

Entrepreneurial intention and entrepreneurial attitudes among rural Tunisian women

Dorsaf Maayoufi, Emese Prihoda, Viktória Kútvölgyi

ABSTRACT

Objective: The objective of the article was to assess the entrepreneurial intentions (EI) of rural women entrepreneurs of Tunisia and the factors affecting them.

Research Design & Methods: The study included a final sample of 308 women entrepreneurs belonging to rural Tunisia. Attitude towards entrepreneurship (ATE), family support (FS), subjective norms (SN), perceived behavioural control (PBC), government effectiveness (GE), and risk taking (RT) were the variables studied for their possible effects on EI. We designed a structured questionnaire was designed to collect data on the variables of interest. We used a 7-point hedonic scale to collect the opinion of a respondent regarding the selected variables. We Applied a-PLS-SEM model using smart PLS 3.2 to the collected data.

Findings: Following a basic analysis-pattern, we confirmed the validity and reliability of the model using convergent validity and discriminant validity. Assessment of data revealed average value extracted score above 0.5 with a CR score above 0.7 for the fitted model which confirmed the convergent validity and composite reliability of the model. Further, analysis of discriminant validity using the Fornell-Larcker criterion revealed a greater factor loading at the own construct of an item as compared to its value on another construct which confirmed the discriminant validity of data. Structural model analysis showed a significant effect of ATE ($\beta=0.31$, $T=3.2$, $p<0.01$), GE ($\beta=0.22$, $T=3.82$, $p<0.01$) and RT ($\beta=0.40$, $T=5.44$, $p<0.01$) on the development of entrepreneurial intentions among rural Tunisian women. PBC ($\beta=0.08$, $T=1.69$, $p>0.05$) and SN ($\beta=0.07$, $T=1.20$, $p>0.05$) showed a non-significant association with the development of EI among rural Tunisian women. Although SN was non-significantly associated with a change in the EI of the respondents, it was significantly associated with family support and was affected positively by it ($\beta=0.29$, $T=3.5$, $p<0.01$).

Implications & Recommendations: The most important step for the development of successful entrepreneurs in rural Tunisia requires government support through effective entrepreneurial policies and programmes which will not only affect the development of positive entrepreneurial intentions but also will lead to the development of a better entrepreneurial environment for rural women of Tunisia.

Contribution & Value Added: This article contributes to the available body of literature on the subject of entrepreneurial intentions. Targeting a specific population of rural women in Tunisia, the novelty of current research provides new findings about the EI of those women who are rarely studied for entrepreneurship.

Article type: research article

Keywords: entrepreneurial intentions; subjective norms; attitude; entrepreneurship; risk-taking; theory of planned behaviour

JEL codes: L26, I28, P35, M13

Received: 29 January 2024

Revised: 6 April 2024

Accepted: 6 June 2024

Suggested citation:

Maayoufi, D., Prihoda, E., & Kútvölgyi, V. (2024). Entrepreneurial intention and entrepreneurial attitudes among rural Tunisian women. *International Entrepreneurship Review*, 10(3), 109-127. <https://doi.org/10.15678/IER.2024.1003.08>

INTRODUCTION

Entrepreneurship has long been acknowledged as a critical contribution to long-term economic growth and development, employment, and innovation. Researchers have investigated a wide range of issues ranging from opportunity recognition to entrepreneurial intentions to starting, managing, and growing

a new enterprise, as well as the factors (e.g. personal characteristics, social-cultural norms, and institutions) that influence the survival, growth, competitiveness, and sustainability of these enterprises (Audretsch *et al.*, 2006). Women's entrepreneurship is one field of research that has recently caught the interest of both academics and politicians, since some researchers have discovered that many of the obstacles that hinder entrepreneurship have a gender component to them (Pathak *et al.*, 2013). For example, conventional notions of entrepreneurs favour men, whereas women are less likely to be entrepreneurs. Furthermore, women entrepreneurs have extra social identities such as wives and moms, which may contribute to the perception that women's duties are to be caregivers or housewives rather than company owners. Multiple identity links can either hinder or aid women's commercial attempts (Chasserio *et al.*, 2014).

Most scholars now believe that the number of female entrepreneurs has increased dramatically in recent years (Chapelle *et al.*, 2010). Women company owner's contributions to economic development include employment creation as well as economic growth as a result of their increased active participation in corporate life. They also contribute to corporate operations because of the disparities in how they act and conduct themselves as compared to their male colleagues (Reed *et al.*, 2012). Specifically concentrating on how certain traits influence women's businesses may reveal insights that may help us better understand not only women's entrepreneurship but entrepreneurship in general (De Bruin *et al.*, 2007). Several studies have been undertaken to investigate how institutional and individual-level factors influence nascent entrepreneurship. Some studies even use the words early entrepreneurship and entrepreneurial intention interchangeably. Being an entrepreneur is frequently the result of a personal decision-making process that involves assessments of possibilities and costs (being employed, jobless, or self-employed), risk-reward linkages (what is at stake), and other factors. This decision is impacted by beliefs, attitudes, and behaviours that are ingrained in a country's and location's culture.

Tunisia, lies in the Northernmost Africa. It contains a great number of men and women entrepreneurs who are driven by a variety of reasons. According to data presented by the World Bank (2022), labour force participation among Tunisian youth reached 18.4% by the end of 2021 due to higher unemployment (especially among young people and women). This data shows that women are among the most affected by unemployment, but they are also among the most important assets in terms of developing the country's economy through entrepreneurship. Moreover, rural women usually suffer the most due to the lack of resources in the backward rural areas. Kassai and Farkas (2007, 2012, 2016) analyse in detail the different aspects of rural women's disadvantage in their works. We conducted this research to identify factors associated with entrepreneurship and to assess the role of these factors in affecting entrepreneurial intentions among women of rural Tunisia in comparison to urban Tunisian women. We constructed relevant research questions based on the set objectives followed by a thorough literature review for the hypotheses construction.

- RQ1:** What is the influence of entrepreneurial attitudes on entrepreneurial intentions?
- RQ2:** How does family support affect subjective norms?
- RQ3:** How does government effectiveness affect the development of entrepreneurial intention?
- RQ4:** What is the role of perceived behavioural control in effecting entrepreneurial intentions?
- RQ5:** How is risk-taking way of behaving associated with entrepreneurial intention?
- RQ6:** How do subjective norms affect entrepreneurial intention?

Each of the constructed research question was thoroughly searched in the available literature for the development of a hypothesis. A total of 6 hypothesis based on the available questions were developed followed by hypothesis testing and result construction. The paper further illustrated the comparison of current results with literature to discuss the outcomes and novelty of obtained results.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Since the Arab Spring in 2011, Tunisia has made great progress towards an open and democratic administration. Following in the footsteps of colonial powers, modern Arab governments have prioritized

socioeconomic development in cities, particularly the capital, while ignoring the trajectories. Peasants are frequently viewed as backward and locked in ‘tradition’ by rulers and nationalist intellectuals, obstructing the elites’ progress towards modernity. Agriculture is vital to Tunisia’s food security and is a significant contributor to the Tunisian economy. According to the Global Entrepreneurship Monitor, an estimated 329 million women established or operated businesses in 83 economies worldwide (GEM) including Tunisia. While the majority of these countries have lower female start up rates than men (Kelley *et al.*, 2014). Despite gender equality legislation in Tunisia, few a small number of young Tunisian women actually work. In rural Tunisia, less than one in every five young women (18.5%) works, and less than two in every five in urban Tunisia (39.8%) (Bank, 2013). Despite this fact, very few researches focused on the factors responsible for such drastic situations of entrepreneurship especially among Tunisian women (Drine & Grach, 2012; Sidrat *et al.*, 2016). The data is scarce if we narrow it down to the number of research which focused on these factors among rural Tunisian women. Therefore, by developing a practical model based on human psychology (Ajzen, 1991), this study investigated the effects of different factors associated with the development of entrepreneurial intentions among women of rural Tunisia.

Theory of Planned Behaviour

Entrepreneurial intentions are critical to the process of entrepreneurship, as they are the first in a sequence of steps leading to the formation of ideas and thoughts which can set the tone for future endeavours. Furthermore, intentions towards an action can be powerful predictors of that behaviour (Ajzen, 1991). Martian Fishbein and Icek Azjien developed the theory of reasoned action (TRA) in 1975. According to the theory, an individual’s behavioural intention is governed by subjective standards and personal attitude towards action (Fishbein, 1980). They divided the theory into four key constructs attitude, subjective norm, behavioural goals, and conduct (Vallerand *et al.*, 1992). Ajzen first proposed the concept of planned conduct in 1985 (Ajzen, 1985). It is a theory of reasoned action extension that tackles the limitation of the theory’s original work when an individual lacks the pure volitional control that the theory of reasoned action assumes. The theory of planned behaviour (TPB) supposes that all behaviour needs some preparation and may be anticipated by the intention to engage in that behaviour. Behaviour is a direct result of intention, which is a product of attitude and subjective norms. Attitude is also seen to be the result of an individual’s beliefs and their judgement of those ideas. Scholars Find subjective perceptions of normative influences to be a ‘product of people’s judgments that important others believe they should or should not execute the behaviour in issue, as well as their incentive to comply with these other’s (Shaw & Shiu, 2003). Ajzen (1985) further expanded the model to include a measure of ‘perceived behavioural control’ resulting in the TPB. This is a direct measure that is the outcome of antecedents in the form of control beliefs. The theory of planned behaviour also included a new construct, perceived behavioural control, making the theory of planned behaviour five components in total, i.e. attitude, subjective norms (SN), perceived behavioural control, behavioural intention, and behaviour.

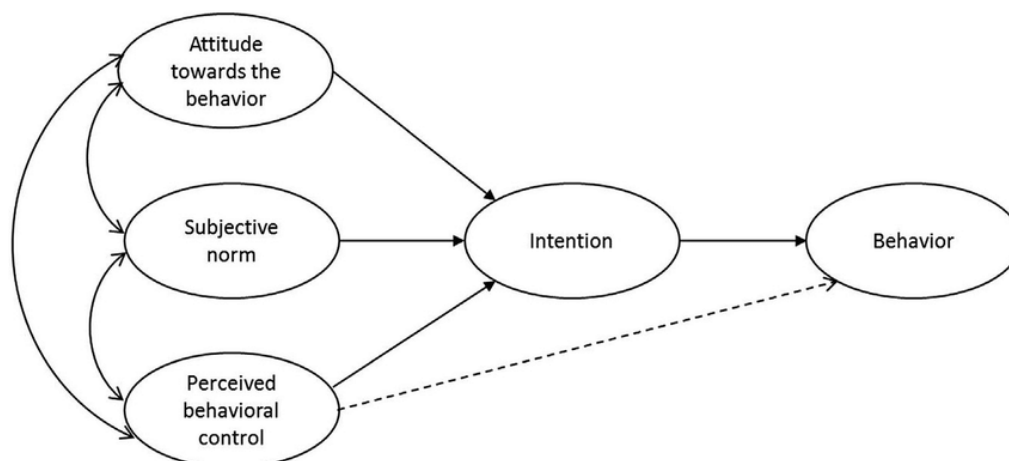


Figure 1. Factors involved in the theory of planned behaviour

Source: Ajzen, 1991.

The intention to adopt entrepreneurial behaviour, according to the TPB, can predict behaviour that involves planning. Miller *et al.*, (2009) define the TPB as having three components that predict behavioural intentions: (1) attitude or desire for the suggested behaviour, as well as overall favourable or negative assessments of executing a specific behaviour; (2) social and subjective norms that consider other people's judgments of the proposed behaviour; and (3) perceived control or feasibility of the proposed behaviour. Individual attitudes, according to TPB, have an influence on behaviour via intention, according to (Schwarz *et al.*, 2009). Based on this, there are three main attitudinal antecedents of intentions including (1) personal attitude towards behaviour outcomes; (2) perceived societal norm; and (3) perceived behavioural control (self-efficacy).

Moreover, the study of entrepreneurship focused on certain other factors which play their part in the development of entrepreneurial intentions and making a successful venture. The two most important among these additional factors were risk-taking (RT) and government effectiveness (GE). Risk-taking was regarded as an important attribute of entrepreneurs by Brockhaus (1982). According to De Vries (1977), risk-taking is one of several distinguishing characteristics of an entrepreneurial personality, which also include moderate risk-taking, anxiousness, need for autonomy and independence, need for achievement, internal locus of control, neglectfulness of interpersonal relations, self-reliance, nonconformity, and aesthetic sense. Some studies confirmed these e.g. Antoncic *et al.* (2018) and Gorostiaga *et al.* (2019) who associated RT with EI and found a significant influence of RT on the development of entrepreneurial intentions.

Good corporate governance standards are critical for reducing investor risk, attracting investment money, and even boosting company performance (Wakaisuka-Isingoma *et al.*, 2016). According to Lee *et al.* (2020), governments or authorities will attempt to highlight the positive role of government efficiency in encouraging innovation in a corrupt environment. Furthermore, Chambers and Munemo (2017) show that the cost of launching a firm is much cheaper in countries with poor governmental institutions. On the other hand, Hung *et al.* (2020) argued that economic development, will increase government efficiency while decreasing income equality. These findings encouraged us to incorporate GE as an important contributor to the development of EI. Based on the identified study variables, we developed the following hypotheses:

Attitude

Individuals evaluate items, people, institutions, events, behaviours, or particular intents to determine if they are good or bad (Ajzen, 2005). Personal attitude is formed by ideas about the implications of one's behaviour, which are known as behavioural beliefs. In other words, if a person feels that a certain behaviour will result in a positive outcome that person will have a positive attitude, and vice versa. According to research, entrepreneurial attitudes at both the personal and societal levels explain how entrepreneurial intention develops. These attitudes and intents are linked to individual perception and may be learned (Law & Breznik, 2017; Maio *et al.*, 2018). Attitudes impact the creation of women's entrepreneurial intentions and are measured as inner characteristics of an individual's willingness to engage in a behaviour. This led to our first hypothesis described below.

Subjective Norms

Subjective norms are the belief that a significant individual or group of people would accept and support a specific behaviour. Subjective norms are established by an individual's perceived social pressure from others to behave in a specific way, as well as their incentive to conform to those people's beliefs (Krueger Jr *et al.*, 2000). Attitudes impact individuals' entrepreneurial interest as a reflection of positive or negative confidence in SN and behaviour (Indrawati *et al.*, 2017). Such an interest may be fostered at a young age and throughout one's education in school, family, and surroundings. Entrepreneurship knowledge may be gained through education and then supplemented with ideas and help from experts in the field (SN). Such norms are among the elements influencing entrepreneurial interest in the (TPB), which implies having the belief to follow someone's recommendations to participate in entrepreneurial activities (Wijaya, 2008). Therefore, we based the next hypothesis on the effects of familial support (social support) on the development of SN among study participants.

Government Effectiveness

In addition to the factors presented in TPB, we considered certain additional factors such as GE for this study. The role of a government in this regard is quite important, because it is the primary body with the power to make things happen. Almost all (Middle Eastern and North African (MENA)) nations have pledged to follow international norms to achieve better development for women and many have signed on to the Millennium Development Goals. At the macro level, governments in the region are gradually playing a vital role in fostering women's entrepreneurship. The government of the Kingdom of Saudi Arabia permits women to seek a business license without the agreement of their spouses (Ahmad, 2011). The UAE legitimizes female entrepreneurship through law, educational programmes, and different efforts that attempt to provide women with the tools they need to establish their own enterprises (Van Horne *et al.*, 2011). In one of our earlier articles we addressed the absence of official assistance for Tunisian women in the registration of businesses. We identified an obstacle which is a lack of awareness of company practices. The government made no special attempt to educate women about the registration process. Therefore, we included the effects of GE on the development of EI among the study participants with the following hypothesis.

Perceived Behavioural Control

Perceived behavioural control (PBC) is an individual's assessment of the ease or complexity of beginning and operating a business. It constitutes an important component of the theory of planned behaviour. The theory of planned behaviour differs from the earlier theory of reasoned action in that it incorporates PBC. According to the theory of planned behaviour, PBC, coupled with behavioural intention, may be a good predictor of an individual's success in a certain subject (Ajzen, 1991). Because entrepreneurship is such a deeply ingrained phenomenon, subjective perceptions of one's surroundings and one's relative position within that environment are crucial (Jack & Anderson, 2002). Thus, personal perceptions of a society's supportiveness, the business environment, and one's own abilities are linked to individuals' EI. This led to our next hypothesis.

Risk-taking

Risk-taking is involved in a project or a task when the conclusion is uncertain and there is a chance of failure. The risk-taking characteristics indicated entrepreneurs' willingness to participate in dangerous work or face no bail. It also refers to the capacity to cover potential losses resulting from business decisions or initiatives (Wiklund & Shepherd, 2005). A positive attitude towards risk will enable the entrepreneur to succeed and endure in business. Thus, entrepreneurs should regard the bravery to take risks as the first step (Tracy, 2007). Given the risky external environment and high project failure rate, a greater awareness of risk might potentially boost the efficiency of entrepreneurial decision-making (Forlani & Mullins, 2000). Therefore, our next hypothesis related to RT behaviour of the study respondents which we described below.

Subjective Norms

The TPB model outlines that an individual's attitude towards a behaviour, together with existing SN and perceptions of behavioural control elements, all impact an individual's intention to follow a particular behaviour (Ajzen, 1991). According to the planned behaviour approach, individuals decide to start a new business based solely on the three motivating elements: attitudes towards behaviour, PBC, and subjective standards that directly predict behavioural intentions (Liñán *et al.*, 2011). The factor of SN in TPB literature has to do with the individual's perceived social pressure either to do or not do a specific behaviour which can be the decisive point for EI development among an individual. Therefore, we constructed our final hypothesis:

- H1:** Positive entrepreneurial attitudes will positively affect respondent's entrepreneurial intentions.
- H2:** Respondent's family support will have a positive effect on subjective norms.

- H3:** Government effectiveness will positively affect respondents' entrepreneurial intention of the respondents.
- H4:** Perceived behavioural control of the respondents' will positively affect their entrepreneurial intention.
- H5:** Respondent's risk-taking will positively affect their entrepreneurial intention.
- H6:** Positive subjective norms of the respondents will have a positive impact on their entrepreneurial intention.

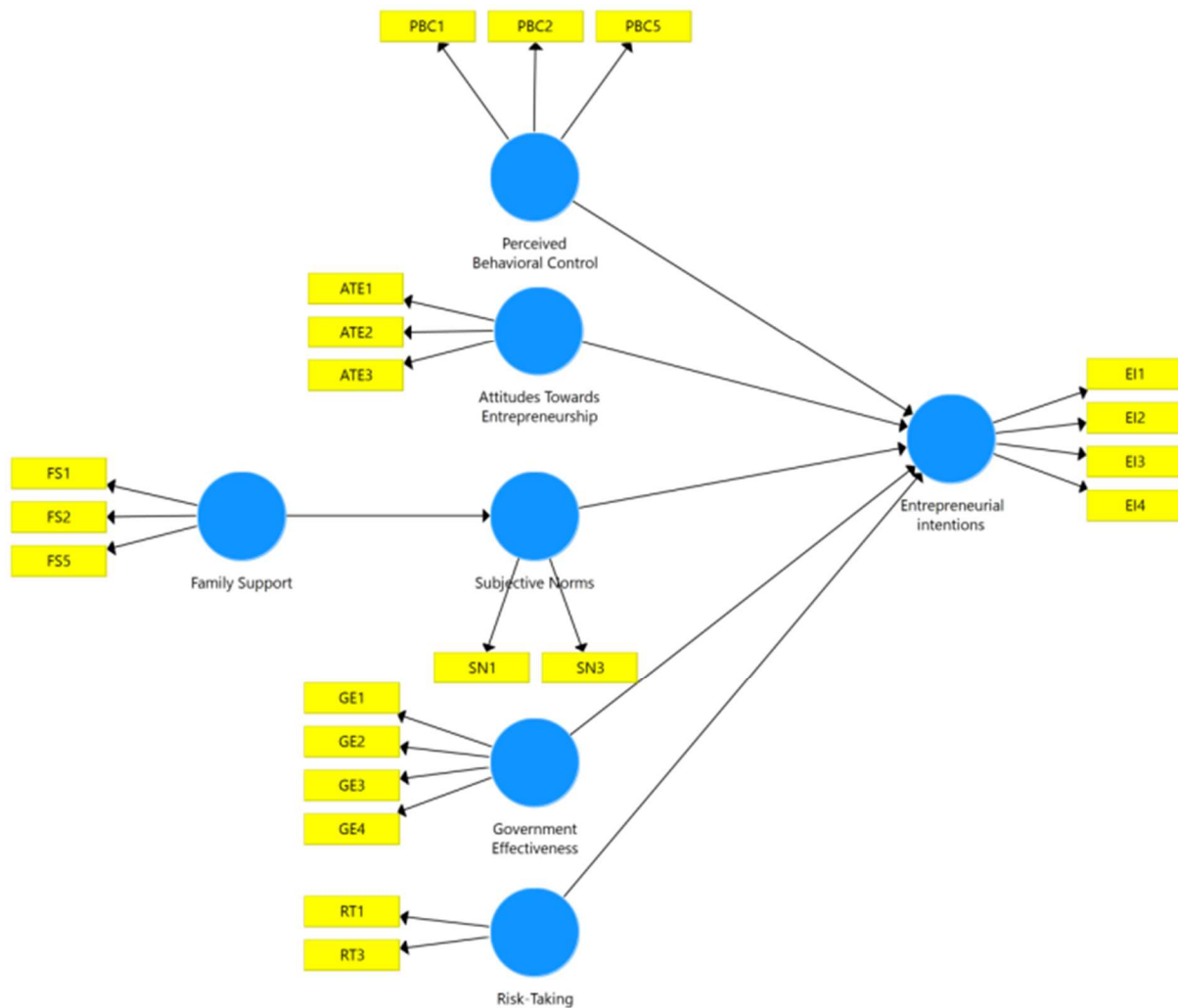


Figure 2. Research model

Source: own elaboration.

RESEARCH METHODOLOGY

This study was exploratory in nature. We used a causal study design based on the research question. We evaluated various factors and quantified their impact on rural Tunisian women's entrepreneurship. We estimated a variance-based structural equation model with partial least squares (PLS) that primarily targeted predicting the causal link in the complicated model (Urbach & Ahlemann, 2010). We employed PLS to investigate and interpret predicted causal linkages for which we used Smart PLS 3.2. Because the PLS technique minimizes the variance of the model's dependent variables, PLS-SEM performs well with small sample numbers (Hair Jr *et al.*, 2016). This field study gathered 330 responses from female entrepreneurs working in rural and urban Tunisia. However, after computing the missing values, the final number of respondents was 308. Figure 2 presents the model used for this study.

Sample and Data Collection

For sample collection, we used simple random sampling (SRS), which ensured an equal probability of selection for every individual in the selected area. The area involved different regions of Tunisia. Respondents had to fulfil selection criteria according to which they needed to be Tunisian nationals and run some type of business. We performed fieldwork in several locations in Tunisia to gather data from random respondents who met the study's selection criteria. After the initial literature review and identification of key factors, we conducted five interviews with users who understood well the various features to confirm that the items accurately reflected the constructs and to determine which items were to be removed from the deeper investigation of the constructs. We conducted the interviews with the explicit objective of validating the initial set of constructs and screening out duplicate or insufficient items as well as producing new ones to assure completeness (*i.e.*- that no crucial elements were omitted) and content validity of the scales.

Measurement Scales

We used a well-structured questionnaire containing a 7-point Likert Scale ranging from strongly disagree to strongly agree to assess survey respondents' sentiments. The 'No' opinion is a discrete value which we replaced throughout the data analysis to attain appropriate results. The studied variables were perceived behavioural control (PBC), attitude towards entrepreneurship (ATE), subjective norms (SN), risk-taking (RT), family support (FS), government effectiveness (GE) and entrepreneurial intentions (EI).

- PBC is indicated by five items adopted from the scale of Karimi *et al.* (2017).
- ATE is indicated by three items adapted and modified based on the scale of Karimi *et al.* (2017).
- SN is also indicated by three items adopted from the study of Ahmad *et al.* (2014).
- RT used four items for its indication (Gorostiaga *et al.*, 2019).
- FS used five items which were identified in the study of Kim and Branzei (2017).
- GE is indicated by four items (Al Maqtari & Farhan *et al.*, 2020).
- EI is indicated by four items (Karimi *et al.*, 2017).

RESULTS AND DISCUSSION

Participants' demographic profile

This study focused on rural Tunisian women, thus, all of the respondents (308) were women, with a mean age score of 32.48 ± 6.79 . We included respondents from all six geographical regions of Tunisia (Table 1) =resulting in 14.61% respondents from North East Tunisia, 13.31% respondents from Greater Tunis, 15.26% respondents from North West Tunisia, 21.75% respondents from Center West Tunisia, 18.51% respondents from Center East Tunisia, and 16.56% respondents from South Tunisia. The majority of the rural women entrepreneurs either had a bachelor's degree (37.99%) or attained a secondary school education (35.06%). Data on the marital status was mixed with 48.38% married followed by 46.43% single respondents. Entrepreneurial status data showed various fields of enterprises including handicraft (22.08%), grocery stores (18.83%), fruits and vegetable stalls (21.1%), fertilizers and seeds businesses (13.31%), tailor shops (10.39%), and other enterprises (14.29%). Most of the respondents (44.16%) reported to have moderate experience as an entrepreneur followed by 36.36% of respondents who reported little entrepreneurial experience. Only 19.48% of rural Tunisian entrepreneurial women reported to be having a significant working experience (Table 1).

Partial Least Square Design

We subjected the collected data to PLS 3.2 for statistical analysis which helped construct a suitable model based on the requirements of the study and it used a basic model considering several latent variables (Henseler & Sarstedt, 2013). Following the algorithms of PLS, the first step in the analysis was the assessment of validity and reliability of the model (Ramayah *et al.*, 2011). The validity test determines how correctly an instrument measures a certain concept that it is intended to assess. Meanwhile, the reliability test assesses the measurement instrument's stability and consistency (Sekaran & Bougie, 2016).

Table 1. Respondents' socio-demographic profile

Variable	Category	f (%) / Mean \pm SD
Gender	Female	308 (100%)
Age	–	32.48 \pm 6.79
Residence	North East Tunisia	45 (14.61%)
	Greater Tunis	41 (13.31%)
	North West Tunisia	47 (15.26%)
	Center West Tunisia	67 (21.75%)
	Center East Tunisia	57 (18.51%)
	South Tunisia	51 (16.56%)
Education	Doctor of philosophy	18 (5.84%)
	Master's	32 (10.39%)
	Bachelor	117 (37.99%)
	Secondary	108 (35.06%)
	Vocation	33 (10.71%)
Marital Status	Divorced	11 (3.57%)
	Married	149 (48.38%)
	Single	143 (46.43%)
	Widowed	5 (1.62%)
Enterprise	Handicraft	68 (22.08%)
	Grocery/general stores	58 (18.83%)
	Vegetable/fruit stall	65 (21.1%)
	Fertilizer/seeds	41 (13.31%)
	Tailor shop	32 (10.39%)
	Others	44 (14.29%)
Expertise	Little experience (<1 year)	112 (36.36%)
	Moderate experience (1–5 years)	136 (44.16%)
	Significant experience (More than 5 years)	60 (19.48%)

Source: own study.

Validity and Reliability Assessment of the Constructed Model

Usually, scholars the validity of a model in PLS using two types of validity tests, *i.e.* convergent validity and discriminant validity (Sekaran & Bougie, 2016). Convergent validity is the degree to which a measure correlates favourably with another measure both of which exist in the same construct. Average variance extracted and item loading are the two measurements used to assess the convergent validity of a statistical model (Hair *et al.*, 2012). Ideal threshold value for AVE is ≥ 0.5 (Hair *et al.*, 2012); a factor item loading ≥ 0.5 is considered good while ≥ 0.7 is considered ideal with a T-value ≥ 1.96 (Hair, 2009). Results from the data showed most values above the recommended thresholds for items. However, there were a few items which not only had a lower factor loading but also dragged AVE down below 0.5 in which case, we removed these items. According to Hair *et al.* (2014), items with a factor loading value between 0.4-0.7 should be considered for removal if they drag down the value of AVE below 0.5 which was the case in this study. With the removal of PBC3, PBC4, SN2, RT2, RT4, FS3 and FS4, the obtained factor loading values were above the threshold (0.7) with AVE values ≥ 0.5 (Table 1). Discriminant validity refers to a construct's uniqueness, whereas the phenomena recorded by a construct are unique. Hence, it is not represented by other constructs in the model (Hair *et al.*, 2013). Discriminant validity is assessed by the item loading at the construct of an item's own variable as compared to its loading on the construct of another variable using the fornell-Larcker criterion (Fornell & Larcker, 1981). A higher loading at a variable's own construct indicates the fulfilment of criteria for discriminant validity (Vinzi *et al.*, 2010). Data from our study meets the standards set for discriminant validity (Table 2).

Table 2. Measurement model (convergent validity)

Constructs	Items	F.L	CR	AVE
Perceived Behavioural Control	PBC1	0.894	0.872	0.696
	PBC2	0.866		
	PBC3	0.735		
Attitudes Towards Entrepreneurship	ATE1	0.756	0.815	0.595
	ATE2	0.742		
	ATE3	0.814		
Subjective Norms	SN1	0.905	0.758	0.617
	SN2	–		
	SN3	0.645		
Risk-Taking	RT1	0.669	0.745	0.598
	RT2	0.865		
Family Support	FS1	0.472	0.817	0.615
	FS2	0.942		
	Ff S3	0.858		
Entrepreneurial Intentions	EI1	0.845	0.887	0.662
	EI2	0.782		
	EI3	0.859		
	EI4	0.765		
Government Effectiveness	GE1	0.456	0.821	0.548
	GE2	0.859		
	GE3	0.88		
	GE4	0.686		

Note: F.L, factor loading; CR, composite reliability; AVE, average variance extracted. Source: own study.

Table 3. Measurement model (discriminant validity)

Variables	Attitudes towards entrepreneurship	Entrepreneurial intentions	Family support	Government effectiveness	Perceived behavioural control	Risk-taking	Subjective norms
Attitudes towards entrepreneurship	0.771	–	–	–	–	–	–
Entrepreneurial intentions	0.670	0.814	–	–	–	–	–
Family support	0.386	0.455	0.785	–	–	–	–
Government effectiveness	0.247	0.356	0.303	0.740	–	–	–
Perceived behavioural control	0.401	0.443	0.331	0.26	0.834	–	–
Risk-taking	0.592	0.676	0.301	0.047	0.352	0.773	–
Subjective norms	0.35	0.499	0.292	0.216	0.398	0.569	0.786

Source: own study.

Structural Model Assessment

A significant association between two variables in a hypothesis are determined by its p-value and t-value. We considered a CI of 95%, therefore, we considered significant a p-value below 0.05 with a critical t-value above 1.96 (Hair *et al.*, 2014). Noteworthy, four out of six hypotheses were supported including H1, H2, H3 and H5 (Table 4). Two of the hypotheses (H4 and H6) were not supported due to their lower p-value (>0.05) and t-value (<1.96). H1 which tested the effects of (ATE) on EI revealed a significant association ($\beta=0.31$, $T=3.2$, $p<0.01$). Further, FS affected a positive development of SN among study respondents ($\beta=0.29$, $T=3.5$, $p<0.01$). Government support also showed a significant positive association with the development of EI among Tunisian women ($\beta=0.22$, $T=3.82$, $p<0.01$). Note-

worthy Risk Taking was a strong predictor of EI as compared to the other tested variables ($\beta=0.40$, greater than others). Subjective norms ($\beta=0.07$, $T=1.20$, $p>0.05$) and perceived behavioural control ($\beta=0.40$, $T=5.44$, $p<0.01$) had a non-significant link with the development of EI. This showed that PBC and SN had non-significant positive effects on the development of EI among rural Tunisian women.

Table 4. Structural model and hypothesis testing

Relationship	β	Std. Error	T-value	P-Value
Attitudes towards entrepreneurship -> Entrepreneurial intentions	0.313	0.32	3.214	0.001***
Family support -> subjective norms	0.292	0.311	3.555	0.00***
Government effectiveness -> Entrepreneurial intentions	0.22	0.212	3.826	0.00***
Perceived behavioural control -> Entrepreneurial intentions	0.087	0.086	1.69	0.091 ^{NS}
Risk-taking -> Entrepreneurial intentions	0.406	0.404	5.441	0.00***
Subjective norms -> Entrepreneurial intentions	0.076	0.076	1.204	0.229 ^{NS}

Source: own study.

Discussions

The first major finding of the study indicated the positive effect of EI on the development of ATE among Tunisian women living in rural areas. Several researchers discussed this association between the two factors and most of them came to a similar conclusion. A study conducted on 376 economic students in Indonesia revealed that ATE affected the EI of the study participants. The study findings for the tested hypothesis on ATE yield a p-value of 0.00, indicating that there was a highly significant association between ATE and EI (Wardana *et al.*, 2021). In another study, Ayalew and Zeleke (2018) confirmed the effect of entrepreneurial attitude on the EI of Ethiopian university students using component factor analysis and binary logistic regression. Several other studies identified and reported similar effects of attitude towards entrepreneurship and the development of ATE (Fayolle & Gailly, 2015; Potishuk & Kratzer, 2017; Schwarz *et al.*, 2009; Zampetakis *et al.*, 2009).

The second important finding was associated with H2 of the study which tested the effect of FS on SN and found a positive significant association between the two factors ($\beta=0.29$, $T=3.5$, $p<0.01$). Family member's emotional support was the most essential asset that entrepreneurs may have. The concurrent and frequently competing duties of family and profession limit women's mobility and higher labour-force involvement. Social conventions and preconceptions about women's roles and standing in society and the job market limit their participation in economic activities. Moreover, women with children who are financially reliant on their husbands are more vulnerable in situations of domestic abuse (Ariffin *et al.*, 2020). Thus, the FS becomes valuably important for a woman to have SN especially associated with entrepreneurship. Rostami, Hassan, and Yaghmaei (2018) confirmed this association by finding a direct influence of FS on the SN of women workers in Malaysia.

The third finding of this article inflicted that governmental support had a positive effect on the development of EI among rural women entrepreneurs ($\beta=0.22$, $T=3.82$, $p<0.01$). Malebana (2014) performed a research study in South African rural communities to examine the impact of government initiatives in promoting entrepreneurship. The study examined the South African government's various kinds of entrepreneurial assistance and, the findings indicated that the supportiveness of the entrepreneurial environment promotes the formation of EI among respondents. Moreover, several studies discussed the effectiveness of government through entrepreneurial policies and programmes which affected the development of intentions towards entrepreneurship (Etzkowitz, 2002; Lüthje & Franke, 2003; Pals, 2006; Salem, 2014). This presents a clear picture that the government itself is among the greatest motivators of EI among women entrepreneurs. The issues faced by women entrepreneurs in Tunisia (especially in rural regions) which serve as obstacles to EI (Salem *et al.*, 2020) can be minimized or eradicated with development of sufficient government policies and implementation of those policies with a greater efficiency.

Interestingly, our study resulted in a non-significant association between PBC and EI which is the fourth finding ($\beta=0.08$, $T=1.69$, $p>0.05$). Various researchers studied the relation between PBC and EI

in various researches due to the importance of PBC in TPB. Cynthia *et al.* (2020) discovered a relationship between PBC and EI. Using linear regression analysis, the correlation of PBC was shown to be positive ($b=.251$). Furthermore, Dinc and Budic (2016) reported a significantly positive association of PBC and EI. Alternatively, Fayolle, Gailly, and Lassas-Clerc (2006) also studied the association between the two and found that PBC was negatively associated with the development of EI. We can link these findings with Jack and Anderson's (2002) ideology who believed that the development of PBC requires great support from the environment. A supportive environment for entrepreneurship will build stronger PBC and hence lead to EI development and vice versa.

The fifth finding which associated RT behaviour with EI showed that RT was associated positively with the development of EI among Tunisian women. This association was statistically significant ($\beta=0.40$, $T=5.44$, $p<0.01$). Chipeta and Surujlal (2017) confirmed this association. They found a highly significant association of RT with the development of EI among South African students ($\beta =9.540$, $p=0.000$). Several other researches also showed similar association between RT and EI which confirms the findings of our study (Fernandes *et al.*, 2018; Mujahid *et al.*, 2020; Zhang *et al.*, 2015).

The sixth and final finding associated with H6 of the article revealed a non-association between SN and EI among the rural Tunisian women entrepreneurs ($\beta=0.08$, $T=1.69$, $p>0.05$). Previous research linked the effects of SN on EI through other variables among which the most important is parental support (Verheul *et al.*, 2012). In our study, H2 confirmed this finding. We found that FS had a highly significant effect on SN development among rural entrepreneurial women of Tunisia. A family supporting entrepreneurship can help develop SN which will develop EI among individuals. A number of researchers found this positive association (Solevik, 2013; Utami, 2017; Yousaf *et al.*, 2015). However, our study findings revealed a non-significant association between the two factors which can be explained by a non-entrepreneurial family background or man-dominant society of Tunisia which does not promote entrepreneurial SN among the study respondents. For this reason, the FS' influence on subjective norm development was significant but it did not lead to a significant EI development- among rural Tunisian women.

CONCLUSIONS

Entrepreneurial intentions are an important element of becoming a successful entrepreneur. These intentions studied in the rural Tunisian society are affected by a number of variables among women entrepreneurs. Entrepreneurial attitude (EA), subjective norms (SN), risk-taking (RT), and government effectiveness (GE) are a few of the most important variables that influence the development of EI among rural Tunisian women. All the variables showed a positive association with the development of EI. We found the tested effects of RT were the greatest regarding the development of EI. Meanwhile, GE showed comparatively the lowest effect on EI among the tested variables. Although, SN posed a non-significant effect on EI, the development of SN strongly related to respondents' FS. Moreover perceived behavioural control (PBC) also showed a non-significant association with the development of EI in our study. With this, the most important step for the development of successful entrepreneurs in rural Tunisia requires government support through effective entrepreneurial policies and programmes. Moreover, the development of EA and RT required entrepreneurial education which can help these women understand the importance of these two variables and their roles in becoming successful entrepreneurs. These things will not only help the rural women directly but also facilitate them indirectly by advocating the importance of entrepreneurial FS through family members which will lead to the development of a better entrepreneurial environment for rural women of Tunisia.

Limitations

Although this research contributed greatly to the field of entrepreneurship in relation to the psychological factors influencing it, there are some limitations to it.

- We' considered limited factors that affected the development of EI among study respondents. Additional factors were also present but they were in negligible amount which is why we did not consider them. Future studies can focus on increasing the number of variables to attain more efficient results.

- The study involved the Tunisian population as a whole. However, our number of respondents was limited to 500 due to the nature of the research and the limitation of resources which researchers can increase in future studies.
- Although little, the use of online resources for data collection sometimes leads to exaggeration by the participants which can affect the overall study results.

Implications

This was the first research study to evaluate the effects of the behavioural factors identified by TBP with the addition of GE and RT on the development of entrepreneurial intentions among rural Tunisian women. Findings of this study will not only contribute to the body of research but can also be used to improve the managerial aspects of government and NGO-based activities directed towards EI among rural Tunisian population. The addition of FS as an important predictor of (SN) can also play its part in future programme development.

Theoretical Implications

The theoretical contributions of this research are as follows:

- It is the first study to provide the basis for future research in this field in the Tunisian context.
- It will allow the researchers to look for more factors to consider and conduct an in-depth analysis in future research.
- It will add up to already present body of literature on the topic of women entrepreneurs.
- Entrepreneurial intentions set the basic ideology of an entrepreneur. Therefore, our results will guide future researchers to adopt appropriate models and select more versatile variables in future researches.

Managerial Implications

Managerial/practical implementations of this research are as follows:

- This study can serve as the cornerstone in the development of governmental policies to promote entrepreneurship among women of Tunisia, especially, the marginal rural women.
- Project development can consider the results of the study to focus on the factors of interest which can facilitate the promotion of EI among rural Tunisian women.
- Government and private interventions targeting an improvement entrepreneurship among rural Tunisian women can adopt effective plans of actions by considering the factorial response of different variables involved in this study.
- Other countries which follow a similar tradition and culture to Tunisia can also adopt the results of this study and either consider managerial changes or conduct regional research set by our model to promote entrepreneurship among the marginal population.

REFERENCES

- Ahmad, M.H., Shahar, S., Teng, N.I.M.F., Manaf, Z.A., Sakian, N.I.M., & Omar, B. (2014). Applying theory of planned behavior to predict exercise maintenance in sarcopenic elderly. *Clinical Interventions in Aging*, 9, 1551. <https://doi.org/10.2147/CIA.S60462>
- Ahmad, S.Z. (2011). Evidence of the characteristics of women entrepreneurs in the Kingdom of Saudi Arabia. *International Journal of Gender Entrepreneurship*. <https://doi.org/10.1108/17566261111140206>
- Ajzen, I. (1985) From Intentions to Action: A Theory of Planned Behavior. In Kuhl, J. & Beckmann, J. (Eds.), *Action-Control: From Cognition to Behavior* (pp. 11-39). Springer-Verlag, Heidelberg https://doi.org/10.1007/978-3-642-69746-3_2
- Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, 50(2), 179-211. [https://doi.org/0749-5978\(91\)90020-T](https://doi.org/0749-5978(91)90020-T)
- Ajzen, I. (2005). *EBOOK: Attitudes, Personality and Behaviour*. McGraw-hill education (UK).

- Al Maqtari, F.A., Farhan, N.H., Al-Hattami, H.M., & Khalid, A.S. (2020). Impact of country-level corporate governance on entrepreneurial conditions. *Cogent Business Management*, 7(1), 1797261. <https://doi.org/10.1080/23311975.2020.1797261>
- Antoncic, J.A., Antoncic, B., Gantar, M., Hisrich, R.D., Marks, L.J., Bachkirov, A.A., & Coelho, A. (2018). Risk-taking propensity and entrepreneurship: The role of power distance. *Journal of Enterprising Culture*, 26(01), 1-26. <https://doi.org/10.1142/S0218495818500012>
- Ariffin, A.S., Baqutayan, S.M.S., & Mahdzir, A.M. (2020). Enhancing women entrepreneurship development framework: Policy & institution gap and challenges in the case of Malaysia. *Journal of Science, Technology Innovation Policy*, 6(2), 22-33. <https://doi.org/10.11113/jostip.v6n2.58>
- Audretsch, D.B., Keilbach, M.C., & Lehmann, E.E. (2006). *Entrepreneurship and economic growth*: Oxford University Press. <https://econpapers.repec.org/bookchap/oxpobooks/9780195183511.htm>
- Ayalew, M.M., & Zeleke, S.A. (2018). Modeling the impact of entrepreneurial attitude on self-employment intention among engineering students in Ethiopia. *Journal of Innovation Entrepreneurship*, 7(1), 1-27. <https://doi.org/10.1186/s13731-018-0088-1>
- Bank, W. (2013). *The Unfinished Revolution*. Retrieved from <https://documents.worldbank.org/curated/en/658461468312323813/pdf/861790DPROP12800Box385314B00PUBLIC0.pdf> on August 10, 2022.
- Bank, W. (2022). Tunisia's Economic Update. Retrieved from <https://www.worldbank.org/en/country/tunisia/publication/economic-update-april-2022> on August 22, 2022.
- Brockhaus, R.H. (1982). The psychology of the entrepreneur. In Kent, C.A., Sexton, D.L., & Vesper, K.G. (Eds.) *The Encyclopaedia of Entrepreneurship*. Prentice Hall, Englewood Cliffs, NJ. Retrieved from <https://ssrn.com/abstract=1497760> on June 3, 2022.
- Chambers, D., & Munemo, J. (2017). The impact of regulations and institutional quality on entrepreneurship. Working Papers 07629, George Mason University, Mercatus Center. Retrieved from <https://ideas.repec.org/p/ajw/wpaper/07629.html> on July 8, 2022.
- Chapelle, K. (2010). Non-profit and for-profit entrepreneurship: a trade-off under liquidity constraint. *International Entrepreneurship Management Journal*, 6(1), 55-80. <https://doi.org/10.1007/s11365-007-0071-y>
- Chasserio, S., Pailot, P., & Poroli, C. (2014). When entrepreneurial identity meets multiple social identities: Interplays and identity work of women entrepreneurs. *International Journal of Entrepreneurial Behavior Research*, 20(2), 128-154. <https://doi.org/10.1108/IJEBR-11-2011-0157>
- Chipeta, E.M., & Surujlal, J. (2017). Influence of attitude, risk taking propensity and proactive personality on social entrepreneurship intentions. *Polish Journal of Management Studies*, 15(2), 27-36. <https://doi.org/10.17512/pjms.2017.15.2.03>
- Cynthia, A.U., Ameh, A.A., & Alabi, J.O. (2020). Perceived behavioural control and entrepreneurial intentions: Empirical evidence from selected tertiary institutions in Kogi state. *Ilorin Journal of Human Resource Management*, 4(2), 66-77. Retrieved from https://www.researchgate.net/publication/344631349_PERCEIVED_BEHAVIOURAL_CONTROL_AND_ENTREPRENEURIAL_INTENTION_EMPIRICAL_EVIDENCE_FROM_SELECTED_TERTIARY_INSTITUTIONS_IN_KOGI_STATE on September 11, 2022.
- De Bruin, A., Brush, C.G., & Welter, F. (2007). Advancing a framework for coherent research on women's entrepreneurship. *Entrepreneurship Theory Practice*, 31(3), 323-339. <https://doi.org/10.1111/j.1540-6520.2007.00176.x>
- De Vries, M.K. (1977). The entrepreneurial personality: A person at the crossroads. *Journal of Management Studies*, 14(1), 34-57. <https://doi.org/10.1111/j.1467-6486.1977.tb00616.x>
- Dinc, S., & Budic, S. (2016). The impact of personal attitude, subjective norm, and perceived behavioural control on entrepreneurial intentions of women. *Eurasian Journal of Business Economics*, 9(17), 23-35. <https://doi.org/10.17015/ejbe.2016.017.02>
- Drine, I., & Grach, M. (2012). Supporting women entrepreneurs in Tunisia. *The European Journal of Development Research*, 24(3), 450-464. <https://doi.org/10.1057/ejdr.2011.13>
- Etzkowitz, H. (2002). Incubation of incubators: innovation as a triple helix of university-industry-government networks. *Science Public Policy*, 29(2), 115-128. <https://doi.org/10.3152/147154302781781056>
- Fayolle, A., & Gailly, B. (2015). The impact of entrepreneurship education on entrepreneurial attitudes and intention: Hysteresis and persistence. *Journal of Small Business Management*, 53(1), 75-93. <https://doi.org/10.1111/jsbm.12065>

- Fayolle, A., Gailly, B., & Lassas-Clerc, N. (2006). Assessing the impact of entrepreneurship education programmes: a new methodology. *Journal of European Industrial Training*, *109*, 712-715. <https://doi.org/10.1016/j.sbspro.2013.12.534>
- Fernandes, C., Ferreira, J.J., Raposo, M., Sanchez, J., & Hernandez-Sanchez, B. (2018). Determinants of entrepreneurial intentions: an international cross-border study. *International Journal of Innovation Science*, *10*(1), 129-141. <https://doi.org/10.1108/IJIS-02-2017-0017>
- Fishbein, M. (1980). Understanding Attitudes and Predicting. *Social Behaviour*. Prentice-Hall.
- Forlani, D., & Mullins, J.W. (2000). Perceived risks and choices in entrepreneurs' new venture decisions. *Journal of Business Venturing*, *15*(4), 305-322. [https://doi.org/10.1016/S0883-9026\(98\)00017-2](https://doi.org/10.1016/S0883-9026(98)00017-2)
- Fornell, C., & Larcker, D.F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics. In Sage Publications Sage CA: Los Angeles, CA.
- Gorostiaga, A., Aliri, J., Ulacia, I., Soroa, G., Balluerka, N., Aritzeta, A., & Muela, A. (2019). Assessment of entrepreneurial orientation in vocational training students: Development of a new scale and relationships with self-efficacy and personal initiative. *Frontiers in Psychology*, *10*, 1125. <https://doi.org/10.3389/fpsyg.2019.01125>
- Hair, J., Black, W., Babin, B., & Anderson, R. (2014). Multivariate Data Analysis (new int. ed.). In *Pearson Education*. New Jersey.
- Hair, J.F. (2009). *Multivariate data analysis*. Pearson Education.
- Hair, J.F., Ringle, C.M., & Sarstedt, M. (2013). Partial least squares structural equation modeling: Rigorous applications, better results and higher acceptance. *Long Range Planning*, *46*(1-2), 1-12. <https://doi.org/10.1016/j.lrp.2013.01.001>
- Hair, J.F., Sarstedt, M., Pieper, T.M., & Ringle, C.M. (2012). The use of partial least squares structural equation modeling in strategic management research: a review of past practices and recommendations for future applications. *Long Range Planning*, *45*(5-6), 320-340. <https://doi.org/10.1016/j.lrp.2012.09.008>
- Hair Jr, J.F., Sarstedt, M., Matthews, L.M., & Ringle, C.M. (2016). Identifying and treating unobserved heterogeneity with FIMIX-PLS: part I—method. *European Business Review*, *28*(1), 63-76. <https://doi.org/10.1108/EBR-09-2015-0094>
- Henseler, J., & Sarstedt, M. (2013). Goodness-of-fit indices for partial least squares path modeling. *Computational Statistics*, *28*(2), 565-580. <https://doi.org/10.1007/s00180-012-0317-1>
- Hung, N.T., Yen, N.T.H., Duc, L.D. M., Thuy, V.H.N., & Vu, N.T. (2020). Relationship between government quality, economic growth and income inequality: Evidence from Vietnam. *Cogent Business Management*, *7*(1), 1736847. <https://doi.org/10.1080/23311975.2020.1736847>
- Indrawati, S., Herkulana, H., & Syahrud, H. (2017). Pengaruh Sikap dan Norma Subjektif terhadap Minat Berwirausaha Siswa SMK Immanuel II. *Jurnal Pendidikan dan Pembelajaran Khatulistiwa*, *6*(12), 1369-1382. <https://doi.org/10.26740/jim.v9n4.p1369-1382>
- Jack, S.L., & Anderson, A.R. (2002). The effects of embeddedness on the entrepreneurial process. *Journal of business venturing*, *17*(5), 467-487. [https://doi.org/10.1016/S0883-9026\(01\)00076-3](https://doi.org/10.1016/S0883-9026(01)00076-3)
- Karimi, S., Biemans, H.J., Naderi Mahdei, K., Lans, T., Chizari, M., & Mulder, M. (2017). Testing the relationship between personality characteristics, contextual factors and entrepreneurial intentions in a developing country. *International Journal of Psychology*, *52*(3), 227-240. <https://doi.org/10.1002/ijop.12209>
- Kautonen, T., & Palmroos, J. (2010). The impact of a necessity-based start-up on subsequent entrepreneurial satisfaction. *International Entrepreneurship Management Journal*, *6*(3), 285-300. <https://doi.org/10.1007/s11365-008-0104-1>
- Kelley, D., Brush, C., Greene, P., Herrington, M., & Kew, P. (2014). Women's Report. Global Entrepreneurship Monitor. In: Babson Park, MA: Babson College.
- Kim, N., & Branzei, O. (2017). *Divided We Stand: The Policy Bifurcation of Fields in the Aftermath of Critical Events*. Paper presented at the Academy of Management Proceedings. <https://doi.org/10.5465/AMBPP.2017.1>
- Krueger Jr, N.F., Reilly, M.D., & Carsrud, A.L. (2000). Competing models of entrepreneurial intentions. *Journal of Business Venturing*, *15*(5-6), 411-432. [https://doi.org/10.1016/S0883-9026\(98\)00033-0](https://doi.org/10.1016/S0883-9026(98)00033-0)
- Law, K.M., & Breznik, K. (2017). Impacts of innovativeness and attitude on entrepreneurial intention: Among engineering and non-engineering students. *International Journal of Technology Design Education*, *27*(4), 683-700. <https://doi.org/10.1007/s10798-016-9373-0>

- Lee, C.-C., Wang, C.-W., & Ho, S.-J. (2020). Country governance, corruption, and the likelihood of firms' innovation. *Economic Modelling*, 92, 326-338. <https://doi.org/10.1016/j.econmod.2020.01.013>
- Liñán, F., Urbano, D., & Guerrero, M. (2011). Regional variations in entrepreneurial cognitions: Start-up intentions of university students in Spain. *Entrepreneurship Regional Development*, 23(3-4), 187-215. <https://doi.org/10.1080/08985620903233929>
- Lüthje, C., & Franke, N. (2003). The 'making' of an entrepreneur: testing a model of entrepreneurial intent among engineering students at MIT. *RD Management*, 33(2), 135-147. <https://doi.org/10.1111/1467-9310.00288>
- Maio, G.R., Haddock, G., & Verplanken, B. (2018). *The psychology of attitudes and attitude change*. Sage.
- Malebana, M. (2014). The effect of knowledge of entrepreneurial support on entrepreneurial intention. *Mediterranean Journal of Social Sciences*, 5(20), 1020-1020. <https://doi.org/10.5901/mjss.2014.v5n20p1020>
- Mas-Verdú, F., Baviera-Puig, A., & Martinez-Gomez, V. (2009). Entrepreneurship policy and targets: The case of a low absorptive capacity region. *International Entrepreneurship Management Journal*, 5(3), 243-258. <https://doi.org/10.1007/s11365-009-0112-9>
- Miller, B.K., Bell, J.D., Palmer, M., & Gonzalez, A. (2009). Predictors of entrepreneurial intentions: a quasi-experiment comparing students enrolled in introductory management and entrepreneurship classes. *Journal of Business Entrepreneurship*, 21(2), 39-62. Retrieved from https://researchgate.net/publication/264551326_Predictors_of_entrepreneurial_intentions_A_quasi-experiment_comparing_students_enrolled_in_introductory_management_and_entrepreneurial_classes on July 11, 2022.
- Mujahid, S., Mubarik, M.S., & Naghavi, N. (2020). Developing entrepreneurial intentions: what matters?. *Middle East Journal of Management*, 7(1), 41-59. <https://doi.org/10.1504/MEJM.2020.10026906>
- Pals, S. (2006). Factors determining success/failure in business incubators: A literature review of 17 countries. *Worcester Polytechnic Institute*, 2-81. Retrieved from https://digital.wpi.edu/concern/student_works/tm70mw628?locale=en on August 22, 2022.
- Pathak, S., Goltz, S., & Buche, M.W. (2013). Influences of gendered institutions on women's entry into entrepreneurship. *International Journal of Entrepreneurial Behaviour Research*, 19, 478-502. Retrieved from https://www.researchgate.net/publication/260983696_Influences_of_Gendered_Institutions_on_Women's_Entry_into_Entrepreneurship on August 08, 2022.
- Potishuk, V., & Kratzer, J. (2017). Factors Affecting Entrepreneurial Intentions and Entrepreneurial Attitudes in Higher Education. *Journal of Entrepreneurship Education*, 20(1). Retrieved from https://www.researchgate.net/publication/319478767_Factors_affecting_entrepreneurial_intentions_and_entrepreneurial_attitudes_in_higher_education on October 11, 2022.
- Ramayah, T., Mohamad, O., Young, N.C., & Lo, M.-C. (2011). Testing dimensionality of the consumer ethnocentrism scale (CETSCALE): Assessing reliability and validity in a multicultural context. *Australian Journal of Basic Applied Sciences*, 5(9), 325-334. Retrieved from https://www.researchgate.net/publication/228467911_Testing_the_dimensionality_of_Consumer_Ethnocentrism_Scale_CETSCALE_among_a_young_Malaysian_consumer_market_segment on July, 1, 2022.
- Reed, R., Storrud-Barnes, S., & Jessup, L. (2012). How open innovation affects the drivers of competitive advantage: Trading the benefits of IP creation and ownership for free invention. *Management Decision*, 50(1), 58-73. <https://doi.org/10.1108/00251741211194877>
- Rostami, F., Hassan, S.T.S., & Yaghmaei, F. (2018). Applying Theory of Planned Behavior to Develop Family-centered Care, 2015-2016. *Iranian Journal of Public Health*, 47(3), 460. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5971189/> on September 15, 2022.
- Salem, A.B., Malek, A., & Chka, H. (2020). Profile of Women Entrepreneurs in Tunisia and Their Choice of Entrepreneurial Career: An Exploratory Study. *Journal of Enterprising Culture*, 28(03), 281-303. <https://doi.org/10.1142/S0218495821500126>
- Salem, M.I. (2014). The role of business incubators in the economic development of Saudi Arabia. *International Business Economics Research Journal*, 13(4), 853-860. <https://doi.org/10.19030/iber.v13i4.8694>
- Schwarz, E.J., Wdowiak, M.A., Almer-Jarz, D.A., & Breiteneker, R.J. (2009). The effects of attitudes and perceived environment conditions on students' entrepreneurial intent: An Austrian perspective. *Education+ Training*, 51, 272-291. <https://doi.org/10.1108/00400910910964566>
- Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach*. John Wiley & Sons.

- Shaw, D., & Shiu, E. (2003). Ethics in consumer choice: a multivariate modelling approach. *European Journal of Marketing*, 37(10), 1485-1498. <https://doi.org/10.1108/03090560310487202>
- Sidrat, S., Amouri, A., Boujelbene, Y., & Boudabbous, S. (2016). Entrepreneurship in Tunisia: Obstacles. *International Journal of Humanities Social Science Invention*, 5(4), 60-67. Retrieved from https://www.researchgate.net/publication/332524060_Entrepreneurship_in_Tunisia_Obstacles on October 21, 2022.
- Solesvik, M.Z. (2013). Entrepreneurial motivations and intentions: investigating the role of education major. *Education+ Training*, 55(3), 253-271. <https://doi.org/10.1108/00400911311309314>
- Tracy, B. (2007). *The Way to Wealth*. Entrepreneur Press.
- Tsuchiya, R. (2010). Neighborhood social networks and female self-employment earnings in Taiwan. *International Entrepreneurship Management Journal*, 6(2), 143-161. <https://doi.org/10.1007/s11365-010-0143-2>
- Urbach, N., & Ahlemann, F. (2010). Structural equation modeling in information systems research using partial least squares. *Journal of Information Technology Theory Application*, 11(2), 2. Retrieved from https://www.researchgate.net/publication/228467554_Structural_equation_modeling_in_information_systems_research_using_Partial_Least_Squares on October 29, 2022.
- Utami, C.W. (2017). Attitude, subjective norm, perceived behaviour, entrepreneurship education and self efficacy toward entrepreneurial intention university student in Indonesia. Retrieved from https://www.researchgate.net/publication/317214147_Attitude_Subjective_Norms_Perceived_behavior_Entrepreneurship_education_and_Self-efficacy_toward_entrepreneurial_intention_University_student_in_Indonesia on September 23, 2022.
- Vallerand, R.J., Deshaies, P., Cuerrier, J.-P., Pelletier, L.G., & Mongeau, C. (1992). Ajzen and Fishbein's theory of reasoned action as applied to moral behavior: A confirmatory analysis. *Journal of Personality Social Psychology*, 62(1), 98. <https://doi.org/10.1037/0022-3514.62.1.98>
- Van Horne, C., Huang, V., & Al Awad, M. (2011). *Global entrepreneurship monitor (GEM) report on entrepreneurship in the United Arab Emirates*, Zayed University. Retrieved from https://www.zu.ac.ae/main/en/research/publications/books_reports/2011/2011%20gem%20report%20on%20entrepreneurshio%20in%20the%20uae.pdf on October 11, 2022.
- Verheul, I., Thurik, R., Grilo, I., & Van der Zwan, P. (2012). Explaining preferences and actual involvement in self-employment: Gender and the entrepreneurial personality. *Journal of Economic Psychology*, 33(2), 325-341. <https://doi.org/10.1016/j.joep.2011.02.009>
- Vinzi, V.E., Trinchera, L., & Amato, S. (2010). PLS path modeling: from foundations to recent developments and open issues for model assessment and improvement. *Handbook of Partial Least Squares*, 47-82. https://doi.org/10.1007/978-3-540-32827-8_3
- Wakaisuka-Isingoma, J., Aduda, J., Wainaina, G., & Mwangi, C.I. (2016). Corporate governance, firm characteristics, external environment and performance of financial institutions in Uganda: A review of literature. *Cogent Business Management*, 3(1), 1261526. <https://doi.org/10.1080/23311975.2016.1261526>
- Wardana, L.W., Narmaditya, B.S., Wibowo, A., Saraswati, T.T., & Indriani, R. (2021). Drivers of entrepreneurial intention among economics students in Indonesia. *Entrepreneurial Business Economics Review*, 9(1), 61-74. <https://doi.org/10.15678/EBER.2021.090104>
- Wijaya, T. (2008). Kajian model empiris perilaku berwirausaha UKM DIY dan Jawa Tengah. *Jurnal Manajemen Dan Kewirausahaan*, 10(2), 93-104. <https://doi.org/10.9744/jmk.10.2.pp.%2093-104>
- Wiklund, J., & Shepherd, D. (2005). Entrepreneurial orientation and small business performance: a configurational approach. *Journal of Business Venturing*, 20(1), 71-91. <https://doi.org/10.1016/j.jbusvent.2004.01.001>
- Yousaf, U., Shamim, A., Siddiqui, H., & Raina, M. (2015). Studying the influence of entrepreneurial attributes, subjective norms and perceived desirability on entrepreneurial intentions. *Journal of Entrepreneurship in Emerging Economies*. <https://doi.org/10.1108/JEEE-03-2014-0005>
- Yusof, M., & Jain, K.K. (2010). Categories of university-level entrepreneurship: a literature survey. *International Entrepreneurship Management Journal*, 6(1), 81-96. <https://doi.org/10.1007/s11365-007-0072-x>
- Zampetakis, L.A., Kafetsios, K., Bouranta, N., Dewett, T., & Moustakis, V.S. (2009). On the relationship between emotional intelligence and entrepreneurial attitudes and intentions. *International Journal of Entrepreneurial Behavior Research*. 15(6), 595-618. <https://doi.org/10.1108/13552550910995452>
- Zhang, P., Wang, D.D., & Owen, C.L. (2015). A study of entrepreneurial intention of university students. *Entrepreneurship Research Journal*, 5(1), 61-82. <https://doi.org/10.1515/erj-2014-0004>

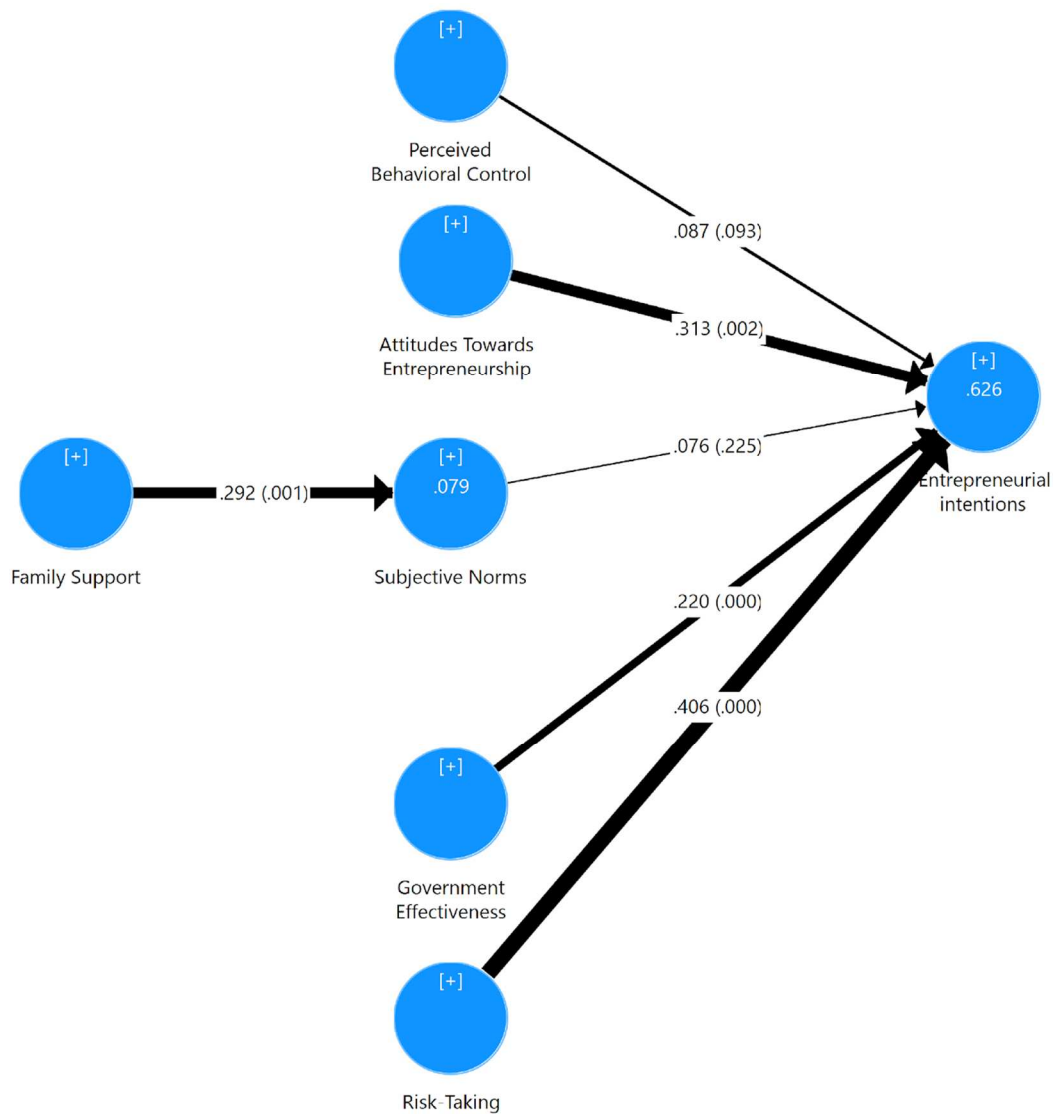
Appendix A: Questionnaire

No.	Factor	Item	Description
1	Perceived behavioural control	PBC1	I think that starting a firm and keeping it viable would be easy for rural women.
		PBC2	I believe rural women would be completely able to start their own businesses.
		PBC3	I think rural women can control the creation process of their new own businesses.
		PBC4	I think it would be very easy for rural women to develop their businesses ideas.
		PBC5	I think that rural women know all about the practical details needed to start their own businesses.
2	Attitudes towards entrepreneurship	ATE1	I think that the career as an entrepreneur is totally attractive to rural women.
		ATE2	I think that if rural women had the opportunity and resources they would love to start their own businesses.
		ATE3	I think that being an entrepreneur would give rural women great satisfaction.
3	Subjective norms	SN1	I think that that people close to the rural women believe, hope and encourage the rural women to participate in business.
		SN2	I think that that friends of the rural women influence the rural women willingness to start a new business.
		SN3	I think that the surroundings of the rural women influence the rural women decision to start a new business.
4	Risk-taking	RT1	I think that rural women must take risks at times to be successful in their own businesses.
		RT2	I think that rural women can take risky decisions about their own businesses.
		RT3	I think that to create something of value of their own businesses, rural women need to take risks.
		RT4	I think that the risk of COVID-19 will be a barrier for rural women to start and operate their business.
5	Family support	FS1	I think that the members of the rural women’s families will approve their actions.
		FS2	I think that the members of the rural women’s families will encourage them to start their business.
		FS3	I think that if necessary, the members of the rural women’s will loan them money to help them start their own business.
		FS4	I think that if necessary, the members of the rural women’s families will provide them materials and equipment to help them start their own business.
		FS5	I think that the members of the rural women’s families will give them advice to start their own business.
6	Entrepreneurial education	EE1	I think that the entrepreneurship education at basic school (primary and secondary) will motivate the rural women to start their own business.
		EE2	I think that the entrepreneurship education at post-secondary levels (higher education such as vocational, college, business schools, etc.) will help the rural women to start their own business.
		EE3	I think that entrepreneurship education is a necessary part for rural women to become successful in entrepreneurship.
		EE4	I think that entrepreneurship education will promote the entrepreneurship among the rural women.
7	Government effectiveness	GE1	I think that the quality of public services will help the rural women to start or operate their own businesses.
		GE2	I think that the quality of policy formulation will help the rural women to start or operate their own businesses.
		GE3	I think that the quality of policy implementation will help the rural women to start or operate their own businesses.
		GE4	I think that the credibility of the government’s commitment to the public services and policies will help the rural women to start or operate their own businesses.
8		EI1	I think that rural women professional goal is to become an entrepreneur.
		EI2	I think that rural women will make every effort to start and run their own businesses.

No.	Factor	Item	Description
	Entrepreneurial intentions	EI3	I think that rural women are determined to create a firm in the future.
		EI4	I think that rural women have very seriously thought about starting a business.
9	Source of data collection	SDC1	In the selection of samples, we used simple random sampling known as SRS. We made field visits to different regions of Tunisia to collect data from random respondents falling within the selection criteria for this study. Apart from this, we also used online questionnaire forms to collect data from random respondents without any referral. For ensuring the validity of sampling technique and data, we informed all of the respondents regarding the purpose of study prior to filling the questionnaire.

Source: own study

Appendix B: Overview of the structural model



Source: own elaboration.


Authors

Dorsaf Maayoufi (60%): Description of contribution of authors (concepts, design, analysis and interpretation of data, methods etc.), Emese Bruder (20%): Methodology, Viktória Kútvolgyi (20%): Literature analysis.

Dorsaf Maayoufi

Dorsaf Maayoufi Degree: Doctor of Management and Business Administration. Her research interest include Rural Development, Rural Women, Agribusiness, Female Entrepreneurship. PhD student, Hungarian University Of Agriculture And Life Sciences (Hungary).


Correspondence to: Dorsaf Maayoufi, Bártfai Utca 48 1115, Budapest. e-mail: maayoufidorsaf5@gmail.com

ORCID  <https://orcid.org/0000-0002-1424-9953>

Emese Prihoda

Emese Prihoda Associate Professor Degree: Doctor of Management and Business Administration. Her research Interest include Poverty, Deprivation, Internal Migration, Territorial Inequalities.


Correspondence to: Emese Prihoda, Hungarian University of Agriculture And Life Sciences. Gödöllő, Páter Károly u. 1, 2100, e-mail: Prihoda.emese@uni-mate.hu

ORCID  <https://orcid.org/0000-0001-8554-723X>

Viktória Kútvolgyi

Viktória Kútvolgyi (Degree In Qualified Teacher, Head of Public Education (2019, At The Budapest University of Technology and Economics), PhD Student, Hungarian University of Agriculture and Life Sciences (Hungary). Her Research Interests Include Health Tourism and Gastronomy.

Correspondence to: Viktória Kútvolgyi, Bajcsy zsilinszky út 59., 1065, Budapest, Hungary, e-mail: viktoriakutvolgyi@gmail.com

ORCID  <https://orcid.org/0009-0006-0997-4997>

Acknowledgements and Financial Disclosure

Acknowledgement: To the rural Tunisian women who filled out the questionnaires and thus contributed to the writing of the article. Financial disclosure: Supported by authors.

Conflict of Interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Copyright and License



This article is published under the terms of the Creative Commons Attribution (CC BY 4.0) License <http://creativecommons.org/licenses/by/4.0/>

Published by Krakow University of Economics – Krakow, Poland



Ministry of Education and Science
Republic of Poland

The journal is co-financed in the years 2022-2024 by the Ministry of Education and Science of the Republic of Poland in the framework of the ministerial programme "Development of Scientific Journals" (RCN) on the basis of contract no. RCN/SP/0251/2021/1 concluded on 13 October 2022 and being in force until 13 October 2024.

