005; Huis et al., 2019). An increasing number of empirical studies have explored the impact of Gender and Entrepreneurship Together Ahead (Get Ahead) training, initially developed by the International Labor Organization (ILO) to improve business outcomes and enhance women's economic empowerment (Bulte et al., 2016, 2017; Huis et al., 2019). They find evidence that Get Ahead business training considerably attenuates the bargaining gap in household financial decisions by fortifying wives' bargaining positions (Bulte

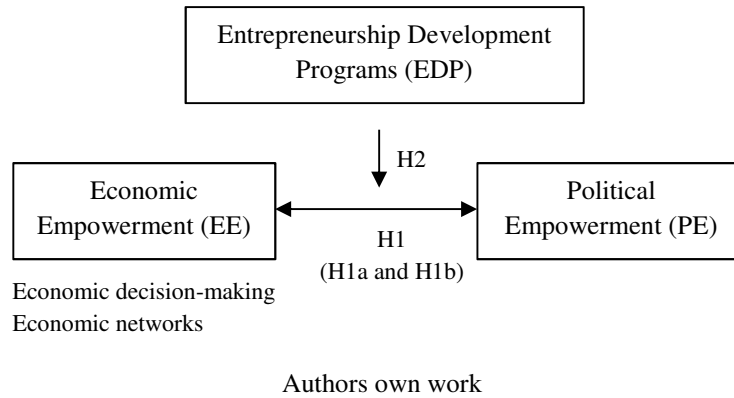
et al., 2016). The program is also observed to improve women's intra-household decision-making agency on larger expenditures (Huis et al., 2019). Similarly, Po and Hickey (2020) indicate that women having access to technical training opportunities in rural Kenya are more likely to be exposed to new agricultural methods or nutrition-sensitive information, influencing their preferences and farm decisions. Gine & Mansuri (2014) find that business training improves the financial decision-making of microfinance clients. Holvoet (2005) shows that a package including technical training and microfinancing has a more empowering effect on women in South India than a package offering only microfinancing. Training is found to shift women's overall decision-making patterns from being guided by norms and men's decision-making alone to more bargaining and joint decision-making on loan use, expenditure, money management, and agricultural business. Finally, Hansen's (2015) study finds that the additional business and technical training component in microfinance programs is particularly effective in stimulating women's social networks in Sri Lanka compared to access to only microloans.

Another set of studies in the political literature has asserted that access to and/or control of financial resources increases individuals' political participation (Hashemi et al., 1996; Isaksson, 2014), political representation (Iversen and Rosenbluth, 2008), civic engagement (Levin-Waldman, 2013), involvement in formal political activities (Girard, 2014), legal and political awareness (Datta, 2015; Hashemi et al., 1996; Pitt et al., 2006) and capacity for collective action (Datta, 2015; Hansen, 2015; Sanyal, 2009). A considerable proportion of these studies point to access to microfinance and its influence on individuals' political outcomes in the rural context, particularly for women. This literature displays that access to microloans improves rural women's freedom of mobility within villages, legal and political awareness (Datta, 2015; Hashemi et al., 1996; Pitt et al., 2006), participation in public campaigns, protests and meetings (Hashemi et al., 1996), negotiation power on gender barriers within households (Hashemi et al., 1996; Pitt et al., 2006). The literature also reveals an increase in women's capacity for collective action through seeking, receiving, and providing help in times of crisis (Sanyal, 2009) or resolving community-level issues (Datta, 2015), compared to control groups of rural women having no access to microloans.

Taken together, the EDPs, including entrepreneurial training and microfinance, may play a moderator role on the EE-PE association. We formulate, thus, the following hypothesis:

H2: The EDPs strengthen the individuals' EE-PE association.

**Fig1: Moderation effect of EDPs on the EE-PE association**



### 3. Research design

The objective of the study is to test the individuals' EE-PE association (H1, H1a and H1b) and whether the entrepreneurship development process (EDP) strengthens such association (H2). This section presents the research design, including the sampling procedure, data collection instruments and method, and data analysis techniques.

#### 3.1. Sampling procedure

The target population of the study is participants in the "Entrepreneurship for the Participation and Inclusion of Vulnerable Youth in Tunisia (EPVIYT)" Program (see Box 1) implemented in 4 provinces in north-western Tunisia: Beja, Jendouba, Siliana, and Kef. This region is typically rural and displays the highest poverty rate (28,4% versus 15,2% at the national level) (INS, 2020), high rate of unemployment (20,3%) (Nabi, 2019), and low civic and political engagement among young people (The World Bank, 2014).

At the time of the data collection, between December 2019 and July 2020, the EPVIYT program was at the microfinancing stage (see Box 1), which was the first year of access to microcredit, and took place almost two years after the beginning of the training sessions. All participants were aware that the EPVIYT program no longer offered funding.

The target population includes 1200 participants in the EPVIYT program, among which 200 (17% of the total participants) were selected to go through the entrepreneurship process, which included technical and business training sessions and microfinancing. The 1200 participants were recruited in equal proportions from 4 provinces in northwestern Tunisia: Beja, Jendouba, Siliana, and Kef, which corresponds to 300 individuals from each province (25% of the total participants). Besides, the 200 beneficiaries were jointly selected by the NGO in charge of implementing the EPVIYT program, and the microfinance institution partner (in equal proportions from 4

provinces). The NGO's assessment is based, first, on participants' attendance at the political/citizen training sessions and, second, on their availability to participate in 16 days of business and technical training sessions. The microfinance institution also checked for the participants' criminal records, their debt capacities, and the availability of guarantors or collaterals. Participants who were already indebted and had micro-credits were excluded from the selection. For more gender equality, a focus was put on women, which ended up with approximately 30% of the participants being women.

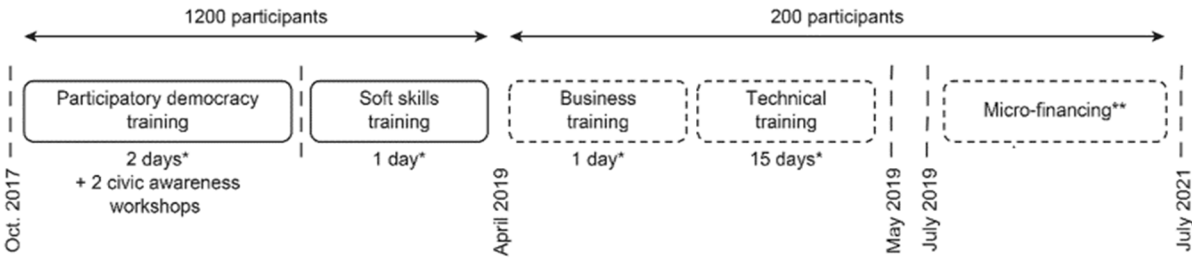
Given the large size of the study population, a stratified random sampling is used to construct the sample study based on the above-mentioned criteria: province of residence, involvement in the training and microfinancing process and gender.

**Box 1: The Entrepreneurship for the Participation and Inclusion of Vulnerable Youth in Tunisia Program**

The EPIVYT program implemented by Tamkeen for Development (T4D), an NGO acting to empower vulnerable populations in marginalized areas in Tunisia, aims to foster development pathways in marginalized rural areas. It was funded by the United Nations Democracy Fund (UNDEF) between 2017 and 2021. The main objectives include the civic and political empowerment of rural youth in northwestern Tunisia through entrepreneurship and strengthening their economic power.

The EPIVYT program consisted of two distinct but complementary processes, the political and the economic empowerment processes, including different sessions (see Table 1 and Fig. 2). The program recruited 1200 youths who were unemployed or with precarious jobs. Training centered on the development of civic skills, soft skills, technical skills, and business skills was accrued out to build participants' civic and entrepreneurial capabilities.

**Fig.2: The EPIVYT project timeline**



Authors own work

**Table 1: Training sessions**

<p><b>Participatory democracy training (Two days per participant)</b></p> <ul style="list-style-type: none"> <li>- Principles, tools, and techniques of participatory democracy</li> <li>- The role of civil society organizations</li> <li>- Skills needed for participatory democracy</li> <li>- Meetings with actors from the political and civic spheres</li> </ul>
<p><b>Citizen and political awareness workshops (Volunteering activities)</b></p> <ul style="list-style-type: none"> <li>- Training on local election observation</li> <li>- Workshops on participatory budgeting</li> <li>- Conferences on the contribution of rural women to regional development</li> <li>- Meetings with local government members</li> </ul>

<b>Soft skills training (One day per participant)</b> <ul style="list-style-type: none"> <li>- Access to job markets</li> <li>- Types of intelligence (emotional intelligence, etc.)</li> <li>- Soft skills and hard skills</li> <li>- Communication and interpersonal relationships</li> <li>- Good practices of communication</li> <li>- Public speaking, and speech preparation</li> </ul>
<b>Business training (One day per participant)</b> <ul style="list-style-type: none"> <li>- Starting a business, business planning</li> <li>- Basic book-keeping</li> </ul>
<b>Technical training (15 days per participant)</b> <ul style="list-style-type: none"> <li>- Calf fattening, sheep fattening, poultry farming, and beekeeping</li> </ul>

Authors own work

### 3.2.Data collection instruments and method

The study used a quantitative research method to understand the EE-PE association and how the EDP moderates this relationship (see Fig 1). Questionnaires were used to gather quantitative data on EE and PE indicators and individual-level information. This questionnaire is created by the authors based on the literature (see Section 3.3) and was administered by an interviewer to collect primary data on applicants. Each questionnaire is administrated through telephone interviews and lasted approximately 10-15 min for each respondent. The questionnaires covered topics concerning the participants' economic empowerment in terms of decision-making agency and economic networks membership, and political empowerment in terms of political choice, agency, and civic participation (see Table 2). The applicants were asked about their marital status, education (primary, secondary, or post-secondary level), gender, province of residence, and age. They were also asked for access to micro-loans and their project type (agricultural project or not). Secondary data on applicants' attendance at civic training sessions and civic awareness workshops were also provided by the NGO.

In total, 392 respondents agreed to participate in this study and provided informed consent (out of more than 450 contacted participants), for a response rate of 87% approximatively. After the filtering process, 49 questionnaires were identified as incomplete and screened out of the study. As the sample study is constructed based on the province of residence, involvement in the entrepreneurial process and gender, the final sample consists of 343 participants equally distributed over 4 provinces, 22% of whom (n=76) are beneficiaries of the entrepreneurial process (Technical and business training and microfinancing) and 35% are women (n =122). Finally, most of them do not have university degrees (62.3%, n = 213), have agricultural projects (62%, n = 213) and were aged 24/35 (64%, n=219). This analysis is completed by a matching

technique, the coarsened exact matching (CEM) method, as discussed in section 3.4 to overcome a potentially unbalanced sample.

### 3.3. Variables and measures

Table 2 details the dependent, explanatory, and control variables used in the quantitative analysis. Table 3 and Appendix 1 provide the related descriptive statistics and the Pearson correlation coefficients respectively. The construct variables used in this study followed the criteria from Hair (2011), with Cronbach's coefficient alpha equal to 0,6 or higher to assess the scale's reliability of each construct. The closer Cronbach's alpha coefficient is to 1, the greater the internal consistency of the items in the scale. We empirically tested the scale's reliability and validity using explanatory factor analysis (EFA) to generate each sub-index (see Table 2).

**Political empowerment (PE):** We follow Sundström et al. (2017) to construct the PE index. It includes three dimensions: the *PE\_Choice* sub-index, *PE\_Agency* sub-index, and *PE\_Participation* as presented in Table 2. We calculate the average of the dimensions below to construct the participant's overall *PE* index:

- (a) *PE\_Choice* sub-index captures whether participants can make meaningful decisions in critical areas of their daily lives (e.g., freedom of domestic movement, freedom from forced labor, right to private property, and access to justice). It combines four indicators (see Table 2). The Cronbach's coefficient alpha reliability of the sub-index is 0.87, indicating excellent internal reliability. The Kaiser-Meyer-Olkin (KMO) test indicates a good value of 0.82, showing adequate sampling.
- (b) *PE\_Agency* measures the participant's ability to engage in public debate freely through discussing political issues openly and participating in civil society organizations and media. It combines three indicators (see Table 2). The Cronbach's coefficient alpha is 0.94, indicating excellent internal reliability. Kaiser-Meyer-Olkin (KMO) indicates a good value of 0.77, showing adequate sampling.
- (c) *PE\_Participation* dimension captures participant citizen engagement and participation in political decision-making processes in their communities (Girard, 2014; Levin-Waldman, 2013; Mansouri, 2022; Stolle and Howard, 2008; Sundström et al., 2017), including membership in civil society organizations (CSOs), membership in political structure (political party, union, etc.), voting in the last elections (legislative and presidential elections in 2019), and participation to meetings with local authorities (e.g., municipal

meetings). The Cronbach's coefficient alpha is 0,59. We accept this value following (Hair, 2011).

**Economic empowerment (EE):** For the EE measures, we mobilize indicators developed for the agricultural sector (e.g., Alkire et al., 2013; Po and Hickey, 2020; Seymour and Peterman, 2018). The focus on the agricultural sector results from the objectives of the EPIVYT program, which is implemented in rural areas of northwestern Tunisia and aims to promote political empowerment among rural citizens through rural entrepreneurship in the agricultural sector. Participants have received business and technical training in agriculture and facilitated access to capital through microfinance to start farming (Box 1).

We assess, first, whether the participant is a primary decision-maker in agricultural and financial decisions and second, whether the participant is a member of at least one economic group in the agricultural sector as presented in Table 2. We calculate the average of the dimensions below to construct the participant's overall *EE* index

The *EE\_Decision-making* sub-index captures the extent to which participants benefit from the freedom to make a particular economic decision in a particular domain, including five indicators related to decision-making about agricultural production (e.g., project type, purchase of agricultural inputs, project monitoring, crops, and production sale) and three indicators related to decision-making about resources and income control/use (e.g., ownership, purchase, sale, or transfer of assets; access to/use of financing). We construct, thus, the *EE\_Decision-making [Agricultural]* and the *EE\_Decision-making [Financial]* measures. The Cronbach's coefficients alpha are 0.98 and 0,89 respectively, indicating excellent internal reliability.

The *EE\_Participation* dimension captures participants' involvement in at least one professional group in the agricultural sector, such as agricultural producer groups, agricultural cooperatives, agricultural associations, trade, and business associations, or other economic groups (a yes/no question) (Alkire et al., 2013; Prillaman, 2017). The economic groups are not restricted to formal agriculture-related groups. Other informal groups provide essential sources of social capital that are resources for empowerment and could be essential sources of agricultural information and inputs (Alkire et al., 2013). 37% of respondents state belonging to economic groups (Table 3).

**Entrepreneurship development process (EDP):** It is a binary variable that takes the value 1 if the participant received the business and technical training and micro-financing provided by the EPIVYT program, and 0 otherwise.

### **Control variables:**

As political and civic behavior tends to vary across socio-demographic groups (Isaksson, 2014; Levin-Waldman, 2013; Solt, 2008), we control for individual-level factors that could affect participants' PE. First, we control for the applicants' marital status (married, single), education (primary, secondary, or post-secondary level), gender, the province of residence, and age. Second, as the 200 beneficiaries of the entrepreneurial training and micro-credits provided by EPVIYT were selected jointly by the NGO and the microfinance partner (see section 2.1), we control for the applicants' attendance at the civic and political empowerment process, property ownership and project nature (agricultural entrepreneur or not). Finally, we control for access to microcredits as, during the administration of the questionnaires, some participants not selected among the 200 beneficiaries, declared that they had ongoing microcredits outside of the EPVIYT program. Some of them state they applied for microcredit to fund their projects even before the start of the business and technical training (the entrepreneurial process).

### **3.4. Econometric modeling**

To investigate the Participants' EE-PE association (H1: H1a and H1b) and the moderation effect of the entrepreneurship development process (EDP) on such association (H2), the following regression models are estimated (Baron and Kenny, 1986; Helm and Mark, 2012) :

$$PE_i = C + \beta_1 EE_i + \beta_2 EDP_i + \sum_{j=1}^J \beta_j X_i + \varepsilon_i \quad (\text{Eq. 1})$$

$$PE_i = \gamma_0 + \gamma_1 EE_i + \gamma_2 EDP_i + \gamma_3 EE_i * EDP + \sum_{j=1}^J \gamma_j X_i + \varepsilon_i \quad (\text{Eq. 2})$$

where C is the constant term,  $\beta_j$  are the coefficients,  $PE_i$  is the political empowerment level for specific individual i,  $EE_i$  is the economic empowerment level for specific individual i, EDP is the entrepreneurship development process,  $X_i$  are the control variables and  $\varepsilon_i$  is the error term.

Data were first tested for data normality (see Skewness and Kurtosis of the variables mobilised for the regressions in Table 3) and factorability using explanatory factor analysis (see section 3.3 and Table 2 for Cronbach coefficients).

We run OLS regressions by controlling for provinces' fixed effects and individual-level factors. We run a Wald test of exogeneity for all regressions to address any potential endogeneity bias. The Wald test statistics are not significant; thus, we fail to reject the null hypothesis.

Furthermore, since the survey subjects of this study are not randomly allocated to the treatment group (beneficiaries of the EDP), self-selection bias may exist. For robustness testing for results,



we apply coarsened exact matching (CEM) method (Blackwell et al., 2009; Iacus et al., 2012), which is a matching technique for improving the estimation of causal effects by reducing imbalance in covariates between treated and control groups. After the sample is checked for imbalance, based on  $L1$  as explained in (Blackwell et al., 2009), the results show that CEM improves the balance between the treated and control groups, reducing the sample from 343 to 292 individuals with similar characteristics. In the model, the original unbalanced sample has an  $L1$  of 0.36, knowing that a value closer to 1 indicates a very unbalanced sample (Iacus et al., 2012). After the matching procedure is performed, the  $L1$  decreases to  $2.14e-16$  (approximately zero), indicating a very balanced sample.

<b>Table 2: Variables and measures</b>		
<b>Variables</b>	<b>Explanations/Questions of the questionnaire</b>	
<b>PE</b>	<b>Political empowerment index</b>	
<b>PE_Choice</b>	<b>Political empowerment choice sub-index</b> Each indicator is scored on an ordinal scale ranging from 1(enjoy no rights) to 5 (enjoy all rights). The questions take the following format: “On a scale of 1 to 5, how much freedom do you enjoy [domain]?”: ...to move freely? ...to work freely without any kind of forced labour? ... the right to acquire, possess, inherit, and sell a private property? ... access to justice without risk to their safety, and they enjoy the rights to counsel, defense, and appeal?	The Cronbach's alpha: 0.87
Domain: Freedom of movement	...to move freely?	
Domain: Freedom from forced labour	...to work freely without any kind of forced labour?	
Domain: Freedom of property rights	... the right to acquire, possess, inherit, and sell a private property?	
Domain: Freedom of access to justice	... access to justice without risk to their safety, and they enjoy the rights to counsel, defense, and appeal?	
<b>PE_Agency</b>	<b>Political empowerment agency sub-index</b> Each indicator is scored on an ordinal scale ranging from 1(almost never) to 5 (almost always). The questions take the following format: On a scale of 1 to 5, to what extent you are you able to [domain]?”: ...to discuss political issues openly? ...to participate in civil society organizations? ...to participate and be represented in media?	The Cronbach's alpha: 0.94
Domain: Freedom of discussion	...to discuss political issues openly?	
Domain: Freedom of participation in CSOs	...to participate in civil society organizations?	
Domain: Freedom of participation in media	...to participate and be represented in media?	
<b>PE_Participation</b>	<b>Political and citizen participation</b> The dimension measures the extent to which individuals participate in civic and political activities. Each indicator takes one if the individual participates in the activity. The questions take the following format (Yes or no question): Are you an active member of an association or another civil society organization? Did you exercise your right to vote in the last presidential or legislative elections in 2019? Do you participate locally in your community? (e.g. you participate in meetings initiated by local authorities, you make complaints to local authorities, etc.) Are you an active member of a political party or other political structure (e.g. union)?	The Cronbach's alpha: 0.59
CSO_Membership	Are you an active member of an association or another civil society organization?	
Voting	Did you exercise your right to vote in the last presidential or legislative elections in 2019?	
Local_Participation	Do you participate locally in your community? (e.g. you participate in meetings initiated by local authorities, you make complaints to local authorities, etc.)	
Political_Participation	Are you an active member of a political party or other political structure (e.g. union)?	
<b>EE</b>	<b>Economic empowerment index</b>	
<b>EE_DecisionMaking</b>	<b>Decision-making agency in economic life sub-index</b> Each indicator is scored 0, 0.5, or 1. The dimension measures the extent to which individuals benefit from the freedom to make a particular economic decision. The questions take the following format: “Do you need the permission of someone else to decide on a particular [Domain]?” Response options include (i) Never, (ii) occasionally or (iii) Usually, I need to take someone else's permission. The score is ranked 1; 0.5 and 0 for never, occasionally, and usually responses.	The Cronbach's alpha: 0.97
<b>DecisionMaking [Agricultural]</b>	<b>Decision-making agency about production and agricultural aspects sub-index</b>	The Cronbach's alpha: 0.98
Domain: ProjectType	Decision-making about the project type	
Domain: PurchaseAgriculturalInput	Decision-making about the purchase of agricultural input	
Domain: ProjectMonitoring	Decision-making related to the monitoring of the project	
Domain: Crops	Decision-making related to crops	
Domain: ProductionSale	Decision-making related to the sale of production	

<b>DecisionMaking [Financial]</b>	<b>Decision-making about financial aspects sub-index</b>	The Cronbach's alpha: 0.89
Domain: Assets	Decision-making related to the ownership, purchase, sale, or transfer of assets	
Domain: Financing	Decision-making related to access to/use of financing	
Domain: Income	Decision-making about control/use of income	
<b>EE_Participation</b>	<b>Membership in economic networks</b>	
	It takes one if the individual is a member of at least one economic network (informal or formal), zero otherwise	
EDP	It takes one if the individual received entrepreneurial training and micro-financing provided by the EPVIYT program	
Micro-loans	It takes one if the individual has a micro-credit, zero otherwise	
Agricultural_Project	It takes one if the individual project is related to the agricultural sector, zero otherwise	
Civic_Awareness	It captures the individual's involvement in the citizen empowerment process offered by the program, zero otherwise	
Property_Ownership	It takes one if the individual owns at least a real estate asset (agricultural land, house, etc.), zero otherwise	
Education	It captures the individual's education level: Primary, secondary or Post-secondary	
Women	It takes one if the individual is a woman	
Married	It takes one if the individual is married	
Age	The individual's age	
Province	Participants come from four provinces: Beja, Jendouba, Kef, and Siliana	

Authors own work

**Table 3: Descriptive Statistics**

Variables	Obs.	Mean	Std. Dev.	Min	Max	Skewness	Kurtosis
<b>PE</b>	331	-0,012	0,604	-2,062	1,187	-0,82	3,22
PE_Choice	341	0,000	0,919	-4,676	0,539		
PE_Agency	343	0,000	0,967	-1,673	0,806		
PE_Participation	333	0,000	0,717	-0,403	2,313		
CSO_Membership	341	0,219	0,414	0	1		
PoliticalStructure_Membership	342	0,102	0,303	0	1		
Voting	343	0,758	0,428	0	1		
Local_Participation	343	0,518	0,500	0	1		
<b>EE</b>	337	0,105	0,582	-1,308	1,114	-0,29	1,75
EE_Decision-making	339	0,000	0,928	-2,874	1,921	-0,45	2,01
EE_Decision-making [Agricultural]	339	0,000	0,801	-2,927	1,702	-0,55	2,74
EE_Decision-making [Financial]	341	0,000	0,933	-1,413	0,959	-0,45	1,65
EE_Participation	343	0,370	0,48	0	1	0,74	1,55
EDP	343	0,22	0,418	0	1	1,15	2,32
Micro-loans	343	0,580	0,498	0	1	0,21	1,04
Agricultural_Project	343	0,621	0,486	0	1	-0,49	1,24
Civic_Awareness	342	3,725	0,804	3	6	0,84	2,93
Property_Ownership	342	0,386	0,396	0	1	0,42	1,71
Women	343	0,356	0,479	0	1	0,60	1,36
<b>Marital Status</b>						0,38	1,14
Single	343	0,595	0,492	0	1		
Married	343	0,405	0,492	0	1		
<b>Education</b>						-0,32	2,06
Primary	342	0,158	0,365	0	1		
Secondary	342	0,465	0,499	0	1		
Post-Secondary	342	0,377	0,485	0	1		
<b>Age</b>						-0,02	2,81
[19-24]	343	0,111	0,314	0	1		
[24-35]	343	0,644	0,479	0	1		
[36-48]	343	0,245	0,431	0	1		
<b>Provinces</b>						0,27	1,74
Beja	343	0,254	0,436	0	1		
Jendouba	343	0,254	0,436	0	1		
Kef	343	0,248	0,432	0	1		
Siliana	343	0,244	0,430	0	1		

Authors own work

## 4. Empirical results

The study hypothesizes, first, a positive association between individuals' economic empowerment EE, in terms of economic decision-making agency and membership to economic networks, and their political empowerment PE (H1, H1a and H1b). Second, the study hypothesizes the existence of a moderation effect of the entrepreneurship development process EDP, offering entrepreneurial training and microfinancing, on this relationship (H2).

### 4.1. The EE-PE relationship and the moderation effect of EDP on this association results

Table 4 presents the estimation results on the EE-PE association to test H1 and H2 using OLS regressions. As shown in Model 1, individuals' EE is positively associated with PE at the 1%

level of significance. The result shows that a one-unit change in an individual’s EE implies an increase of 20 percentage points in PE. The same result is found when focusing on the EE dimensions, as shown for economic decision-making agency (Model 2) and participation in the agricultural economic community (Model 5), at the 5% and 1% levels of significance, respectively. We also observe that the dimensions do not provoke the same magnitude of PE. We find that membership in agricultural networks increases PE levels by 32 percentage points, compared to an increase of 7 percentage points for decision-making agency in economic life. The results also give insights regarding the effect of decision-making agency regarding agricultural and financial aspects on PE and show that higher decision-making power to control/use financial resources is more likely to provoke a slightly greater increase in PE, at the 10% and 1% levels of significance, respectively (see Models 3 and 4). Overall, the findings show that when rural individuals have expanded their economic decision-making agency or are members of economic groups, they are more likely to demonstrate an enhanced political and citizen empowerment level, which supports hypotheses H1a and H1b and thus, H1.

Regarding the control variables, we find that higher education is observed to be significant at a 5% level of significance meaning that higher educational attainment is an essential factor in being civically and politically empowered which aligns with the literature on the impact of human resources on political and civic participation (Isaksson, 2014; Levin-Waldman, 2013; Norris, 2008; Sell and Minot, 2018; Solt, 2008). Education provides cognitive skills, strengthens a sense of internal efficacy and a feeling of competence to engage, and increases knowledge and awareness about public affairs, facilitating all types of political and civic activism. Finally, the participants who report possessing private property (agricultural farms, houses, etc.) demonstrate higher PE behaviour as demonstrates the positive and significant coefficients of Property Ownership, meaning that access to physical resources is an essential factor in being politically and civically empowered in rural areas.

**Table 4: OLS regressions. EE-PE association. Full sample**

	(1)	(2)	(3)	(4)	(5)
	PE	PE	PE	PE	PE
EE	0.20*** (0.06)				
EE_DecisionMaking		0.07** (0.04)			
EE_DecisionMaking [Agricultural]			0.06* (0.04)		
EE_DecisionMaking [Financial]				0.09*** (0.03)	

EE_Participation					0.32*** (0.07)
EDP	-0.22** (0.10)	-0.22** (0.10)	-0.22** (0.10)	-0.20** (0.10)	-0.24** (0.10)
Micro-loans	0.03 (0.09)	0.04 (0.09)	0.03 (0.09)	0.02 (0.09)	0.04 (0.09)
Agricultural_Project	0.09 (0.09)	0.10 (0.09)	0.10 (0.09)	0.11 (0.09)	0.02 (0.09)
Property_Ownership	0.15 (0.09)	0.15 (0.10)	0.16 (0.10)	0.17 (0.09)	0.15 (0.09)
Civic_Awareness	-0.02 (0.04)	-0.02 (0.04)	-0.01 (0.04)	-0.01 (0.04)	-0.03 (0.04)
Women	-0.04 (0.09)	-0.09 (0.09)	-0.08 (0.09)	-0.06 (0.09)	-0.09 (0.08)
Married	-0.07 (0.07)	-0.06 (0.07)	-0.07 (0.07)	-0.08 (0.07)	-0.07 (0.07)
Education [Secondary]	-0.15* (0.09)	-0.16* (0.09)	-0.15* (0.09)	-0.17* (0.09)	-0.19** (0.09)
Education [Post-secondary]	0.22** (0.10)	0.22** (0.10)	0.22** (0.10)	0.21** (0.10)	0.18* (0.10)
Age [24-35]	0.16 (0.11)	0.17 (0.11)	0.18 (0.11)	0.18* (0.11)	0.16 (0.11)
Age [36-48]	0.21* (0.13)	0.24* (0.13)	0.24* (0.13)	0.25** (0.12)	0.18 (0.12)
Constant	-0.06 (0.21)	-0.04 (0.21)	-0.06 (0.21)	-0.07 (0.21)	0.01 (0.20)
Observations	323	324	324	326	327
Province FE	Yes	Yes	Yes	Yes	Yes
R-squared	0.19	0.17	0.16	0.18	0.20
F	4.690***	4.173***	4.047***	4.472***	5.317***

Standard errors in parentheses, \*\*\* p<0.01, \*\* p<0.05, \* p<0.1  
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Table 5 presents the estimation results of the moderation role played by the entrepreneurship development process (EDP) on the EE-PE association to test H2 using OLS regressions. We consider EE indicators' interactions with the entrepreneurship development process (EDP) in explaining PE (Models 1-5, Eq. 2). As illustrated in Model 1, the interaction term of EE with EDP is observed to be significant and positive at a 1% level of significance. Similar results are also observed for the EE dimensions where the interaction terms EE\_ DecisionMaking\*EDP and EE\_Participation\*EDP appear to be positively significant at a 1% level as shown in Models 2 and 5 (Table 6). Furthermore, when focusing on the interaction terms with the decision-making agency sub-dimensions related to agricultural and financial aspects, the moderation effect is only observed on the decision-making agency [Agricultural] and PE relationship at a 10% level of significance (Model 3, Table 6). Overall, the findings show that expanding rural individuals' economic opportunities by providing entrepreneurial resources (human and financial) strengthen individuals' EE-PE association, supporting thus, H2.

**Table 5: OLS regressions. Moderation effect of EDP on EE-PE association. Full sample**

	(1)	(2)	(3)	(4)	(5)
	PE	PE	PE	PE	PE
EE	0.12*				
	(0.07)				
EE*EDP	0.28***				
	(0.12)				
EE_ DecisionMaking		0.03			
		(0.04)			
EE_ DecisionMaking * EDP		0.24***			
		(0.09)			
EE_ DecisionMaking [Agricultural]			0.02		
			(0.05)		
EE_ DecisionMaking [Agricultural]* EDP			0.16*		
			(0.09)		
EE_ DecisionMaking [Financial]				0.07*	
				(0.04)	
EE_ DecisionMaking [Financial]* EDP				0.12	
				(0.08)	
EE_Participation					0.21***
					(0.08)
EE_Participation* EDP					0.36***
					(0.15)
EDP	-0.26**	-0.23**	-0.23**	-0.20**	-0.38***
	(0.10)	(0.10)	(0.10)	(0.10)	(0.12)
Micro-loans	0.04	0.04	0.03	0.02	0.06
	(0.09)	(0.09)	(0.09)	(0.09)	(0.09)
Property_Ownership	0.14	0.14	0.16*	0.15*	0.15*
	(0.09)	(0.09)	(0.10)	(0.09)	(0.09)
Civic_Awareness	-0.02	-0.02	-0.02	-0.01	-0.03
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Agricultural_Project	0.12	0.12	0.13	0.13	0.03
	(0.09)	(0.09)	(0.09)	(0.09)	(0.09)
Women	-0.03	-0.08	-0.07	-0.05	-0.08
	(0.09)	(0.08)	(0.09)	(0.09)	(0.08)
Married	-0.06	-0.05	-0.07	-0.07	-0.07
	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)
Education [Secondary]	-0.17*	-0.18**	-0.16*	-0.17**	-0.19**
	(0.09)	(0.09)	(0.09)	(0.09)	(0.09)
Education [Post-secondary]	0.22**	0.22**	0.22**	0.21**	0.19**
	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)
Age [24-35]	0.16	0.17	0.18*	0.18*	0.15
	(0.11)	(0.11)	(0.11)	(0.11)	(0.11)
Age [36-48]	0.20	0.21*	0.24**	0.24**	0.17
	(0.12)	(0.13)	(0.13)	(0.12)	(0.12)
Constant	-0.05	-0.01	-0.07	-0.08	0.03
	(0.20)	(0.21)	(0.21)	(0.21)	(0.20)
Observations	323	324	324	326	327
Province FE	Yes	Yes	Yes	Yes	Yes
R-squared	0.20	0.19	0.17	0.18	0.22
F	4.844***	4.474***	4.015***	4.346***	5.445***

Standard errors are in parentheses. \*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1

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## 4.2. Robustness tests

This section presents robustness tests based on coarsened exact matching (CEM) estimations. Table 6 presents findings related to the EE-PE association while Table 7 presents those on the moderation effect of EDP on this association. Overall, Tables 6 and 7 show similar results compared to those presented in Tables 4 and 5.

As shown in Table 6, Model 1 reveals that individuals' EE is positively associated with PE at the 1% level of significance. The result shows that a one-unit change in farmers' EE implies an increase of 22 percentage points in their PE. Similar significant results are found for the EE dimensions, as shown for economic decision-making agency (Models 3-4) and involvement in the economic networks (Model 5). Similar significant coefficients are also shown in CEM regressions considering control variables (Models 6-10, Table 6). Overall, CEM estimations support the first hypothesis H1 dealing with a significant positive EE-PE association.

Regarding the moderation effect of EDP on the EE-PE relationship, we consider EE indicators' interactions with EDP in explaining PE. As illustrated in Model 1, the interaction term of EE with EDP is observed to be significant and positive at a 5% level of significance (Model 1). Similar results are also observed for the EE dimensions where the interaction terms EE\_DecisionMaking\*EDP and EE\_Participation\*EDP appear to be positively significant at a 1% level as shown in Models 2 and 5, respectively. When focusing on the interaction terms with the decision-making agency sub-dimensions (Agricultural and Financial), the moderation effect is observed at a 10% level of significance for both sub-dimensions, respectively (see Models 3-4) and Models 6-10). Overall, the CEM estimations show that providing entrepreneurial resources (human and financial) reinforces individuals' EE-PE relationship, supporting thus, H2. Fig3 illustrates these results where intersections are observed for EE indicators with PE, then there are significant interactions between them (using the sample based on the CEM method).

We note that, compared to the OLS regression estimation showing an insignificant coefficient of the interaction term, EE\_DecisionMaking [Financial]\*PE (Table 5, Model 4), the CEM coefficient appears significant (Table 7, Models 4 and 9). The EDP also appears significantly negative in all CEM regressions in Table 6, except for Models 1-4.



**Table 6: Coarsened Exact Matching. EE-PE association. Full sample**

	(1) PE	(2) PE	(3) PE	(4) PE	(5) PE	(6) PE	(7) PE	(8) PE	(9) PE	(10) PE
EE	0.22*** (0.07)					0.20*** (0.06)				
EE_DecisionMaking		0.06 (0.04)					0.06 (0.04)			
EE_DecisionMaking [Agricultural]			0.11** (0.05)					0.08* (0.05)		
EE_DecisionMaking [Financial]				0.07* (0.04)					0.06* (0.04)	
EE_Participation					0.37*** (0.08)					0.37*** (0.07)
EDP	-0.16 (0.10)	-0.1 (0.10)	-0.16 (0.10)	-0.15 (0.10)	-0.17* (0.10)	-0.18* (0.10)	-0.18* (0.10)	-0.18* (0.10)	-0.16* (0.10)	-0.19** (0.10)
Micro-loans	0.01 (0.09)	0.02 (0.09)	0.01 (0.09)	0.01 (0.09)	0.02 (0.09)	0.02 (0.09)	0.03 (0.09)	0.03 (0.09)	0.02 (0.09)	0.03 (0.09)
Agricultural_Project	0.00 (0.10)	0.04 (0.10)	0.03 (0.10)	0.04 (0.10)	-0.09 (0.10)	0.05 (0.10)	0.07 (0.10)	0.07 (0.10)	0.08 (0.10)	-0.04 (0.10)
Property_Ownership	0.23** (0.10)	0.26** (0.10)	0.26** (0.10)	0.26*** (0.10)	0.26*** (0.10)	0.19* (0.10)	0.20** (0.10)	0.21** (0.10)	0.21** (0.10)	0.21** (0.10)
Civic_Awareness	-0.02 (0.05)	-0.02 (0.05)	-0.02 (0.05)	-0.01 (0.05)	-0.04 (0.05)	-0.02 (0.05)	-0.02 (0.05)	-0.02 (0.05)	-0.02 (0.05)	-0.04 (0.04)
Women	0.07 (0.09)	0.00 (0.09)	0.04 (0.09)	0.02 (0.09)	-0.02 (0.08)	-0.02 (0.10)	-0.09 (0.10)	-0.05 (0.10)	-0.07 (0.10)	-0.11 (0.09)
Married						-0.04 (0.08)	-0.03 (0.08)	-0.04 (0.08)	-0.04 (0.08)	-0.04 (0.07)
Education [Secondary]						-0.07 (0.11)	-0.06 (0.11)	-0.05 (0.11)	-0.08 (0.11)	-0.13 (0.11)
Education [Post-secondary]						0.26** (0.12)	0.27** (0.13)	0.26** (0.13)	0.25** (0.12)	0.19* (0.12)
Age [24-35]						0.28* (0.15)	0.30** (0.15)	0.28* (0.15)	0.31** (0.15)	0.28** (0.14)
Age [36-48]						0.36** (0.16)	0.39** (0.16)	0.38*** (0.16)	0.40*** (0.16)	0.32** (0.15)
Constant	0.08 (0.19)	0.08 (0.19)	0.09 (0.19)	0.06 (0.19)	0.12 (0.19)	-0.17 (0.25)	-0.19 (0.25)	-0.19 (0.25)	-0.21 (0.25)	-0.07 (0.24)
Observations	276	276	276	279	280	276	276	276	279	280
Province FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-squared	0.14	0.11	0.12	0.11	0.18	0.21	0.19	0.19	0.19	0.25
F	4.159***	3.122***	3.487***	3.219***	5.738***	4.659***	3.985***	4.099***	4.092***	5.855***

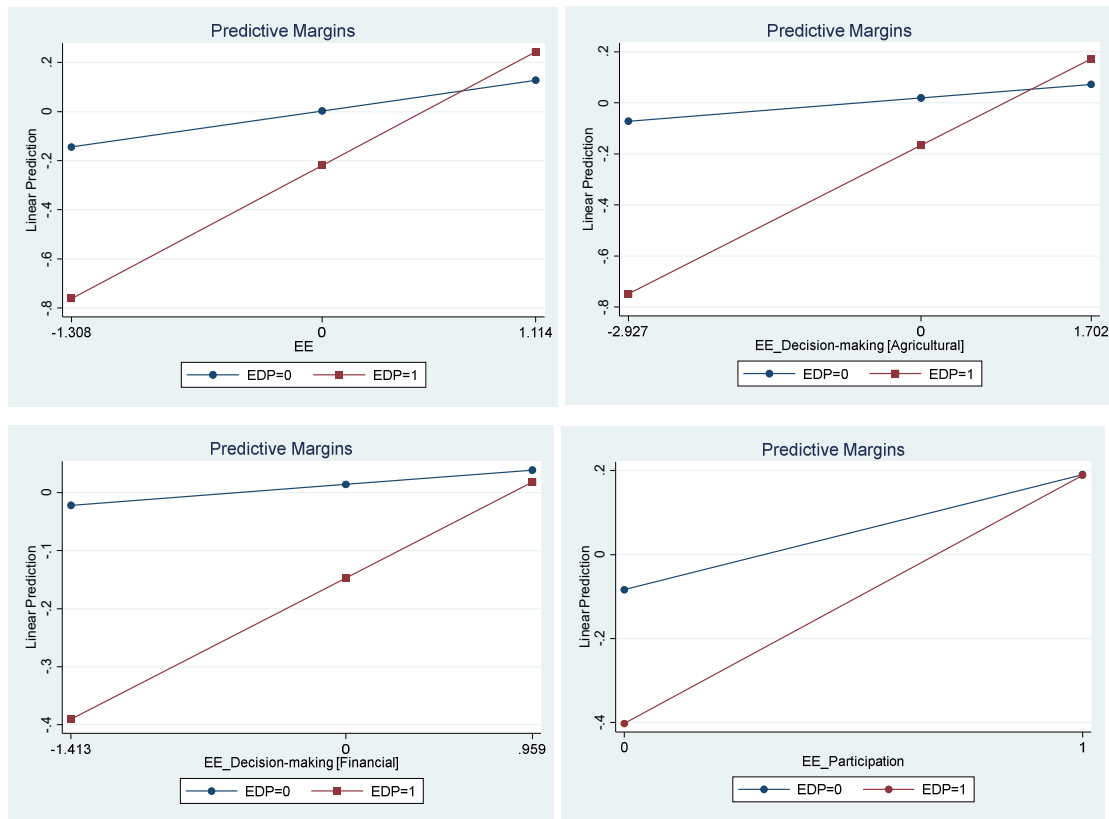
Standard errors in parentheses, \*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1. Authors own work

**Table 7: Coarsened Exact Matching. Moderation effect of EDP on EE-PE association. Full sample**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	PE	PE	PE	PE	PE	PE	PE	PE	PE	PE
EE	0.14*					0.10				
	(0.08)					(0.07)				
EE*EDP	0.28**					0.31***				
	(0.13)					(0.13)				
EE_ DecisionMaking		-0.00					-0.01			
		(0.05)					(0.05)			
EE_ DecisionMaking * EDP		0.25***					0.27***			
		(0.10)					(0.09)			
EE_ DecisionMaking [Agricultural]			0.06					0.02		
			(0.06)					(0.06)		
EE_ DecisionMaking [Agricultural]* EDP			0.14*					0.18*		
			(0.10)					(0.10)		
EE_ DecisionMaking [Financial]				0.03					0.02	
				(0.05)					(0.04)	
EE_ DecisionMaking [Financial]* EDP				0.15*					0.15*	
				(0.08)					(0.08)	
EE_Participation					0.29***					0.28***
					(0.09)					(0.09)
EE_Participation* EDP					0.26*					0.28*
					(0.15)					(0.15)
EDP	-0.16	-0.14	-0.12	-0.10	-0.25**	-0.17	-0.15	-0.13	-0.11	-0.26**
	(0.10)	(0.10)	(0.10)	(0.10)	(0.12)	(0.10)	(0.10)	(0.10)	(0.10)	(0.12)
Micro-loans	-0.03	-0.01	-0.02	-0.02	-0.02	-0.01	-0.00	-0.01	-0.02	-0.00
	(0.09)	(0.09)	(0.09)	(0.09)	(0.09)	(0.09)	(0.09)	(0.09)	(0.09)	(0.09)
Agricultural_Project	-0.03	-0.00	-0.01	-0.00	-0.14	0.02	0.03	0.03	0.03	-0.09
	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)
Property_Ownership	0.29***	0.30***	0.32***	0.31***	0.33***	0.25**	0.25**	0.28***	0.26***	0.29***
	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)	(0.10)	(0.09)
Civic_Awareness	-0.03	-0.04	-0.03	-0.03	-0.04	-0.04	-0.04	-0.04	-0.04	-0.05
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.04)
Women	0.07	-0.00	0.03	0.02	-0.02	-0.02	-0.10	-0.06	-0.07	-0.10
	(0.09)	(0.09)	(0.09)	(0.09)	(0.08)	(0.10)	(0.10)	(0.10)	(0.10)	(0.09)
Constant	-0.01	0.02	-0.01	-0.01	0.03	-0.27	-0.25	-0.31	-0.30	-0.17
	(0.18)	(0.18)	(0.18)	(0.18)	(0.18)	(0.24)	(0.25)	(0.24)	(0.24)	(0.24)
Observations	276	276	276	279	280	276	276	276	279	280
R-squared	0.11	0.09	0.09	0.08	0.15	0.18	0.17	0.16	0.16	0.22
F	4.299***	3.334***	3.135***	3.041***	6.144***	4.585***	4.075***	3.770***	3.816***	5.808***

Standard errors in parentheses, \*\*\* p&lt;0.01, \*\* p&lt;0.05, \* p&lt;0.1. Control variables are included in Models 6-10. Authors own work

**Fig 3: Predictive margins. The interaction of EE\_dimensions with PE**



Authors own work

## 5. Discussion

This study addresses two hypotheses related to the individuals' EE-PE association and the moderation effect of the agricultural entrepreneurial development process (EDP) on this association in rural areas. The focus on the agricultural sector results from the objectives of the EPIVYT program which aims to promote people's political and economic empowerment in rural areas through agricultural entrepreneurship. Overall, the findings show, first, that expanded economic decision-making agency and membership in economic networks increase citizen/political empowerment and, second, this relationship is more pronounced for individuals who have benefited from the agricultural entrepreneurial development process (EDP).

The empowerment literature supports these results. Indeed, the decision-making process allows for acquiring new skills such as information search, reasoning, negotiating interests, and formulating opinions (Bleck and Michelitch, 2018). It also strengthens individuals' feelings of autonomy (Seymour and Peterman, 2018) and perceived self-efficacy, defined by Bandura (1977) as strong beliefs in their competencies to understand and participate in a particular activity. These skills are relevant for active citizenship and political empowerment. Besides,

the findings support the hypothesis that economic networks promote citizen and political empowerment. Prillaman (2017) argues that membership in economic groups impacts the extent to which villagers participate in political activities, attend village assembly meetings, and make claims to local officials. Indeed, economic networks allow individuals to leave the family space and interact with people having different experiences in life (Sanyal, 2009) and be exposed to relevant information, knowledge, and news (Bleck and Michelitch, 2018; Prillaman, 2017; Sanyal, 2009). Economic networks provide, thus, space to build confidence in speaking openly and freely and strengthen individual's civic skills (Prillaman, 2017; Stolle and Howard, 2008) and the power of undertaking collective action (Hansen, 2015; Levin-Waldman, 2013; Prillaman, 2017; Sanyal, 2009).

The findings on the moderation effect of the EDP are consistent with the empirical literature investigating the influence of access to business and technical training (e.g., Bulte et al., 2016, 2018; Gine and Mansuri, 2014; Hansen, 2015; Holvoet, 2005; Huis et al., 2019) and microfinancing (e.g., Hansen, 2015; Holvoet, 2005; Pitt et al., 2006; Weber and Ahmad, 2014) on enhancing individuals' EE in terms of economic decision-making agency and economic networks. The results are also consistent with the empirical political literature arguing that access to/control of financial resources, mainly rural microcredit, increases individuals' political participation (Hashemi et al., 1996; Isaksson, 2014), civic engagement (Levin-Waldman, 2013), involvement in formal political activities (Girard, 2014), legal and political awareness (Datta, 2015; Hashemi et al., 1996; Pitt et al., 2006) and capacity for collective actions (Datta, 2015; Hansen, 2015; Sanyal, 2009), so their PE.

In more detail, the findings show that the moderation effect of the entrepreneurship development program is observed for the PE relationship with the decision-making agency in agricultural and financial aspects. Technical training and business training are likely to improve farmers' empowerment in the short term. Indeed, as the study takes place in the first year of the agricultural venture, the results may reveal that acquiring new agricultural methods, practices, and knowledge during technical training sessions could influence farmers' preferences and agricultural decision-making agency in the short term, explaining the significant increase in PE. Similarly, the results reveal that acquiring financial knowledge during business training sessions could influence farmers' financial decision-making agency in the short term, explaining the significant increase in PE. The latter result is different from previous studies focusing on women's empowerment suggesting that it takes time for business training outcomes regarding empowerment to materialize (Bulte et al., 2017; Huis et al., 2019, 2017). Huis et al.

(2019) argue that it may take some time before newly acquired business skills can be implemented and yield improved business capacity outcomes, resulting in increased empowerment. Huis et al. (2019) find evidence only for a medium-term effect and not for a short-term effect of business training. Bulte et al. (2017) report that providing female microfinance borrowers access to business training results in more pronounced economic impacts in the medium rather than the short run. Our result is different and this may be attributed to the study sample which is composed of men and women, contrary to the above-mentioned studies focusing on women empowerment.

Besides, the negative effect of EDP reveals that beneficiaries of the EDP appear to manifest lower PE at the time of the analysis. This could be related to the time allocated to/available for agricultural activities for new agriculture ventures. Newly established agricultural entrepreneurs seem to be exposed to an excessive workload in the first year of their agricultural venture and the latter takes time to generate income, which could harm their civic and political behaviour in the short run. This statement is in line with Alkire et al. (2013) arguing that time constraints in the agricultural sector can negatively affect different aspects of individuals' social life. Similarly, Levin-Waldman (2013) reports that individuals with higher income are more likely to be civically engaged as they feel more autonomous, self-sufficient, and more secure economically, so they may have more leisure time to devote to thinking about civic and political matters. However, we note that this negative effect is observed in Models 5 and 10 (Table 7) when testing the moderation effect of EDP on access to economic networks and PE relationship. Despite this negative effect ( $\beta = -0,26^{**}$ ), the impact of economic networks on PE is observed to be slightly greater and more significant, as reveals the coefficient of EE\_participation ( $\beta = 0,28^{***}$ ), which may counterbalance the negative effect of the EDP on PE. As we already developed, economic networks are relevant to enhance agricultural entrepreneurs' civic behaviors. This result points to the benefits of business networks that could outweigh the time constraints for agricultural entrepreneurs to be civically and politically engaged.

## **5.1. Contributions**

The current study extends the previous literature by linking three branches: entrepreneurship, economic empowerment and political and citizen empowerment. It contributes to the body of knowledge in several ways.

While there is growing research on economic empowerment and citizen and political empowerment, few studies address the intersection of these two kinds of literature. Our study joins the emerging literature linking socio-economic empowerment and political outcomes (Bargain et al., 2019; Bleck and Michelitch, 2018; Deininger et al., 2019). It complements also the large literature emphasizing how people's degree of political engagement and participation depends critically on socio-economic resources like access to education, formal employment, gender inequalities, income generation, etc. (Girard, 2014; Isaksson, 2014; Iversen and Rosenbluth, 2008; Levin-Waldman, 2013). We contribute to these studies by providing evidence that, marginalized individuals' political and citizen empowerment, in terms of being active agents of change and participating in political decision-making processes, is positively related to their economic empowerment, in terms of economic decision-making agency and membership to economic networks, in rural areas.

Furthermore, we complement the literature linking entrepreneurship and democracy (Audretsch and Moog, 2020; Bellone and Goerl, 1992; Bjorn G, 2007; Greenwood, 2008; Vivona, 2023) by shedding light on the positive moderation effect of the entrepreneurship development programs on individuals' economic and political empowerment association. Building entrepreneurship skills includes in fact developing personal qualities which are useful in life and any working and social activity. The entrepreneurship process facilitates independent, decentralized, and autonomous decision-making, which serves as a cornerstone of democracy (Audretsch and Moog, 2020). Entrepreneurs, by exercising their economic freedom and power, are key players in promoting political freedom and citizen participation in political decision-making processes, which bring democracy. The recent study by Farè, Audretsch and Dejardin (2023) also shows that democracy fosters entrepreneurship. We provide evidence that this relationship is likely to be two-sided with entrepreneurship reinforcing economic and civic involvement in political-decision processes association, which sustains democracy.

## **5.2.Implications**

Our research provides practical implications that may be valuable to policy-makers in the field of rural development in newer developing democracies in the MENA Region. Citizens' political empowerment and inclusion in rural areas may be promoted by developing agricultural entrepreneurship and reinforcing entrepreneurs' technical and business knowledge, skills, and financial resources. Agricultural entrepreneurship is generally associated with rural areas (Dias

et al., 2019a) and remains an engine for rural growth and development (Alkire et al., 2013; Ashley and Maxwell, 2002; Dias et al., 2019a). Agricultural entrepreneurship can play an essential role in addressing rural political exclusion while strengthening income generation and reducing unemployment, which would improve social contracts in MENA countries, particularly in Tunisia. Indeed, the MENA countries had quite similar social contracts after their independence, which were based on the provision of social benefits rather than political participation (Loewe et al., 2021). Accordingly, in the pre-revolution era, MENA governments tended to deliver social and economic benefits to citizens (e.g., free health and education, commodity subsidies, and public sector jobs for graduates) while citizens accepted limited government accountability and restricted participation in political decision-making processes. The 2010-2011 Arab uprisings were an expression of discontent with a situation in which governments provided neither political participation nor social benefits, like employment (Loewe et al., 2021; Mansouri, 2022). Since then, MENA countries and their social contracts have evolved in quite different directions to become more inclusive and participatory to include citizens in political decision-making processes. Tunisia has made considerable progress (Loewe et al., 2021) but rural areas are still suffering from weak state-society relations (The World Bank, 2014). The hopes of Tunisian youth for democracy have started to fade, attributing this to the failure of both governments and political parties to address youth concerns as a priority, in particular the worsening economic situation and the stagnant job market (Mansouri, 2022). Entrepreneurship development programs could help overcome these concerns, reinforce the citizens-state relationship, and establish more stable social contracts, mainly in rural areas. Ashley and Maxwell (2002) argue that democracy and decentralisation are often presented as necessary conditions for effective rural development.

Our research also provides practical implications that may be valuable to the international development community, donor agencies and program designers. Development agencies and foundations make large investments in programs designed to strengthen democratic institutions and processes, yet little is known about the effectiveness of these programs in practice where political environments are less receptive to reform (Protik et al., 2018). It is important to understand which programs can be effective in influencing citizen local participation and how components of such programs work and interact with one another (Protik et al., 2018). Our results are based on a program sponsored by the United Nations Democracy Fund (UNDEF) to promote citizen participation in rural northwestern Tunisia. Called the Entrepreneurship for Participation and Inclusion of Vulnerable Youth in Tunisia (EPIVYT), this program aimed to

promote vulnerable youth's citizen empowerment and participatory democracy in post-revolution rural areas by promoting agricultural entrepreneurship. Our results encourage duplicating similar programs in other countries with weak central government structures (i.e., post-conflict environments, post-revolution) or that discourage some forms of open political discourse and active citizenship.

These results deserve now a more comprehensive approach to better understand the implications of such entrepreneurial development programs both for farmers and rural development. Complementary analyses based on qualitative data, used in a mixed-methods approach would therefore complement well the results of this study (Akimowicz et al., 2018).

## **6. Conclusion**

The present study investigates the EE-PE association and the contribution of entrepreneurship development programs to the EE-PE relationship for marginalized rural citizens in northwestern Tunisia. The findings confirm, first, a positive EE-PE association. Indeed, the findings show that when rural individuals have an enhanced economic decision-making agency or are members of economic groups, they are more likely to demonstrate an enhanced political empowerment level. Second, access to the entrepreneurship development process is observed to strengthen this relationship. The study provides practical implications for policymakers in newer developing democracies. Citizens' political empowerment and inclusion could be promoted by developing entrepreneurship and reinforcing entrepreneurs' knowledge, skills, and financial resources.

Despite the promising findings, a few limitations should be noted. First, although the present study employed a cross-sectional design to understand the EE-PE relationship for the participants to the program, longitudinal studies of longer duration should be conducted to examine how the entrepreneurship and empowerment mechanisms function in a post-revolution democracy. Second, the analysis time frame for this study takes place in the first year of the entrepreneurial experience of the participants trained and financed by the program. Although the results prove the effectiveness of the entrepreneurship development program in shaping the EE-PE association in the short term, exploring this association's temporal dimension would be a valuable contribution to the literature on the impact of economic and human resources on empowerment in the medium and long term. Third, our sample may not be representative of the general population of marginalized populations in rural areas because the study mobilized



participants in a particular entrepreneurship development program. The generalizability of the study may be somewhat limited by the characteristics of the sample. This limitation could be addressed through replication using other samples in future studies. The current study deserves to be completed with other studies in a comparative approach which would enrich the understanding of the interactions between EE, PE, and entrepreneurship initiatives.

## Abbreviations

EE: Economic Empowerment

EDP: Entrepreneurship Development Program

EPIVYT: Entrepreneurship for Participation and Inclusion of Vulnerable Youth in Tunisia

NGO: Non-Governmental Organisation

PE: Political Empowerment

UNDEF: United Nations Democracy Fund

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**Appendix 1: The correlation matrix**

	1	2	3	4	5	6	7	8	9	10	12	13	15	16	17	18	19	20	
1 PE	1																		
2 PE_Choice	0,77***	1																	
3 PE_Agency	0,82***	0,51***	1																
4 PE_Participation	0,43***	-0,02	0,09	1															
5 EE	0,23***	0,12***	0,07**	0,32**	1														
6 EE_DecisionMaking [Agricultural]	0,13**	0,11**	0,06	0,09	0,63***	1													
7 EE_DecisionMaking [Financial]	0,18***	0,21	0,09	0,04	0,57***	0,75***	1												
8 EE_Participation	0,31***	0,03	0,17***	0,51***	0,58***	0,19***	0,07***	1											
9 EDP	-0,12**	-0,18***	-0,20***	0,16	0,10**	0,03	-0,03***	0,16***	1										
10 Agricultural_Project	0,01	0,04	-0,11**	0,14***	0,35***	0,19***	0,10	0,40***	0,15	1									
12 Civic_Awareness	-0,12**	-0,12**	-0,22***	0,14	0,02	0,00	-0,04	0,05***	0,35	0,09**	1								
13 Property_Ownership	0,16***	0,23***	0,03	0,08	0,24***	0,16	0,13***	0,21***	0,09***	0,42	-0,02	1							
15 Micro-loans	-0,07***	-0,14**	-0,18***	0,25***	0,20***	0,12	0,05***	0,25	0,6***	,4***	,27***	,13***	1						
16 Women	-0,05	-0,19	0,03	0,07	-0,28***	-0,32***	-0,3**	-0,15	-0,1**	-0,44**	0,05	-0,3***	-0,15**	1					
17 Married	-0,06	-0,12**	-0,03	0,02	-0,01	-0,06	-0,03	0,08	0,03	0,03	0,06	0,05	0,08	0,26	1				
18 Educ	0,12**	0,05	0,09**	0,13	-0,16***	-0,12**	-0,09**	-0,13**	,01***	-0,35	0,03	-0,10	-0,09	0,32	-0,06	1			
19 Age	0,12**	0,06	0,00	0,21***	0,24***	0,15***	0,10**	0,26	0,1***	0,18***	0,04**	0,15***	0,13**	-0,08**	0,25***	-0,04	1		
20 Gov	-0,13***	-0,07**	-0,15***	-0,04**	0,10	0,03	-0,01	0,07	0,0***	0,21	0,10	-0,03	0,14	-0,07**	-0,09**	-0,02	-0,01	1	

\*, \*\*, and \*\*\* denote significance at the 10%, 5%, and 1% levels, respectively.

Authors own work

