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The effect of insecurity and corruption on opportunity-driven entrepreneurship in Mexico: An fsQCA analysis

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Structured Abstract

Purpose: Opportunity-driven entrepreneurship is key to economic development. Consequently, the emigration of potential opportunity-driven entrepreneurs constitutes a barrier to the development of the country of origin. Thus, this study examines how the combined effect of subjective insecurity, corruption perception, subjective norm towards emigration, socioeconomic level, and the entrepreneurial intention of potentially opportunity-driven university students can affect their propensity to emigrate.

Design/methodology/approach: A sample of students (N = 354) from the Technological University of the State of Zacatecas is surveyed, and a causal model based on the fuzzy set qualitative comparative analysis configuration methodology is proposed.

Findings: The results suggest that future graduates are more likely to emigrate when their corruption and/or insecurity perceptions are high. Additionally, the subjective norm is decisive when taking the decision to emigrate. Finally, in the specific cases of individuals with the highest entrepreneurial intentions as well, their perceptions of corruption and insecurity have a great influence.

Originality/value: This study addresses, from a cognitive point of view, the effect on opportunity-driven entrepreneurship of phenomena that are strongly prevalent in Mexico, such as citizen insecurity, corruption, poverty, and the migratory tradition.

Keywords: opportunity entrepreneurship, corruption perception, subjective insecurity, economic development, barriers, QCA

Paper type: Research paper

JEL Codes and management classification: M13, D9, M2

Management classification: Strategy and Entrepreneurship

1. Introduction

The United Nations (2017) indicates that more than 257 million people reside outside their country of origin and that this reality is expanding as this number has tripled since 1990. Due to the importance of this phenomenon, many studies have analysed the flow of people from developing countries to developed ones (Dheer, 2018). However, most of these studies focus on the impact of migrants in the destination country (Rodríguez-Gutiérrez et al., 2019). This study focuses on the impact that the emigration of potential opportunity-driven entrepreneurs (ODEs) may have on the development of their country of origin, while they are directly contributing to the economic development of the territory in which they operate their enterprise (Reynolds et al., 2003; Acs and Varga, 2005; Wennekers et al., 2005). Moreover, policymakers should redefine their strategies to promote this type of entrepreneurship (Block et al., 2015).

The phenomenon of entrepreneurship should also be studied taking into account external factors surrounding the entrepreneurs and not only the internal factors arising from the characteristics of each entrepreneur (Aldrich, 2000; Brush et al., 2003). For example, Mexico shows high levels of violence; as per the Igarapé Institute it appears in the top 20 of the most violent countries in the world with a homicide rate of 20.4 per 100,000 inhabitants in 2017 (Muggah and Tobón, 2018) and 26.7 per 100,000 in 2018. Additionally, it ranks #138 out of 180 in the transparency index (Transparency International, 2019), which highlights the grave corruption problem in the country. Furthermore, Mexicans have a strong emigration tradition, especially focused towards the United States of America (Delgado-Wise and Cypher, 2012) where their number reached circa 12 million individuals in 2017 (Canales and Rojas, 2018). This study investigates, from a cognitive point of view, the influence of different variables that may support the emigration propensity of students from the Technological University of the State of Zacatecas (UTZAC), who are identified as potential ODEs. This category of students has become an important source of economic development for Mexico. Thus, the combined effect of different factors (including subjective insecurity, corruption perception, subjective norm towards emigration, socioeconomic status, and entrepreneurial intention) influencing the emigration propensity of potential ODEs is analysed through the application of a fuzzy set qualitative comparative analysis (fsQCA) on a sample of university students from UTZAC.

In the following sections, this paper provides a conceptual framework for the importance of opportunity-driven entrepreneurship as a mechanism to promote territorial development. As part of the literature review, this research defines the concepts of subjective insecurity, corruption perception, subjective norm towards emigration, socioeconomic status, and entrepreneurial intention, as factors that influence the emigration propensity of potential entrepreneurs. Specific hypotheses have been associated with these topics. The fsQCA methodology is explained, followed by the research results and the main findings. Further, conclusions, limitations, and future research directions are suggested.

2. Literature review and hypotheses development

2.1 Opportunity-driven entrepreneurship and economic development

Traditionally, entrepreneurship has been identified as a source of economic development (Minniti, 2008). However, more recent studies highlight that not all entrepreneurship generates territorial development. There are two types of entrepreneurship, depending on the motivation that pushes the entrepreneur to launch a business: necessity-driven versus opportunity-driven. The literature points out that ODEs influence the development and economic growth of a country (Reynolds et al., 2003; Acs and Varga, 2005; Wennekers et al., 2005). Thus, opportunity-driven entrepreneurship refers to individuals who obtain economic profits by implementing or creating technology and knowledge to take advantage of market opportunities (Reynolds et al., 2003). Individuals who are driven by this motivation to start a business are characterised by their ability to innovate (Headd, 2003; Sternberg and Wennekers, 2005; Wong et al., 2005), and by their higher level of risk assumption (Block et al., 2015), in contrast to necessity-driven entrepreneurs. In this manner, they ultimately generate positive outcomes that have a long-term impact on the development and well-being of the community in which they operate their enterprise (Dawson et al., 2011). Latin America presents very high rates of entrepreneurial activities (Acs et al., 2008). However, these do not result in greater well-being of their populations nor greater vitality in their economies, largely due to underlying high rates of necessity-driven entrepreneurship (Amorós and Cristi, 2008).

This relationship between opportunity-driven entrepreneurship and economic development has led researchers to focus on examining ODEs and how they are affected

by formal and informal institutions in their environments (Fuentelsaz et al., 2015; Aparicio et al., 2016).

2.2 Subjective insecurity

Insecurity has two components: objective and subjective. This research focuses on the subjective component, which is defined as the personal estimate that each individual makes regarding the degree of risk to which they are exposed (Bar-Tal and Jacobson, 1998). Thus, objective risk and victimisation play an important role in the perception of insecurity (Nasir and Rehman, 2019).

Entrepreneurs are directly affected by violent environments. Violence affects the investment capacity of businesses as well as the human capital of the territory (Brück et al., 2013). In addition, insecurity perception compels entrepreneurs to invest significant amounts of money to protect their businesses and themselves (Schwab-Stone et al., 1999); conversely, this has become a barrier to entry that discourages new entrepreneurs (Ospina-Plaza and Giménez-Esteban, 2009). Thus, subjective insecurity significantly affects economic decision-making (Nasir and Rehman, 2019). In this way, violent conflicts and their collateral effects negatively affect entrepreneurs by increasing uncertainty and risk in business decisions. In many cases, these circumstances lead to the closure of a business (Escandon-Barbosa et al., 2019).

A common behavioural response among people who perceive insecurity in their environment is to avoid situations or places that they perceive as dangerous (Warr, 2000). This could explain the emigration of entrepreneurs to other, safer territories that offer less uncertainty. Thus, the following hypothesis is proposed:

H1: The emigration propensity of university students, who are potential ODEs, (PODE university students) depends on their level of subjective insecurity.

2.3 Corruption perception

Institutional conditions affect business activity (Autio and Fu, 2015). However, social environments with deep-rooted cultures of corruption and mistrust are characterized by the generation of endogenously inefficient policies based on political alternation, their administrative power structures, and the allocation of public positions (Padró i Miquel, 2007). This has an impact on trust in rules and social networks. Similarly, poor or inappropriate regulation is linked to the emergence of corruption (Rose-Ackerman, 2007).

Corruption affects institutional quality by decreasing the distribution of resources, increasing capital costs, and inhibiting productive business activity (Estrin et al., 2013).

In countries characterized by the absence of effective bureaucratic systems that mitigate corruption, the inefficiency of the public sector permits leaders to channel a large part of fiscal policy through indirect taxes that increase inequality. Thus, the difference between expenses and taxes means that patronage can be directed towards specific groups (Padró i Miquel, 2007). Consequently, the perception of corruption increases and inhibits private action and its optimal level of performance, altering the adequate allocation of resources in the market.

Evidence suggests that corruption significantly affects entrepreneurship, inequality, and social well-being (Chowdhury et al., 2018). Corruption creates disincentives for investment and, as a consequence of increased uncertainty, transaction costs rise, and market efficiency arising from business action becomes more challenging (Luhmann, 1988). Controlling corruption can improve institutional trust, but in its absence, opportunity-driven entrepreneurship and economic development are limited (Block et al., 2015). Thus, the perception of corruption or abuse of power by private groups, or by public authorities, discourages the decision of ODEs to start a business (Aidis, 2005; Anokhin and Schulze, 2009). Thus, the following hypothesis is proposed:

H2: The emigration propensity of PODE university students depends on their level of corruption perception.

2.4 Subjective norm towards emigration

The theory of planned behaviour (Ajzen, 1991) indicates that there are three factors that drive a person's intention to act: their attitude towards the intended action, their subjective norm towards the intended action, and their perceived behavioural control of the intended action. This theory has been widely used in the field of entrepreneurship. However, there is no consensus among researchers to definitively state whether or not the subjective norm plays an important role in determining the intention of individuals to start a business (Liñan and Chen, 2009). In contrast, there is a consensus with respect to the other two factors; various authors find a significant relationship between the subjective norm and entrepreneurial intention (Kautonen et al., 2015). However, some researchers find that its effects are not significant (Autio et al., 2001), while some experts omit the subjective

norm in their models altogether (Veciana et al., 2005). This research focuses on the subjective norm to improve empirical understanding thereof.

Emigration is itself an entrepreneurial activity. In this context, subjective norm refers to the 'perceived social pressure to perform or not perform a specific behaviour' (Ajzen, 1987, p.188). This component can be specifically defined as a probabilistic judgment about how the majority of the people important to the individual (direct family members, friends, and colleagues) perceive the performance of certain behaviour (Ajzen, 2001). Thus, the results obtained by Kaplan et al. (2016) reinforce the idea that a positive subjective norm towards emigration generates intangible support for the decision to emigrate. Kōu and Bailey (2014) indicate that the existence of positive social norms towards emigration plays an important role in the decision to migrate. Finally, Klabunde et al. (2017) emphasise that 'what matters is not only the individual's preferences, but also the preferences and opinions of others (social norms)' (p.52).

In Mexico, there is a long tradition of emigration, especially to the USA (International Organization for Migration, 2018). Thus, the following hypothesis is proposed:

H3: The emigration propensity of PODE university students depends on their level of subjective norm towards emigration.

2.5 Socioeconomic level

The first studies that investigated why individuals decide to emigrate, identified their economic situation as a significant motivator, considering that they viewed emigration as a means to escape poverty by taking advantage of opportunities in the destination country (Todaro, 1969). Thus, Portes and Walton (1981) point to economic reasons for emigration, since they argue that imbalances in the local economy and society generated by capitalism in peripheral countries compel the labour force to emigrate. The lack of economic opportunities and the lack of access to financial resources are expulsion factors for emigrants (Zubieta, 2011). In addition, when an individual has a low income, the probability of increasing that income through emigration increases (Klabunde et al., 2017).

However, in the Mexican context, the socioeconomic profile of the Mexican migrant has been changing, with the majority being those with a higher socioeconomic level (Zubieta, 2011). Similarly, Delaunay (2007) affirms that 'the hypothesis that migration is a strategy to get out of poverty seems much less likely, as leaving and then settling down in a

satisfactory way, requires human and social resources that the poorest lack' (p. 89). Finally, the research undertaken by Canales and Rojas (2018) illustrates that Mexican migrants with a higher socioeconomic level present legal migratory situations, which gives them higher probabilities of finding formal employment in the destination country, with higher and less precarious wages. Thus, the following hypothesis is proposed:

H4: The emigration propensity of PODE university students depends on their socioeconomic level.

2.6 Entrepreneurial intention

The entrepreneurship process comprises a sequence of phases covering those preceding and following the start-up phase (Moriani, 2005), including pre-launch, launch, and post-launch. Thus, entrepreneurial intention is a central element in understanding the process of creating a company (Bird, 1988). The pre-launch phase incorporates the immediate decision prior to the start of business activity (Liñán et al., 2013). Thus, in recent years, entrepreneurial intention has been deeply analysed as a construct capable of predicting entrepreneurship (Lüthje and Franke, 2003; Hmieleski and Corbett, 2006; Thompson, 2009). Aligned to this, the study of university students has achieved great relevance (Lüthje and Franke, 2003). The theory of planned behaviour (Ajzen, 1991) in its application to entrepreneurial intentions, has received important empirical support (Veciana et al., 2005; Zhao et al., 2005), which reveals the underlying importance attached to the need to achieve (Gürol and Atsan, 2006) and with respect to the assumption of risks and the search for opportunities (Zimmerman, 2008).

However, the entrepreneur's propensity and decision to emigrate should not be considered only in terms of his or her risk-taking profile, since emigration can also offer advantages for entrepreneurs not previously integrated into entrepreneurship networks or financing ecosystems. In this sense, Nanda and Khanna (2010) explain that the entrepreneurs' personal experience abroad gives them access to commercial and financial opportunities within the diaspora. Furthermore, many highly qualified entrepreneurs find in emigration the possibility of accumulating entrepreneurial and innovation skills, as well as gaining access to entrepreneurial and investment networks abroad (Wahba and Zenou, 2009).

Since entrepreneurial intention has a high predictive capacity for entrepreneurship, it is possible to assume that PODE university students with high entrepreneurial intention represent a very important potential value for the development of their country of

residence. This fact justifies the interest in studying this specific group as well. Consequently, the following hypothesis is proposed:

H5: The emigration propensity of PODE university students depends on their level of entrepreneurial intention.

Figure 1 presents the theoretical model of this research:

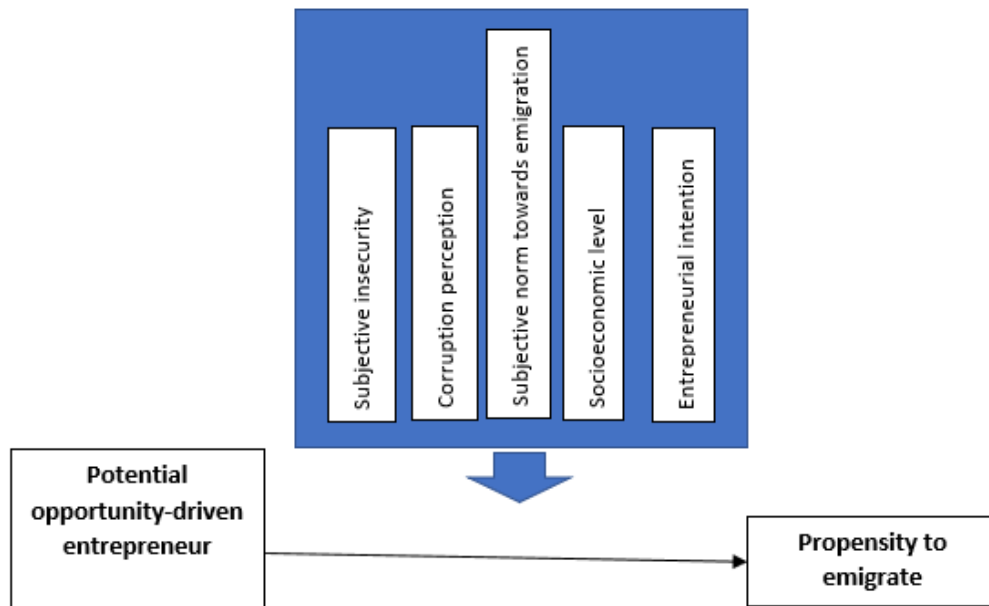


Figure 1: Theoretical model

Source: compiled by the authors.

3. Research methodology

3.1 Data set

The literature on entrepreneurship usually utilises samples of university students (Liñan and Chen, 2009), since recent studies have illustrated that individuals between the ages of 25 and 34 with tertiary education are more likely to start a business (Reynolds et al., 2002). Therefore, for this study, online surveys were administered to students pursuing different technical, engineering, or other professional careers and degrees at UTZAC. The choice of this sample is justified by the migrant tradition within the State of Zacatecas. According to the National Institute of Statistics and Geography (INEGI), 800,000 to 1.3 million Zacatecans and descendants resided in the USA in 2010, while just over 3 million Mexican immigrants in the USA were from the other 31 states that make up the Mexican Republic (INEGI, 2010). Further INEGI data indicate that in 2018, Zacatecas had a net outflow of 700,000 migrants (INEGI, 2018). Considering that the variable resulting from

the fsQCA model of this research is the propensity to emigrate, it seems justified to study a sample from a territory wherefrom such migration actually occurs.

There are approximately 2,500 students in the UTZAC, and therefore, to obtain a representative sample of this population, with a confidence interval of 95% and accepting a margin of error of 5%, at least 334 correctly completed questionnaires are required. To focus on individuals who represent a development potential for the country, the cases that exhibit PODE are selected, using a filter question proposed by Liñan et al. (2016). In total the sample consists of 354 valid questionnaires, which is representative as per the parameters indicated above.

3.2 Variables

To measure the Propensity to Emigrate (PE) the question proposed by Delgado Wise et al. (2015) is used. This question provides a scale with three options for respondees.

The variables, Subjective Insecurity (SUBIN), Corruption Perception (COPER), and Entrepreneurial Intention (EI), have been constructed by applying a factor analysis using the SPSS version 19 statistical software. The items that constitute the SUBIN factor correspond to those proposed by Wills-Herrera et al. (2011), to which we have added some other items selected from various victimisation surveys. Those in the COPER factor correspond to the questions that appear in Transparency International's corruption perception index (2017). Meanwhile, items in the EI factor correspond to the scale that appears in the entrepreneurial intention questionnaire by Liñan et al. (2016).

Additionally, to measure the Socioeconomic Level (SEL), the scale of the Social Research Institute of Mexico (López Romo, 2018) has been used, which enables classifying individuals into six different socioeconomic levels based on their income.

Finally, to measure the Subjective Norm towards Emigration (SNEMI), the model proposed by Liñan and Chen (2009) in their entrepreneurial intention questionnaire has been used. This model includes three reference groups for each individual: direct family members, close friends, and colleagues.

3.3 Fuzzy set qualitative comparative analysis

fsQCA has been used for the analysis and comparison of the hypotheses proposed in section 2. fsQCA is a methodology that allows the systematic analysis of a series of cases

in order to identify causal patterns that determine the result or outcome from a series of conditions called inputs (Ragin, 2008).

QCA was originally designed to analyse small or medium databases; however, as there are no mathematical limitations to working with large databases, the results are equally valid (Woodside, 2012). The objective of this methodology is to find the relations of need and the relations of sufficiency between the conditions and the result (Ragin, 2008). The QCA analysis uses conditions instead of variables, insofar as they show attributes of presence or absence, in terms of set theory, being a causal-type technique (Ragin, 1987), compared to other statistical inferential techniques and multivariate analyses of data. Additionally, QCA is especially accepted within multilevel theories (Lacey and Fiss, 2009), enabling identification of how the inputs have been combined to produce the outcome under study.

The increase in academic interest in the fsQCA methodology has extended its use to many areas of knowledge, including entrepreneurship (Kraus et al., 2018).

The research design process of this work has been developed from a clearly oriented approach based on a case-study (Rihoux and Lobe, 2009). There are three phases in an fsQCA analysis (Ragin, 2008). The first is the calibration of the conditions and the outcome. This calibration consists of determining if a case is totally inside (1), totally outside (0), or at the point of greatest ambiguity (0.5) of a condition (Ragin, 2008). The second is the performance of the need analysis, which aims to determine if a condition is necessary to achieve the result. The last phase corresponds to the sufficiency analysis, where it can be observed which condition or combinations of conditions are sufficient to explain the outcome.

3.4 Calibration

Table 1
Outcome and conditions: description and calibration

Variables	Description	Calibration
Outcome: PE	Outcome that represents the student's propensity to emigrate.	(1) yes (0.5) maybe (0) no
SUBIN	Condition that represents the student's subjective insecurity.	Percentile calibration (Misangyi and Acharya, 2014)

		(p75; p50; p25) → (0,63859; 0,0293905; -0,70375325)
COPER	Condition that represents the student's perception of corruption.	Percentile calibration (Misangyi and Acharya, 2014) (p75; p50; p25) → (0,91551325; 0,027752; -0,517177)
SNEMI	Condition that represents the student's subjective norm towards emigration.	Percentile calibration (Misangyi and Acharya, 2014) (p75; p50; p25) → (6,00; 4,67; 4,00)
SEL	Condition that represents the annual household income level of the student.	Manual calibration method (Ragin, 2008): (1) over 85,000 pesos (0.8) between 35,000 and 84,999 pesos (0.6) between 11,600 and 34,999 pesos (0.4) between 6,800 and 11,599 pesos (0.2) between 2,700 and 6.799 pesos (0) between 0 and 2,699 pesos
EI	Condition that measures the student's entrepreneurial intention.	Direct calibration method (Ragin, 2008) based in three breakpoints (95%, 50%; 5%) → (0,808581; 1,28947E-07; -3,351989)

Source: Compiled by the authors.

Table 1 presents the definition of the conditions and the outcome included in the study, along with the different thresholds established to perform the calibration.

The calibration of the PE outcome has been undertaken manually following the instructions of Ragin (2008).

Regarding the calibration of the conditions, as seen in Table 1, the percentile method (Misangyi and Acharya, 2014) has been followed for SUBIN, COPER, and SNEMI, and the manual method proposed by Ragin (2008) for the condition SEL. For the EI condition, the direct calibration method of Ragin (2008) has been adopted, using the maximum, the mean, and the minimum.

Therefore, the following model is proposed:

$$PE = f(\text{SUBIN}, \text{COPER}, \text{SNEMI}, \text{SEL}, \text{EI})$$

4. Results

4.1 Analysis of necessary conditions

The fs/QCA software was used to perform the analysis, (Ragin and Davey, 2014).

Table 2
Analysis of necessary conditions

Outcome:	PE	
	Consistency	Coverage
subin	0.553784	0.629372
~subin	0.524561	0.586406
coper	0.533835	0.630849
~coper	0.544361	0.586456
snemi	0.613885	0.689234
~snemi	0.498045	0.563553
sel	0.574436	0.710037
~sel	0.672180	0.696262
ei	0.738596	0.619248
~ei	0.396541	0.681689

Note: The symbol (~) indicates the absence of the condition.

Source: Compiled by the authors.

From the analysis presented in Table 2, it is concluded that there is no necessary condition to produce the outcome. This is because no condition exceeds the minimum consistency threshold of 0.9 (Schneider et al., 2010).

Similarly, these results indicate that the propensity to emigrate is determined by different combinations of conditions called causal configurations.

4.2 Analysis of sufficient conditions

Table 3 presents the sufficiency analysis and analyses the different causal configurations that explain PE.

Table 3
Analysis of sufficient conditions

Config no.	Antecedent conditions					Coverage		Consistency
	Subjective insecurity	Corruption perception	Subjective norm towards emigration	Socioeconomic level	Entrepreneurial intention	Raw	Unique	
1		●	●		●	0.288070	0.112682	0.776937
2	●		●		●	0.263108	0.030827	0.766725
3	●	●	●			0.227769	0.036892	0.764983
4	●		●	●		0.226867	0.015389	0.803480

Solution coverage: 0.443559

Solution consistency: 0.765882

Note: Black circles '●' indicate the presence of the condition. White circles '○' indicate the absence of the condition. Frequency threshold = 3; consistency threshold = 0.812760.

Source: compiled by the authors.

As per the results, we observe that the coverage is 0.44. This means that 44% of PODE university students who present a propensity to emigrate are explained by the obtained models. In contrast, the consistency of the model is 0.76, which meets the requirement of Ragin (2008) that the value should exceed the 0.75 threshold for the model obtained to be consistent. In addition, Ragin (2008) recommends that a causal configuration (or combination of conditions) presents a consistency greater than the 0.75 threshold, to state that it is sufficient. Thus, using the information in Table 3, it appears that the four causal configurations explain PE among PODE university students. SNEMI appears in all the patterns, which indicates the importance of social pressure within the students'

environments that compels them to emigrate. Additionally, SUBIN appears in three of the four conditions, which indicates that it is an important condition influencing students to consider emigrating. COPER and EI also appear in half of the causal configurations, highlighting the importance of these conditions. SEL only appears in one of the causal configurations.

Thus, the four causal configurations are analysed, and they all present consistency levels higher than 0.75, and high levels of gross coverage, which indicates their high empirical relevance (Ragin, 2008).

EI * COPER * SNEMI¹ (coverage: 0.28, consistency: 0.77)

This causal configuration explains that PODE university students with higher levels of entrepreneurial intention, higher levels of corruption perception, and high levels of social pressure to emigrate, have higher levels of propensity to emigrate.

EI * SUBIN * SNEMI (coverage: 0.26, consistency: 0.76)

This causal configuration explains that PODE university students with higher levels of entrepreneurial intention, higher levels of subjective insecurity, and high levels of social pressure to emigrate, have higher levels of propensity to emigrate.

SUBIN * COPER * SNEMI (coverage: 0.22, consistency: 0.76)

This causal configuration explains that PODE university students with higher levels of subjective insecurity, higher levels of corruption perception, and high levels of social pressure to emigrate, have higher levels of propensity to emigrate.

SUBIN * SNEMI * SEL (coverage: 0.22, consistency: 0.80)

This causal configuration explains that PODE university students with higher levels of subjective insecurity, high socioeconomic status, and high levels of social pressure to emigrate have higher levels of propensity to emigrate.

Thus, it is observed that the presence of four of the five conditions analysed initially (SUBIN, COPER, SNEMI, and IE), and their combination, yield higher levels of propensity to emigrate among PODE university students. Additionally, the presence or absence of the variable SEL does not appear to be a determining condition to explain

¹ The symbol (*) represents the logical connector AND.

higher levels of propensity to emigrate among PODE university students, since this condition only appears in one of the causal configurations of the model.

5. Discussion, limitations, and future research

The conclusions that emerge from the analysis of the results of this study have management implications at the micro, meso, and macro levels. This is because the results address cultural characteristics present in the Mexican territory, such as violence, corruption, and skilled emigration, as well as the effects that these have at the microeconomic level, affecting productive activity as one of the pillars of the country's economic development. This study reflects the important barrier posed by insecurity and corruption in the economic development of Mexico. It underscores the negative impact of the perception of corruption and subjective insecurity on future ODEs, who would decide to emigrate and thereby transfer their capacity to generate innovation to another country.

An important contribution of this study is oriented to managerial implications for the development of entrepreneurial ecosystems in Mexico. The implications for the direction and management of these ecosystems should be aimed at those officials responsible for universities and public administration bodies. An adequate knowledge of the cross-cultural characteristics that enhance and inhibit entrepreneurship is likely to facilitate the retention of talent in the country of origin.

The longstanding migratory tradition of Mexicans creates a social environment in which PODE higher education students are highly influenced to emigrate by their direct environment, comprising their family, friends, and co-workers. The subjective norm influence is decisive when taking the decision to emigrate. This is aligned to Massey et al. (1998), who indicate that in cultures with a high migratory tradition, migration forms part of the cultural values of individuals, which influence their behaviours.

This study also presents how the perception of insecurity is highly prevalent among PODE university students who are willing to emigrate, in line with the study by Ybañez and Alarcón (2014), in which it is emphasized that a negative perception of insecurity encourages migration. This reinforces the importance of reducing insecurity in the country to avoid the high social impact of the brain drain, understood as the emigration of individuals who have higher levels of academic qualification, and the resulting potential leakage of the country's economic development (Lowell et al., 2004).

Additionally, corruption perception also compels PODE university students to leave the country, since they envision a better future in another country. This reinforces the importance of applying governance measures in Mexico to avoid the brain drain. These results are consistent with those obtained by Escandon-Barbosa et al. (2019) and Pinazo-Dallenbach et al. (2016), insofar as they reinforce that informal factors (i.e., perception of corruption and subjective insecurity) have a significant impact on entrepreneurship.

In the specific case of PODE university students who present high levels of entrepreneurial intention (i.e., they exhibit the direct antecedent to entrepreneurship), it is observed that they present a greater propensity to emigrate when their perceptions of corruption or insecurity is high. This has important implications, since it confirms that corruption and insecurity compel potential ODEs, who are more likely to start up a business and to serve as a source of economic development for Mexico, to leave the country.

Finally, the results of the study do not indicate a direct relationship between the socioeconomic level of PODE university students and their propensity to emigrate. However, they do reflect that there is a specific profile of PODE emigrants with a higher socioeconomic level and fleeing insecurity. This coincides with the study by Zubieta (2011), which identifies the high concentration of Mexicans with this profile in the southern states of the USA.

This work presents relevant implications for policymakers in the region, assuming an important advance in understanding the challenges that characterise entrepreneurial talent in Mexico. The recommendations offered can guide the process of designing and executing more efficient public policies.

This research has limitations in terms of the generalisation of its results; the underlying sample is derived from only one university within a single Mexican state, thereby, conditioning the results to the specific characteristics of that territory. With an increase in the sample size, future studies should be able to further corroborate these exploratory findings.

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