

Entrepreneurial psychosocial profile of university women in the State of Mexico, Mexico

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Abstract

The present empirical research is a descriptive and correlational study from the psychosocial perspective, the objective is to analyze the relationship between the intention to undertake and variables such as family with businesses, work intention, initial motivations, personality traits, individualistic, collectivist and mixed values, support for self-employment in the educational center, difficulty to create a company and perception of the entrepreneur, to integrate an entrepreneurial psychosocial profile of university women from Higher Education Schools in the State of Mexico, Mexico. The sample under study was obtained with the participation of 297 women. Among the main findings is the existence of weak positive relationships in most of the variables studied about entrepreneurship. The risk-taking personality trait is less commonly observed. The most important human values observed are individualistic self-direction, collectivist benevolence, and universalism as mixed value, in this sense, entrepreneurship in commercial businesses and social entrepreneurship are alternatives for the intention of entrepreneurship in university women. Regarding the support from the Educational Center, the correlation was little or non-existent, however, recovering the importance of promoting visits to companies to receive advice or seminars, university women also state that self-employment is stimulated, but the knowledge offered has a low average trend. Another finding is perceived difficulties, which are external such as funding, grants, bureaucracy and advice. Finally, the perception of the entrepreneur is positive.

Keywords: female entrepreneur, potential university entrepreneur, entrepreneurship, female entrepreneurship.

Perfil psicossocial empreendedor de mulheres universitárias do Estado do México, México

Resumo

A presente pesquisa empírica é um estudo descritivo e correlacional na perspectiva psicossocial, o objetivo é analisar a relação entre a intenção de empreender e variáveis como família com negócios, intenção de trabalhar, motivações iniciais, traços de personalidade, valores individualistas, coletivistas e mistos, apoio ao trabalho autônomo no centro educacional, dificuldade para criar uma empresa e percepção do empreendedor, para integrar um perfil psicossocial empreendedor de mulheres universitárias de escolas de ensino superior no Estado do México, México. A amostra em estudo foi obtida com a participação de 297 mulheres. Entre os principais achados está a existência de relações positivas fracas na maioria das variáveis estudadas sobre empreendedorismo. O traço de personalidade de assumir riscos é menos comumente observado. Os valores humanos mais importantes observados são a autodireção individualista, a benevolência coletivista e o universalismo como valor misto, neste sentido, o empreendedorismo em negócios comerciais e o empreendedorismo social são alternativas para a intenção de empreendedorismo em mulheres universitárias. Quanto ao apoio do Centro Educacional, a correlação foi pouca ou inexistente, no entanto, recuperando a importância de promover visitas a empresas para receber aconselhamento ou seminários, as universitárias também afirmam que o auto-emprego é estimulado, mas o conhecimento oferecido tem uma tendência média baixa. Outra constatação são as dificuldades percebidas, que são externas, como financiamento, subvenções, burocracia e aconselhamento. Por fim, a percepção do empreendedor é positiva.

Palavras-chave: mulher empreendedora, potencial empreendedora universitária, empreendedorismo,

emprededorismo feminine

1. Introduction

Entrepreneurship has become an object of inconclusive study, which can be analyzed from various perspectives, observing a positive impact on the economic and social development of countries. Not only is it a proposed solution to unemployment, it is also part of innovation and creative processes within companies (Badoiu et al., 2020; Laguía et al., 2017). From a social perspective, entrepreneurship has had an impact on mitigating unemployment, which is currently considered one of the main problems facing society, as a proposed solution, self-employment arises, which is accompanied by the concept of entrepreneurship (Rodríguez et al., 2021; Medor, 2020; Sparano, 2014). For Romero & Restrepo (2016), entrepreneurship is "an attitude that involves effort, perseverance and tenacity, that is, not to lose heart and to continue despite failures. Facing risks present on the way to achieving the goal. Entrepreneurship is forging a project for the future with new visions that generate well-being for its users and idealizers."

According to Altamirano et al. (2020) and Almodóvar (2018): Entrepreneurship can be divided into the following classifications: a) Entrepreneurship by necessity: As its name indicates, it is carried out by the primary need to generate daily income to be able to live, generally it does not have a plan or vision of future growth; b) Traditional entrepreneurship is one that has growth due to its structure, however, it does not meet the criteria of sales, profitability and high sustainability, they use technology little, sometimes the workforce is not trained; and c) Dynamic entrepreneurship: These are those that have rapid and profitable growth, generally have profitable and representative sales after 10 years.

From the perspective of the "Global Entrepreneurship Monitor (GEM)", companies are generally started by individuals, which is why the GEM studies entrepreneurship from the characteristics of individuals as people, with respect to the start and monitoring of a business (González; Dotor, 2019; Laguía et al., 2017, Amorós, 2011). The process of entrepreneurship begins with a business idea from an individual who, with the help of their knowledge, skills and abilities, is able to identify how they can develop their proposal becoming a potential entrepreneur (Altamirano et al., 2020, Sparano Rada, 2014).

Other research by Laguía et al. (2017) and Amorós (2011) analyzes the life cycle of the entrepreneurial process from the moment in which resources are committed to start a business, which is what is called a nascent entrepreneur; When you already own a business that has been active for more than three months and less than 42 months, you are known as a new business owner; And when you own a business that is in operation for more than 42 months, you are considered an established business owner. For the GEM, the difference between a nascent entrepreneur and new business owners depends on how long the business has been operating, the sum of these two phases is called entrepreneurial activity in stages by its initials TEA (González; Dotor, 2019; Liña; Fernández, 2018; Laguía et al., 2017; Amorós, 2011).

According to Sánchez et al. (2017) an entrepreneur could be an interaction of personal factors: self-efficacy, internal locus of control and proactivity, these factors, at high levels significantly influence taking entrepreneurial action, in addition to showing commitment in activities; and its sociocultural background: attitude, perceived control, subjective norm and reliability, these must always be put as a basis in the proposals that are made to promote the entrepreneurial culture at the educational level, even more so when their influence on the creation of formal businesses has been shown. Among the essential elements in entrepreneurial behavior are responsibility, autonomy, teamwork, adaptability, resource management, social networks, risk-taking, and learning to be an entrepreneur.

From the perspective of Salinas (2022), entrepreneurial education not only seeks to teach how to run a business or set up a company, it also seeks to encourage creative thinking and the promotion of a strong sense of self-esteem and empowerment, in addition, it allows the development of the personal qualities that constitute the basis of the entrepreneurial spirit (creativity, initiative, responsibility, ability to face risks, autonomy in work and teamwork), showing entrepreneurship as a real option for the future while providing them with ideas that respond to social problems; In addition, aspects of social entrepreneurship are promoted, such as: a) creativity; (b) observation and exploration; (c) analysis and synthesis of the environment; (d) teamwork and decision-making; e) A caring conscience, a responsible conscience committed to the problems of their environment. That is, to train people in the recognition and use of opportunities when creating new ideas, reinventing the available resources by gestating new projects, thinking creatively and critically. In this same sense, in the training of entrepreneurs, it is important to consider the type of knowledge that is involved in the development of the entrepreneurial process, for this, at least four areas of knowledge can be identified, namely: a) specific technical knowledge; (b) management skills;

(c) knowledge related to business planning; and d) personal capacities, aptitudes and skills (Santandreu; Marsilgia, 2022).

Additionally, the study by Ripolles & Michavila (2020), mentions the set of knowledge and skills that improve students' ability to explore and exploit, both of which constitute the main elements behind these entrepreneurial competencies, among these are knowledge and skills related to the ability of students to identify problems, define market segments. Develop new products/services, experiment with new technologies, extend market knowledge and identify new trends or skills for the interpretation, integration and application of new knowledge such as the development of stable organizational routines, the design of production and market systems, resource and people mobilization, business management skills, to mention a few. However, it is important to add that the context influences the creation of companies, the role theory tries to explain why in certain geographical areas there are more companies compared to others, that is, environments where business models or activities predominate stimulate the emergence of more companies (Sung; Duarte, 2015).

Now, from the perspective of female entrepreneurship there has been an increase worldwide and in the case of Mexico it has not been the exception, even when research is scarce, women have skills that influence entrepreneurship such as work experience, taste for activities and less fear of failure, financing is obtained from the support of family and friends. Undertaking generally for socio-economic needs such as supporting the family income and improving their standard of living. Regarding the role of women in entrepreneurship and the role as entrepreneurs, research is scarce with limited scope due to the lack of statistical data to be able to identify the interaction of women in the economy (Miranda et al., 2023; Hernández; García, 2019).

Another research with emphasis on the perspective of the initial motivation by opportunity or need, adds the classic theory of needs and the model of individualistic and collectivist values, thus proposes the study of the psychosocial profile of the entrepreneurial woman in Mar de Plata Argentina, the development of entrepreneurship by opportunity or need is observed with personal involvement and critical personal and/or work situations, women manifested the need for filing, and a combination of collectivist values associated with benevolence, as well as mixed values, associated with universalism, was found (Silva; Rompato, 2020).

To complement the studies of Silva & Rompato (2020), the research of Moriano et al. (2001) proposes the existence of significant differences in individualistic and collectivist personal values between a group of entrepreneurs and employees, a tendency towards individualistic values is observed in entrepreneurs; In the same line of research, Moriano et al. (2006) carried out the study of the university entrepreneurial profile in Spain, finding that gender, family, work experience, education towards self-employment, social support, perception of barriers and individualistic and collectivist values allow predicting the intention to create a company or work as a self-employed person. Likewise et al. (2023) carry out an analysis of the predictive capacity of personal values in the entrepreneurial intention of students of the University of Guadalajara, Mexico, the results show the individualistic values with the highest predictive load compared to the collectivist ones, both being positively charged, so they determine that both commercial entrepreneurship and social entrepreneurship are alternatives for development in that community University.

However, Paz & Espinosa (2019) describes women in Mexico are severely affected by unemployment and precariousness of the labor market, therefore, female entrepreneurship arises to face poverty and marginalization of their families, it is important to create public policies where the conditions, needs and motivations that women must create their companies are integrated. With this, government support boosts the survival and growth of businesses. On the other hand, Miranda et al. (2023) carry out the study of women entrepreneurs in Tabasco, Mexico, with the purpose of identifying motivational factors for entrepreneurship, observing first the obtaining of income through one's own business, and to a lesser extent entrepreneurship as a means to achieve long-term economic security.

Another relevant study, mentions based on the Ministry of Finance that 3 out of 5 businesses are run by women in Mexico, despite the generation of support for women entrepreneurs by the government, a failure rate is estimated in 75% of ventures, in other words, not all people who propose to undertake are successful (Almodóvar, 2018), among the *hayazgos*, the success of women in business, with emphasis on the model of the five psychological traits from the behavioral approach and individual personal characteristics are extraversion, openness and conscientiousness, in addition, it highlights the need to provide training in terms of business management, these results are obtained from a sample of entrepreneurs of recently created businesses (0 to 3 years) in four cities in northern Mexico (Tovar et al., 2021).

In this same line of arguments, Rueda et al. (2021) analyze attitudes, values and personality traits of the Potosí entrepreneur in men and women by studying the personality oriented to self-confidence and the propensity to risk.

On the other hand, Moreno (2013), determines factors that influence entrepreneurial intention, citing "people who have a high internal control, high need for achievement, ability to take risks and a high tolerance to ambiguity, will be more likely to get involved in a business activity". The research by Macho et al. (2020), carries out a study of the psychosocial profile and the intention to undertake considering whether there are gender differences considering personality traits, finding no significant differences between women and men.

Following the line of arguments, Ramos et al. (2023) mentions the existence of asymmetry between ventures based on gender, which implies a lower entrepreneurship in women compared to men, it is also observed that women undertake more frequently out of necessity, the main reasons found are economic, for self-realization in two senses, advance in their professional career or because they do not feel satisfied in their job because they do not have the opportunity to move up in their high-ranking jobs (Miranda et al., 2023); and to spend more time with their children. Women entrepreneurs face challenges such as not having sufficient work experience or previous business training; In addition to this, they start operations in low-performance sectors, with a tendency to evade risks or access external sources of financing to grow their business, this because they seek a balance in the dedication to their entrepreneurship and their family. Camarena & Saavedra indicate that companies led by women have little access to credit for their growth, this is partly because there is a stereotype towards women entrepreneurs (Paz, 2023). On the other hand, Palacios et al. (2020), in the comparative study between men and women with respect to business performance, state that the returns of women's companies are lower compared to men's, and women generally undertake out of necessity.

According to Paz (2023) in her documentary research, she highlights the importance of conducting studies on young women entrepreneurs, since so far there is scarce research on young university entrepreneurs, for the United Nations (UN) they are considered young people in the age range between 15 and 24 years old, however, this interval is flexible; in Mexico, the range varies between 15 and 29 years. Regardless of gender, university youth entrepreneurship has obstacles to entrepreneurship, such as lack of capital, lack of managerial skills, risk aversion and little support from public institutions. In addition, women are less likely to create their own business, due to the limitation of continuing to be linked to unpaid domestic work, remaining anchored to this gender stereotype, another aspect is employment discrimination. On the other hand, Garavito et al. (2021) cited in Paz (2023) emphasize the importance of conducting entrepreneurship studies on women university entrepreneurs to identify gaps in this area of study.

According to the literature observed, it is possible to integrate a psychosocial entrepreneurial profile of women, which depends on having developed certain attitudes, personality traits, skills and values; Therefore, knowledge of the psychosocial profile of the entrepreneur is useful to identify possible weaknesses, thereby generating strategies to strengthen these characteristics; On the other hand, from the organizational level, it is possible to know if human capital has the entrepreneurial profile, as it facilitates the decision-making process for the allocation of human and economic resources in innovative and creative projects.

Derived from the above, the objective of this research is to analyze: Yes, family with businesses, work intention, initial motivations, personality traits, individualistic, collectivist and mixed values, support for self-employment in the educational center, difficulty to create a company and perception of the entrepreneur are related to the intention to undertake, thus integrating a psychosocial entrepreneurial profile of university women from Higher Education Schools of the State of Mexico, Mexico.

According to the objective, based on the reviewed literature, the following hypotheses are proposed:

- H1. Family tradition is related to entrepreneurial intention.
- H2. Work Inspiration Is Related to Entrepreneurial intention.
- H3. Initial motivations are related to entrepreneurial intention.
- H4. Personal characteristics are related to entrepreneurial intention.
- H5. Individualistic values are related to entrepreneurial intention.
- H6. Collectivist values relate to entrepreneurial intention.
- H7. Mixed Values Relate to Entrepreneurial intention.
- H8. The support for self-employment in the Educational Center is related to the entrepreneurial intention.
- H9. The difficulty of creating a company is related to entrepreneurial intention.
- H10. The perception of the entrepreneur is related to the entrepreneurial intention.

2. Materials and Methods

The present research is based on an empirical descriptive and correlational analysis, based on a non-probabilistic convenience sample, recovering a total of 297 samples of women from Higher Education Schools in the State of Mexico, Mexico. The measurement instrument used for data collection is extracted from research done on entrepreneurship, considering the operationalization of variables with a total of 90 questions as shown in Table 1, a form available on the Internet is used, which is applied in the period from October 2022 to September 2023.

Table 1. Operationalization of the questionnaire variables

Variable	Scale	Indicator	Cronbach's alpha	Reference
Sociodemographic	Nominal	Sociodemographic characteristics	N/A	(Ripolles; Michavila, 2020)
Family Tradition	Nominal	Business experience by family members - dichotomous variable (yes-no)	N/A	(Moriano, 2006; Moreno, 2013)
Work experience	Nominal	The university student has work experience - dichotomous variable (yes - no)	N/A	(Moriano, 2006; Miranda et al., 2023; Hernández; García, 2019)
Entrepreneurial intent	Ordinal	Perception of intention to undertake - 5-position Likert scale (1 no, never - 5 I am an entrepreneur)	0.82	(Moreno, 2013; Sánchez et al., 2017; Liña; Fernández, 2018; Rueda et al., 2021)
Initial motivation	Ordinal	Perception of entrepreneurship by opportunity or necessity - 5-position Likert scale (1 no, never - 5 I'm an entrepreneur)	0.67	(Silva; Rompató, 2020; Palacios et al., 2020; Ramos et al., 2023)
Work intention	Ordinal	Perception of the importance of working as a self-employed or employed university student - 5-position Likert scale (1 no importance - 5 supreme importance)	0.62	(Miranda et al., 2023)
Personal characteristics	Ordinal	Perception that the university student has of herself - 5-position Likert scale (1 never - 5 always)	0.85	(Moriano, 2001; Moreno, 2013; Rueda et al., 2021; Tovar et al., 2021)
Individualistic values,		Reduced version of Schwartz's Survey values scale questionnaire Perception of importance - Likert scale 5 positions	0.89	(Ros; Grad, 1991, Moriano et al, 2001;
Collectivist values and	Ordinal	1. Opposite to my values, 2. Nothing major, 3. Important, 4. Very important and 5. Of supreme importance	0.91	Rueda et al., 2021;
Mixed values			0.89	Campos; Lara, 2023)
Support for self-employment from the Educational Center	Ordinal	To what extent they have been given support in self-employment during their academic training - 5-position Likert scale (1 not at all - 5 a lot).	0.78	(Moriano, 2006; Sung; Duarte, 2015)
Difficulty setting up a business	Ordinal	Level of importance: difficulties and obstacles to starting a business or		(Moriano, 2006; Peace, 2023)

		working on your own – Likert scale 5 positions (1 -no importance - 5 of supreme importance), inhibiting barriers, external barriers, and invisible barriers are observed.	0.89	
Entrepreneur's perception	Ordinal	Degree of perception of the entrepreneur – Likert scale 5 positions (1 never – 5 always	0.94	(Moreno, 2013; Sung; Duarte, 2015)

The group of women participating in the sample under study come from the following Schools of Higher Education: 53% are students of the UAEM Atlacomulco University Center (CUATLA), 15% of university students belong to the Tecnológico de Estudios de Jocotitlán (TESJO), 13% belong to the Tecnológico de Estudios de San Felipe del Progreso (TESAFEP), another 13% correspond to the Polytechnic University of Atlacomulco (UPA). 2% belong to the Centro Universitario Valle de México, the rest of the participants belong to the University of Ixtlahuaca (CUI), School of Fine Arts of Toluca, Faculty of Chemistry UAEM, State University of the Valley of Toluca (UNEVT), and Intercultural University of the State of Mexico (UIEM).

The treatments are carried out using the SPSS version 25 software, for the descriptive statistics frequency tables, contingency tables, mode, median and percentiles are used; in the calculation of the correlations, Spearman's ordinal correlation coefficient (r_s), Chi-square and likelihood ratio are used, consequently the results are documented including graphs and tables in the explanatory text.

3. Results and Discussion

Once the treatments have been concluded, the explanation is carried out by variable with descriptive and correlational analysis according to the hypothesis proposed in the introductory section.

Initially, the demographic aspects of the sample under study are observed. The most frequent age of university women from the State of Mexico, Mexico is 21 years, with a minimum age of 19 years and the maximum age 29 years, in terms of their distribution by municipality, in (Figure 1) it is observed that they belong most frequently to the municipalities of Atlacomulco (28%). Acambay (12%), Jocotitlán (11%), and Ixtlahuaca 10%. The distribution of women, considering the bachelor's degree, is integrated into management sciences, computer science, engineering, computing, law, health, to mention a few (see Figure 2).

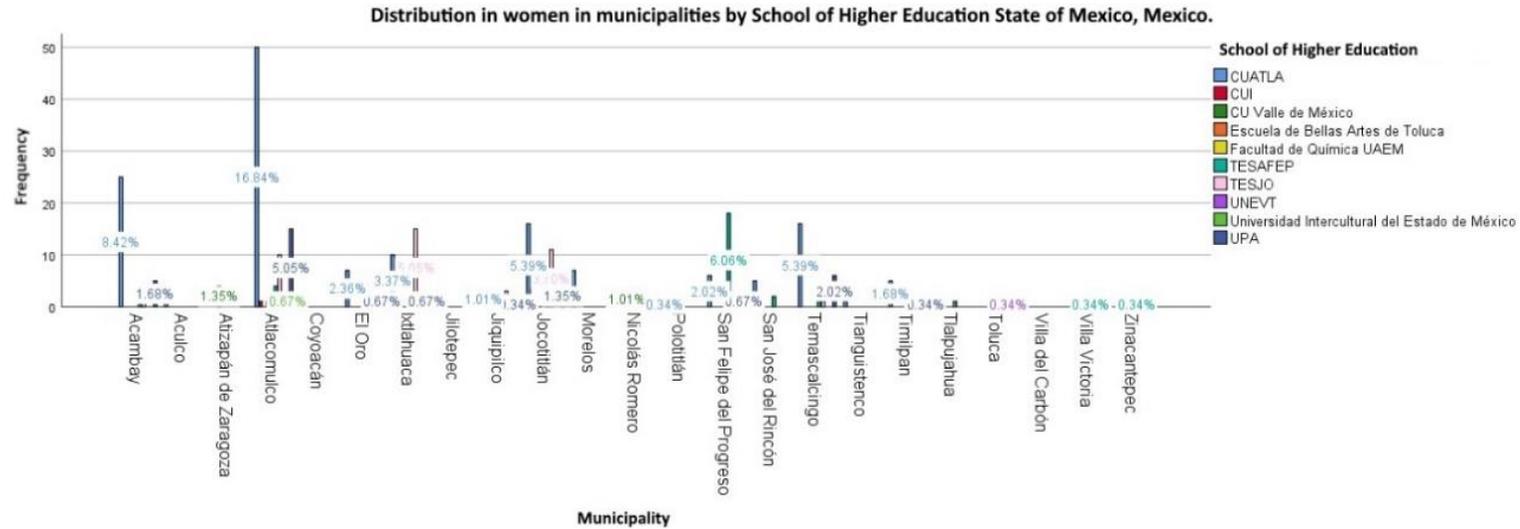


Figure 1. Distribution of university girls by municipality and school of higher education. Source: Authors, 2023.

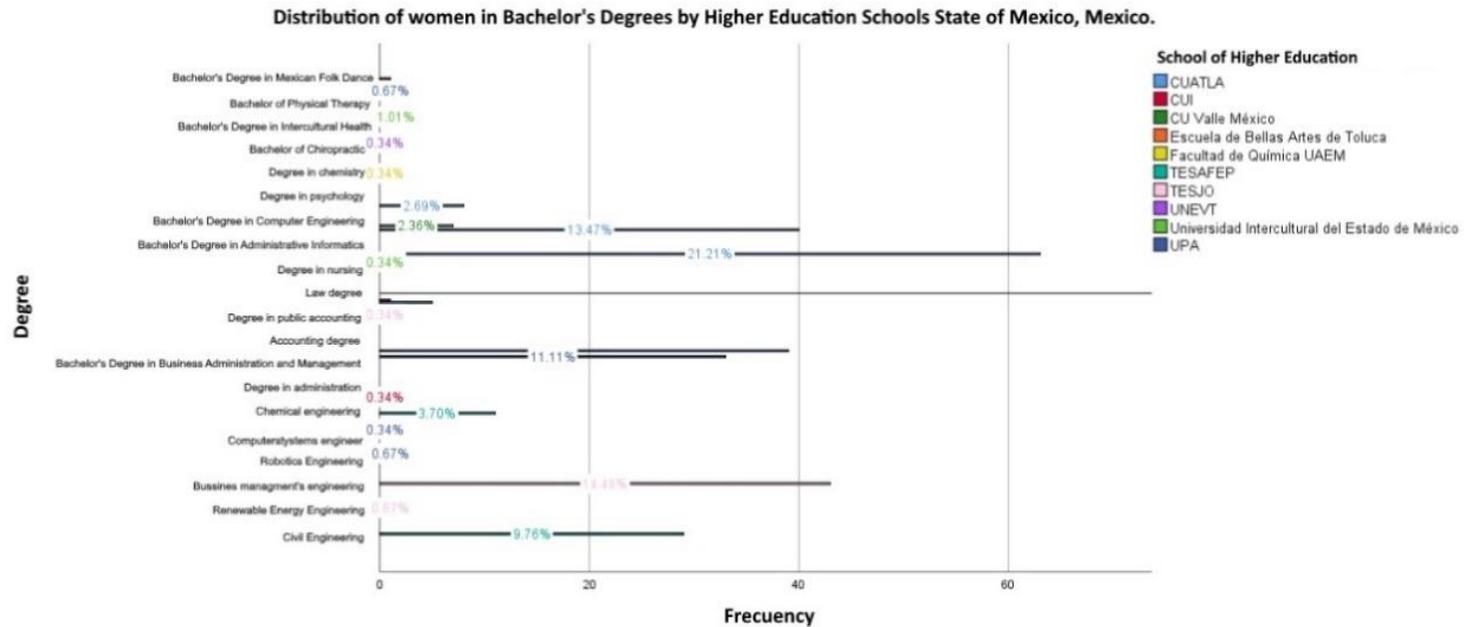


Figure 2. Distribution of women by bachelor's degree and school of higher education. Source: Authors, 2023.

Regarding family tradition, 52% of university women have direct family who are entrepreneurs or have had their own business and work at the same time as they study, only 48% do not have a family with a business and only study. In the past, 72% of university students have been concerned about starting temporary activities or small businesses that have brought them some economic benefit, and 28% have not had this experience. Then, the likelihood ratio is observed with 0.001 significance, finding the existence of a significant relationship between direct family members with business and the intention to undertake.

Another variable object of study is called entrepreneurial intention, three questions are integrated, in the question "Have you ever thought about creating your own company?", approximately 82% of university women, according to the cumulative frequency, give answers from yes, seriously or less in their perception, reflecting a low average trend. Next, there is a medium-high tendency to make decisions to create a company in the future and to make the necessary effort to be entrepreneurs. In addition, of the total sample, four university students who are entrepreneurs are identified.

As for the initial motivations to undertake both out of opportunity and necessity, the trend is medium-high with perceptions ranging from yes, vaguely to yes, firmly in both cases. After calculating the statistics to check if the initial motivations are related to the intention to undertake, the result is a weak positive correlation of 0.355 for entrepreneurship by necessity and a moderate positive correlation of 0.545 for entrepreneurship by opportunity, in both cases significant at a level of 0.01.

However, with regard to the perception of the importance of the work intention to be self-employed and entrepreneurial intention, approximately 19% of university students find it important to work on their own and have the intention of undertaking seriously, only approximately 9% of university students find it of supreme importance to work on their own and have the intention of undertaking firmly (See Figure 3). Likewise, regarding joining private companies to develop their profession, the perception of importance is high and in the case of entering the public administration the trend is medium-high.

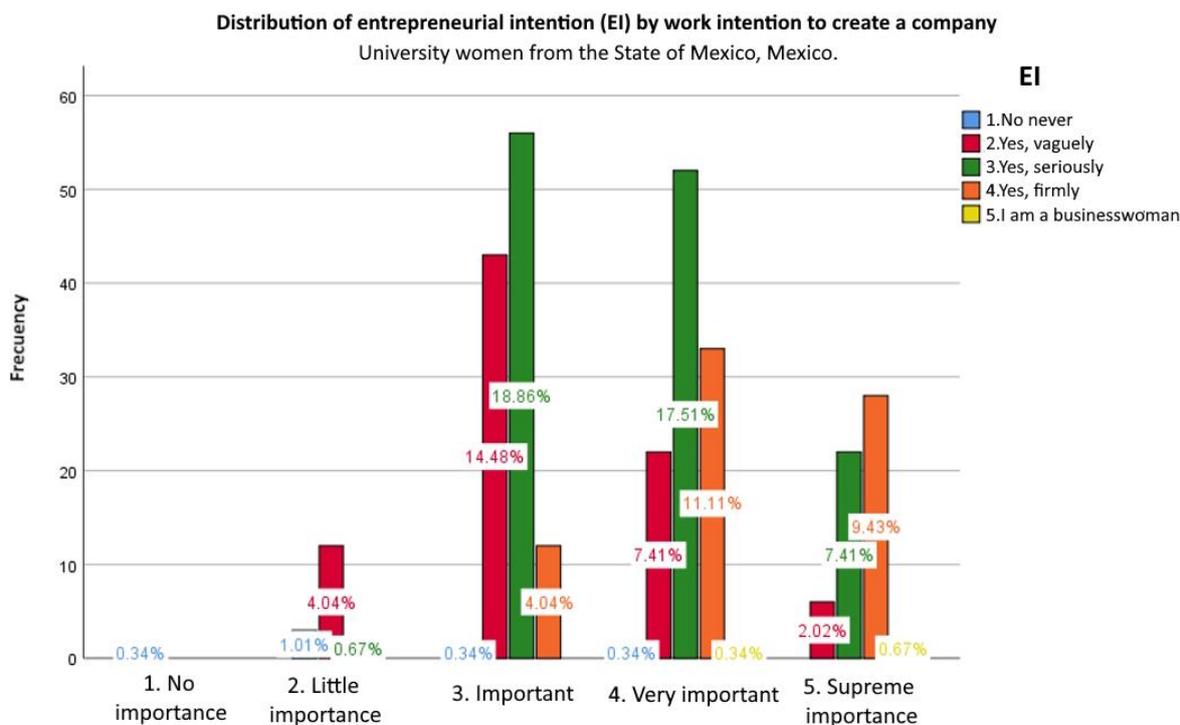


Figure 3. Distribution of entrepreneurial intent and self-employment. Source: Authors, 2023.

In the same vein, based on the calculation of Spearman's ordinal correlation coefficient for H0. The perception of importance of the work intention is not related to the intention to undertake, a weak positive correlation of 0.449

is observed at a level of 0.01, that is, to the extent that for university women it is of supreme importance to work on their own, the entrepreneurial intention improves.

Following the order of ideas, the personal characteristics variable is based on personal traits, according to the studies observed in entrepreneurship we find the internal locus control, tolerance to ambiguity, tolerance to frustration, self-efficacy, propensity to risk, proactivity (Macho et al., 2020; Moreno, 2013). In this sense, the descriptive statistics of the personal characteristics variable are interpreted with the cumulative frequencies as follows: a) I like to stand out in my work or studies, often in 63% of the time the answer was almost always or less; b) I am very thorough in the tasks I perform, often in 77% of the time the answer was almost always or less; c) I like to work daily to be among the best, often 75% of the time the answer was almost always or less; d) It seems to me that if I don't take risks I will get stuck, often 70% of the time the answer was almost always or less; (e) Risk-takers are more likely to succeed than non-risk-takers, often 68 per cent of the time the response was almost always or less; (e) I am a good cop with confusing and unclear situations of definition, often 88 per cent of the time the answer was almost always or less; f) I can withstand situations of uncertainty perfectly, often 88% of the time the answer was almost always or less; g) I like to plan the activities I carry out in time, often in 75% of the time the response was almost always or less; and h) I postpone important matters for a better time even though I am pressed for time, often 90% of the time the answer was almost always or less.

In other words, it is likely that in the context of the sample under study, the answers to the questions will almost always, usually, and sometimes. In another case, Table 2 shows the correlation between personal characteristics and entrepreneurial intention, the result is a weak positive correlation in the range of 0.26-0.5 at the level of 0.01 of almost all questions, except for question RP9 which is not correlated. In other words, for the group of questions with a positive correlation, it can be interpreted that to the extent that university women have a positive perception of their personal characteristics, the intention to be an entrepreneur improves. In the case of question RP9, it can be mentioned that entrepreneurs attend to their important matters and manage their time, in contrast to the sample of participating university women who, if they sometimes postpone their important matters, usually and almost always.

Table 2. Spearman's Correlation Between Personal Characteristic Variables and Entrepreneurial Intent.

Personal characteristics	Entrepreneurial Intent
RP1. Me like to excel in my work or studies	0.342**
RP2. I am very thorough in the tasks I perform	0.329**
RP3. I like to work every day to be among the best	0.318**
RP4. It seems to me that if I don't take risks, I will be stagnant.	0.375**
RP5. People who take risks are more likely to come out ahead than those who don't take risks.	0.277**
RP6. I am a good cop with confusing and unclear situations of definition	0.261**
RP7. I can handle situations of uncertainty perfectly.	0.228**
RP8. Me like to plan the activities I do in time	0.223**
RP9 I postpone important matters for a better time, even though I am pressed for time.	0

Note: ** Correlation is significant at level 0.01 (two-sided). Source: Authors, 2023.

Continuing with the study of Schwartz's individualistic, collectivist and mixed values (Ros; Grad, 1991, Moriano et al., 2001; Rueda et al., 2021; Campos; Lara, 2023), in previous research, entrepreneurs oriented to commercial businesses in a nascent, growing or consolidated phase according to the GEM are observed, who are associated with individualistic values, in another line of research, there is the social entrepreneur, who motivated by compassionate purposes with a social purpose, seeks justice and equity for people with orientation to the common good, and in the case of female entrepreneurship, collectivist values associated with benevolence and mixed values in relation to universalism are observed (Campos; Lara, 2023; Vera; Espinoza, 2020; Silva; Rompato, 2020).

"Schwartz & Bilsky (1990) consider a value to be a generalized propensity to pursue certain situations over others, [...] Individuals are capable of evaluating with ranges

of importance and applying them as a life goal [...] they can be transitory or definitive, they imply submission to collective or individualistic interests, with a motivational or satisfaction purpose. By 1992 Schwartz (1992) expanded this perspective to situations in which individuals transform their behavior, or their interests evolve, according to the relative importance they attribute to the observed choices" (Maluk; Maluk, 2019; Silva; Rompató, 2020).

From the above, individualistic values such as hedonism, self-direction, stimulation, power, achievement; collectivist values conformity, tradition and benevolence; and mixed values universalism and security are analyzed, observing the following descriptive statistics as principles that guide the lives of university women according to their importance: a) Hedonism, based on the cumulative frequency in 73% of the time the response was very important or less including or putting my values; b) Self-direction, often in 54% of the time the response was of supreme importance, 36% of the time the response was very important and 10% of the time the response was important, observing a medium-high trend; c) Stimulation based on cumulative frequency in 82% of the time the response was very important or less to nothing, not including the response or put to my values; d) Power, considering the cumulative frequency in 86% of the time the response was very important or less to nothing, not including the response or put to my values; e) Achievement, In this value, 60% of the time the response was very important or less to no extent according to the cumulative frequency, observing a high average trend; f) Conformity, often in 49% of the time the response was of supreme importance, 38% of the time it was very important and 13% of the time the response was important, observing a medium-high trend; g) Tradition, considering the cumulative frequency in 62% of the time the response was very important or less to nothing, not including the answer or put to my values, observing a high average tendency; h) Benevolence, often in 41% of the time the response was of supreme importance, 44% of the time it was very important and 15% of the time the response was important, observing a medium-high trend; (i) Universalism, often 41 per cent of the time the response was of paramount importance, 44 per cent of the time it was very important and 15 per cent of the time the response was important, with a medium-high trend; and finally, j) Security, often in 34% of the time the response was of supreme importance, 48% of the time it was very important and 18% of the time the response was important, observing a medium-high trend.

Table 3 shows the results of Spearman's ordinal correlation coefficient on whether the values are related to entrepreneurial intent. In relation to individualistic values, on the one hand, there is a weak positive correlation in the range of 0.26-0.5 significant at a level of 0.01 in self-direction, stimulation and achievement, on the other hand, there is little or no positive correlation in the range of 0-0.25 significant at a level of 0.01 for hedonism and power. Following the line of arguments, for collectivist values in statistics there is a weak positive correlation in the range of 0.26-0.5 significant at a level of 0.01 in Benevolence, for conformity and tradition, the correlation is positive scarcely significant at a level of 0.01. Finally, for mixed values security has a weak positive correlation and for universalism the relationship is weak positive, in both significant at a level of 0.01. Therefore, it can be interpreted that to the extent that individualistic, collectivist and mixed values have supreme importance for university women, the intention to undertake improvement, both for ventures oriented to commercial businesses and for social enterprises.

Table 3. Spearman's correlation between value variables and entrepreneurial intention.

	Values	Entrepreneurial intent
VI = Individualistic values	VI1. Hedonism	0.124**
	VI2. Self-steering	0.262**
	VI3. Stimulation	0.285**
	VI4. Power	0.216**
	VI5. Achievement	0.316**
VC = Collectivist Values	VC1. Conformity	0.252**
	VC2. Tradition	0.225**
	VC3. Benevolence	0.276**
VM = Mixed Values	VM1. Universalism	0.259**

VM2. Safety

0.262**

Note: ** Correlation is significant at level 0.01 (two-sided). Source: Authors, 2023.

With regard to support for self-employment from the Educational Centre, the following can be observed: (a) Attendance at seminars on self-employment in companies, often in 36 per cent of the time the response was little, in 29 per cent of the time they gave sufficient opinion, in 25 per cent of the time not at all, 10 per cent of the time the opinion ranged from quite a lot to a lot; (b) Encouragement of self-employment, often 36 per cent of the time the response was sufficient, 29 per cent of the time they had little opinion, 21 per cent of the time quite a lot, 11 per cent of the time a lot and 3 per cent of the time not at all; (c) Self-employment activities frequently in 37 per cent of the time the response was sufficient, in 31 per cent of the time the opinion was little, in 18 per cent of the time quite a lot and with the same frequency 7 per cent of the time they had a lot of opinion and not at all; (d) Support from the group of membership, often 34 per cent of the time the response was sufficient, 33 per cent of the time the opinion was sufficient, 15 per cent of the time a lot, 14 per cent of the time a little and 4 per cent of the time not at all; e) Support from the reference group, there is a medium-high trend, in other words, university students receive examples from their professors related to self-employment or employment, with an opinion ranging from sufficient to very high.

As far as the H0. Support for self-employment is not related to entrepreneurial intent. Spearman's ordinal correlation coefficient is calculated by observing little or no positive correlation as shown in (Table 4). That is to say, to the extent that there is greater support for self-employment from the Educational Center, the result of the intention to undertake improves, except for AA6 which is not correlated. In terms of support from the reference group, work in the public administration is observed in the first instance, followed by work in the private sector and self-employment in third place.

Table 4. Spearman's correlation between self-employment support and entrepreneurial intent.

Support for self-employment from the Educational Center	Entrepreneurial intent
AA1. Visits to companies have been conducted.	0.166**
AA2. You have received talks or conferences related to your future career from entrepreneurs	0.165**
AA3. You have gained knowledge related to self-employment, i.e. being self-employed or setting up a business.	0.259**
AA4. The school where you have studied or are studying encourages self-employment, i.e. encourages students to set up their own business.	0.214**
AA5. When teachers refer to or give examples about the professional future of students, they do so assuming that students in the future: Will work in the public administration	0.144*
AA6. When teachers refer to or give examples about the professional future of students, they do so assuming that students in the future: They will work in a private company	0.0
AA7. When teachers refer to or give examples about the professional future of students, they do so assuming that students in the future: They will manage their own business.	0.213**

Note: ** Correlation is significant at level 0.01 (two-sided). * Correlation is significant at the 0.05 level (two-sided). AA1, AA2, AA3, AA4, AA5, AA7 have little positive correlation. Source: Authors, 2023.

The penultimate variable under study is the difficulty in creating a company, the descriptive analysis according to the cumulative frequency is interpreted as follows: a) Inhibitory barriers, in 95% of the time the response was important or less, with a low average tendency; (b) External barriers, 98 per cent of the time the response was significant or less, with a low average trend; c) Invisible barriers, 97% of the time the response was important or less. Regarding the existence of a relationship between the difficulties in setting up a business and the entrepreneurial intention, both variables are significantly related, although in a weak and negative way, in other words, the more importance university women give to the difficulties of creating a business, the lower their intention to start a business (see Table 5).

Table 5. Spearman's correlation coefficient between the variables difficulty in creating a business and entrepreneurial intention.

	Dimension	Entrepreneurial intent
DCE1. A business idea is missing.	DCE1, DCE2, DCE3 inhibitory barriers	-0.206**
DCE2. Lack of work experience.		
DCE3. Lack of training.		
DCE4. Lack of funding.	External barriers	-0.248**
DCE5. Lack of aid or subsidies.		
DCE6. Bureaucracy (paperwork).	DCE4, DCE5, DCE6, DCE7	
DCE7. Lack of advice or information		
DCE8. Lack of agreement with partners		
DCE9. Lack of support from the people around me.	Invisible barriers DCE8, DCE9	-0.230**

Note: ** Correlation is significant at level 0.01 (two-sided). Source: Authors, 2023.

Finally, the perception of university students regarding entrepreneurs is analyzed with a total of 14 questions retrieved from Moreno's research (2013), finding a high average trend in the descriptive analysis, consequently, in the correlational analysis of the perception of the entrepreneur and the intention to undertake, the results show a weak positive correlation in the range of 0.26-0.5 for all questions and significant at a level of 0.01. In other words, it can be interpreted that to the extent that a positive perception of the entrepreneur is observed, the intention to be an entrepreneur improves (see Table 6).

Table 6. Spearman's correlation between entrepreneur perception and entrepreneurial intention.

Entrepreneur's perception	Entrepreneurial intent
PE1. They are dynamic people.	0.266**
PE2. They have great organizational skills	0.304**
SP3. They have great financing and management skills.	0.246**
PE4. They have an innovative mindset	0.258*
SP5. They are very professionally prepared people.	0.254**
PE6. They are able to take risks in their company	0.210**
SP7. They have a great vision for the future.	0.359**
PE8. They invest money.	0.198**
SP9. They create jobs.	0.227**
SP10. They help the development of the country.	0.204**
SP11. They make a lot of money	0.198**
SP12. They are able to dialogue with workers	0.275**
SP13. They are moral and honest persons.	0.273**
SP14. They are people with clear criteria of social justice	0.261**

Note: ** Correlation is significant at level 0.01 (two-sided). Source: Authors, 2023.

4. Conclusions

Entrepreneurial intention has been widely studied by a diversity of researchers from various perspectives and contexts thanks to this information we can look for opportunities for improvement in the field of study and its

application with solution proposals in a dynamic context with a large amount of uncertainty, this requires that rapid adaptations are made in the business and educational field. Learning to undertake with a sense of equality for each human being, this is observed in the sustainable development goals promoted by the United Nations for the 2030 agenda.

From what was observed in the study of women entrepreneurs in the State of Mexico in Mexico, the presence of family members with a business, as well as carrying out business activities during the studies are relevant, in this sense, from the Schools of Higher Education it is important to promote the generation of strategies that allow university women to carry out the actions in practice with small temporary businesses that allow them to integrate into these scenarios; Another aspect is the dissemination and promotion of participation in events or community meetings where success or failure cases in ventures are observed, for example Hackers and Founders and Hackers and Founders Women; Also, it is important to carry out activities related to human talent to strengthen the perception of themselves, in this sense, personal characteristics, such as postponing important issues and risk aversion are traits that need special attention, as they are indicators to improve the intention to start a business.

Regarding human values and their relationship with entrepreneurship, it is essential to work on the study programs, to promote in an alternative way both business-oriented ventures and social entrepreneurship, in the case of the university women participating in this study, the presence of collectivist values that are oriented to social entrepreneurship is observed.

On the other hand, it is important to carry out collaborative and integrative work with business organizations, government bodies, social organizations and educational institutions to address the barriers perceived by women, thereby providing new opportunities in terms of female entrepreneurship. And finally, to establish lines of action to generate spaces where the participation of entrepreneurs and businesswomen is achieved to share experiences.

Finally, to carry out new studies on female entrepreneurship to identify opportunities for improvement in spaces and contexts, since these cannot and should not be treated in a generalized way, that is, what is done or results in one context will not necessarily apply to another, due to its relevance.

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6. Authors' Contributions

Elizabeth Evangelista Nava: development of research and statistical treatment of information. *Carlos Alberto Baltazar Vilchis*: methodological advisor. *Jesús Cabral Araiza*: copy editor, spelling and writing checker. *Eduardo Martínez Chimal*: compilation of information and support in the statistical processing of information.

7. Conflicts of Interest

No conflicts of interest.

8. Ethics Approval

Not applicable.

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