



# Innovative outcomes from migrant entrepreneurship: a matter of whether you think you can, or think you can't

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## Abstract

The entrepreneurship literature has exposed some of the most influential antecedents of innovative entrepreneurship. Prior research has also identified crucial features of migrant entrepreneurship. This article employs lessons from these two areas and draws on social cognitive theory to explore the main drivers of innovative ventures among migrants. We center the attention on entrepreneurs, differentiating them between two management strategies: imitation or innovation; and we study the role of perceived self-efficacy, prior entrepreneurial experience, and social capital into the likelihood of acting innovative. For our empirical analysis, we primarily use data from the Global Entrepreneurship Monitor for three years covering 2016–2018 and gathering 5713 observations of early-stage entrepreneurs from Chile. Our estimations show that being a migrant is in itself an insufficient condition to influence seeking substantial differentiation from what is traditionally offered in the local market; instead, we confirm that a migrant who feels capable of successfully starting a business will be likely to conduct innovative entrepreneurship. Contributions of these findings for theoretical and practical advances of the field are discussed.

**Keywords** Migrant entrepreneurship · Innovative entrepreneurship · Developing country · Perceived self-efficacy · Prior entrepreneurial experience · Social capital

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## Introduction

Sustantial research has evidenced a direct relationship between migration and entrepreneurship. This has attracted the attention of scholars and policymakers due to its potential influences on poverty reduction and for enhancing competitiveness through better integration and economic development (Ram et al. 2017; Mahroum 2000). Despite the interest in migrant entrepreneurship (Dheer 2018; Dabić et al. 2020), most empirical efforts have focused on developed countries and mainly under social embeddedness and network approaches (e.g., Granovetter 1985, 1995; Waldinger 1986; Portes and Sensenbrenner 1993; Cahn 2008). Even when some recent endeavors had contributed in a deeper understanding of migrant entrepreneurship in transitional economies beyond the aforementioned theoretical lenses (Vershina and Rodgers 2019; Nazareno 2019); on certain regions, like Latin America (Aguinis et al. 2020; Puente et al. 2019), a lack of systematic evidence still remains. This is relevant since several studies have highlighted that entrepreneurship (including migrant entrepreneurship) is filled with heterogeneity in several aspects, such as entrepreneurial abilities/skills, background/experience, involvement in others communities, and how environmental conditions is perceived, with subsequent effect into their decision making process and actions (e.g., Shepherd et al. 2015; Portes and Martinez 2020; Kahn et al. 2017). Moreover, both policymakers and scholars have pressed for more evidence about the link between migration and innovative entrepreneurial activity to enhance high-impact entrepreneurship on the economy (Hart and Acs 2011; Stephan and Levin 2001).

Naude et al. (2017) noted that the collective perception of migrant entrepreneurs is highly valued, with migrant entrepreneurs often hailed as akin to super-entrepreneurs. However, recent studies have evidenced that migrants' entrepreneurial spirit frequently emerges as a response to an array of challenges (e.g., Santamaria-Alvarez et al. 2018; Williams and Krasniqi 2018). More importantly, while migrant entrepreneurs may be less risk-averse than local entrepreneurs, as it is evident from their decision to migrate—which in itself is a risky activity (Neville et al. 2014; Jansen et al. 2011)—not all migrant ventures are willing to innovate (e.g., Amorós et al. 2019). On the contrary, evidence has noted that migrant entrepreneurs are more prone to select markets with low growth potential (Rath and Kloosterman 2000), and so the overall impact on the local economy in most cases is quite limited (Dheer 2018; Ram et al. 2017; Kerr and Kerr 2020). Accordingly, the specific reasons behind migrants' willingness to innovate remain underdeveloped.

To address this issue, and advance the theory and empirical research on migrant entrepreneurship, we must recognize that innovative entrepreneurship can take many forms. These include product-market innovations, innovative technological processes, and novel organizational designs (Aldrich 1999; Davidsson and Wiklund 2007; Low and Abrahamson 1997; Schumpeter 1934; Shepherd et al. 2000; Shane and Venkataraman 2000). Thus, we will investigate imitative versus innovative entrepreneurship (Koellinger 2008; Dyer et al. 2008; Cliff et al. 2006) by examining the extent to which an entrepreneur perceives low or no direct competition, and that all or most of the customers consider that the products or services offered are novel.

We aim to contribute to the migrant entrepreneurship literature in emerging economies by studying migrant entrepreneurs in Chile. We consider this country to be of interest since—similarly to other developing countries—during the last years, Chile

has faced consistently high rates of entrepreneurial activity and an exponential recent increase in migration (Mandakovic and Serey 2016; Amorós et al. 2016). Considering that many other Latin American economies have a somehow similar pattern in terms of migrant situation, the findings of this study may be useful not only for Chilean policymakers but also for other developing economies that are institutionally and economically more robust than their neighbouring countries.

Dheer (2018) observed that most migrant entrepreneurship research examining individual-level characteristics has centered on the role of demographic antecedents (e.g. Li 2001; Constant and Shachmurove 2006), psychological factors, and migrants' resources, including human capital (Panayiotopoulos 2006), personal backgrounds (e.g., Cueto and Rodríguez 2015; Elo et al. 2018), among others. Further, recent evidence has highlighted the importance of cognition in the process of opportunity identification among migrants and the types of managerial strategies they implement (e.g., Lundberg and Rehnfors 2018; Morgan et al. 2018; Dheer and Lenartowicz 2020). The core argument of this literature is that migrant entrepreneurs tend to differ from their local counterparts insofar they have a distinctive set of cognitive resources at their disposal (i.e., foreign-market knowledge and experience) (e.g., Neville et al. 2014; Sui et al. 2015), different cognitive representations (i.e., perceptions of themselves) (e.g., Morgan et al. 2018; Brixy et al. 2013), and also the environmental circumstances, which are characterized by unfamiliar institutional settings (Nazareno et al. 2019; Dheer and Lenartowicz 2020). Hence, we will use this cognitive approach to explore why certain migrant entrepreneurs, but not others, conduct innovative ventures delivering novel products and/or services (Dheer 2018).

In consequence, drawing on social cognitive theory (Bandura 1986, 1999), we center the attention on entrepreneurs, differentiating them between two management strategies: imitation or innovation (Koellinger 2008; Dyer et al. 2008; Cliff et al. 2006). We hypothesize about elements that may interact with the migrant status in the development of innovative entrepreneurship (Mueller 2014). To identify the differences in business strategies, we draw on research about individual-related factors: an individual's social capital, human capital and beliefs, which have been shown to be relevant in the creation of innovative entrepreneurship (e.g., Wang and Liu 2015; Cliff et al. 2006). Specifically, we will center on the network that migrants have, particularly if they know other entrepreneurs in the country of settlement. Further, we will focus on the individual's beliefs about their self-efficacy. Lastly, we will analyze whether having prior entrepreneurial experience influences the likelihood of conducting innovative entrepreneurship.

In doing so, this study makes three primary contributions to the literature. First, while extensive attention has been given to exploring various types of migrant entrepreneurial initiatives in developed countries, little understanding exists of the dynamics that arise within transitional economies where the rapid flow of migrants is a recent phenomenon (Nazareno et al. 2018; Dabić et al. 2020). Second, prior research has extended our understanding of the theory of social cognition. However, scholars still have limited empirical insight into how this theory can predict behavior among migrant entrepreneurs and the specific challenges they have to deal with. Finally, this study explores why certain migrants are better able to innovate than others; we find that individuals' self-confidence, rather than human and social capital, explain the relationship between migrant entrepreneurship and innovative ventures. To the best of our

knowledge there are no other studies that have studied migration, cognitions and innovation in an emerging economy. In light of these results, we discuss the need for more narrow migration and entrepreneurship public policies.

## Theoretical framework and hypotheses development

Social cognitive theory states that human functioning results from the interplay between personal, behavioral, and environmental influences (Bandura 1986; Wood and Bandura 1989; Lent and Brown 1996). Concretely, this theory maintains that there is a continuous causal structure between cognition and other personal factors, the performance environment, and individuals' behaviors. This implies that the social environment shapes an individual's cognition, and ultimately, his/her behavior (Bandura 1986; Wood and Bandura 1989). This assumes that while people do not have direct control over social conditions and institutional practices, they contribute by intentionally influencing their life circumstances and decisions (Dheer and Lenartowicz 2020). Therefore, this theory views the person as being goal-directed and proactively involved in shaping the task environment.

Central to the social cognitive theory are self-regulatory mechanisms that control performance achievement and motivations through goal challenges and outcome expectations (Bandura 1986). One key mechanism is self-efficacy, which is defined as a person's "beliefs in their capabilities to mobilize cognitive resources and actions needed to exercise control over events in their lives" (Wood and Bandura 1989: 364). According to Townsend et al. (2010), an individual's sense of their own abilities forms the "background" of human action, since only if individuals perceive that they have the abilities to engage in a particular action, will they attempt it. Hence, based on efficacy beliefs, people choose what challenges to undertake, how much effort to expend on the endeavor, and for how long to persevere (Bandura 1999).

Perceived self-efficacy plays a key role in the reciprocal interaction highlighted in the social cognitive theory because efficacy beliefs affect adaptation and change not only in their own right but through their impact on other determinants, such as the types of activities and environments people choose to engage in (Maddux 1995; Schwarzer 2014). For instance, the likelihood that people will act on the outcomes they expect their prospective performance to produce depends on their beliefs about whether or not they can produce those performances (Wood and Bandura 1989; Kahn et al. 2017). The stronger the self-belief in one's capabilities, the greater and more persistent the effort will be to master challenging tasks and complete goals, even in the face of adversity (Wood and Bandura 1989; Bullough et al. 2014).

In the context of entrepreneurship, where decisions are made in a highly dynamic, complex, and extremely uncertain environment (Ruzzier et al. 2006) and involve high levels of personal risk, stress, and effort, perceived entrepreneurial self-efficacy is critical (Baron and Shane 2007; Rauch and Frese 2007). Entrepreneurial self-efficacy refers to the belief entrepreneurs have the skills and capabilities to start and run new business ventures (McGee et al. 2009). Evidence has suggested that entrepreneurial self-efficacy influences several outcomes, such as the intention to start a business (Chen et al. 1998, Kickul et al. 2009; Dheer and Lenartowicz 2020), opportunity-recognition (Mitchell and Shepherd 2010), entrepreneurial action (Boyd and Vozikis 1994;

Hechavarria et al. 2012; Townsend et al. 2010), risk-taking (Krueger and Dickson 1994), and entrepreneurial success (Hmieleski and Baron 2008; Markman and Baron 2003). This literature rests on the notion that resilient self-belief in one's capabilities to accomplish desired personal goals is as important as one's skills and knowledge (Rauch and Frese 2007; McGee et al. 2009; Boudreaux et al. 2019).

For migrant entrepreneurs, in particular, prior literature has evidenced that most migrants face adverse market conditions and that entrepreneurship enables upward mobility (Santamaria-Alvarez et al. 2018; Vershinina and Rodgers 2019). Although migrants may be aware of the potential difficulties of doing businesses, those individuals with high entrepreneurial self-efficacy might perceive fewer threats in this foreign environment and exhibit a higher tolerance for ambiguity (Bullough et al. 2014; Krueger and Dickson 1994). Given the particularly challenging circumstances that migrant entrepreneurs face, self-efficacy may play a predominant role in triggering distinctive managerial strategies (Dheer and Lenartowicz 2020). In essence, entrepreneurial self-efficacy may lead migrants to categorize complex situations, such as conducting an innovative venture, as being less risky, more manageable, and more feasible, which in turn, relies on a conviction that one can carry out a required behavior (Kahn et al. 2017; Townsend et al. 2010). This would suggest that migrant entrepreneurs aiming to start an innovative new venture in the country of settlement, would be more likely to do so if they believed in their entrepreneurial abilities. Therefore:

- **H1:** *Migrant entrepreneurs with perceived entrepreneurial self-efficacy have a higher likelihood of engaging in innovative new ventures than local entrepreneurs.*

A second self-regulatory mechanism is the information individuals have acquired through prior entrepreneurial experience (Hmieleski and Baron 2009; Bryant 2007). Social cognition theory considers prior experience as a key element in how the cognitive map of entrepreneurs is shaped over time and based on the context (Carsrud et al. 2009). Insofar ideas and actions in a given situation depend not only on what one knows but also on how one applies and extends knowledge in a particular situation (Bandura 1999). In this sense, according to Fitzsimmon and Douglas (2011) prior entrepreneurial experience is one of the most important human capital variables, and along with self-efficacy, is considered a sufficient characterization of the individual's perceived feasibility.

Evidence has suggested that prior entrepreneurial experience is useful in assessing decision-making, as it provides a lens to interpret information and relate it to applications for new products or services (Douglas 2017; Dimov 2007; Shane 2000). Indeed, studies suggest that prior experience particularly influences the implementation strategy of the business (e.g., Farmer et al. 2011). For example, empirical studies suggest that individuals with prior entrepreneurial experience are more prone to exploit opportunities more innovatively than those who are inexperienced (Ucbasaran et al. 2009).

This is particularly relevant in the context of migrants, where studies have already shed some light on the difference in knowledge structures between migrants and locals (Chaganti et al. 2008). Migrant entrepreneurs with startup experience can be more aware of the complexity of starting a new firm in a foreign environment (Tietz et al. 2020; McGrath and MacMillan 2000; Shane

2000). Further, prior knowledge —encoded as cognitive scripts— can orient migrant entrepreneurs in shaping new behavioral patterns, judgmental structures, and generative mechanisms for action (Holcomb et al. 2009). In other words, prior experience does not only contributes to knowing what to anticipate and what mistakes to avoid but also which strategies to apply. By doing so, risk-acceptance levels may potentially be higher (Neville et al. 2014; Jansen et al. 2011), uncertainty surrounding the venture can be reduced (Kotha and George 2012), and a holistic understanding of the firm-creation tasks developed (Dimov 2010). Therefore, we expect that entrepreneurs with relevant experience to be more aware of the resources needed, how to mobilize them in more optimal ways (Kloosterman et al. 2010; Kotha and George 2012), and their inherent value (Hellmann and Puri 2002). This argument leads us to suggest that innovative strategies among migrants are more common for those who have experienced business ownership in the past. Hence:

- **H2:** *Migrant entrepreneurs with prior entrepreneurial experience have a higher likelihood of engaging in innovative new ventures than local entrepreneurs.*

Another source of information is that which can be acquired from others. While prior entrepreneurial experience provides experiential learning, social capital is a source of vicarious knowledge. Social capital, including social networks, represents an overarching concept that captures several aspects of the socialized nature of knowledge sharing (Dheer and Lenartowicz 2020). These include the social connections among individuals which generate emotional support and knowledge sharing capacity, and also the social context in which knowledge sharing is embedded, which is frequently conceptualized as the collectivized nature of the phenomenon. According to Tolciu (2009) the networks of interpersonal relations are particularly crucial for the way migrant businesses are managed.

In this research, and following Samuelsson and Davidsson (2009), we do not distinguish between strong or weak ties (e.g., Román et al. 2013), but focus instead on the instrumental social capital perspective through which individuals gain access to information, business partners, and resources (cf. Aldrich and Fiol 1994; Portes 1998). The instrumental view highlights the benefits for individuals to be part of the network and especially the access that this gives to other resources (Gargiulo and Benassi 2000; Nahapiet and Ghoshal 1998). Therefore, we conceptualize social capital in terms of the resources acquired from the network of relationships possessed by an individual (Nahapiet and Ghoshal 1998). This, in turn, points to the information available for a firm as a result of its location within a social network structure (Presutti and Odorici 2019).

A tenet of the social cognition theory is that a person's behavior is partially shaped and controlled by the influences exerted by social networks (i.e., social systems), hence, building upon instrumental social capital as a contingency factor is of major importance for the successful continued pursuit of innovative ventures (De Carolis et al. 2009; Chiu et al. 2006; Samuelsson and Davidsson 2009). Indeed, studies have suggested that innovative firms are intensely dominated by multiple social relations that substantially shape how business activities are structured (Lau and Bruton 2011; Acquah 2007). In this sense, social capital can be conceived as a complement of entrepreneurs' cognition in explaining how entrepreneurial opportunities are exploited (De Carolis and

Saparito 2006), as social networks also seem to enhance resource mobilization (Stuart and Sorenson 2007).

For the particular case of migrant entrepreneurs, who are normally characterized by being under-resourced due to limited access to social capital (Hu et al. 2019; Bizri 2017), this resource has often been hailed as a key determinant in firm creation and daily business practices through the provision of customers, labor force, and financing (Aldrich and Waldinger 1990; Tolciu 2011). Moreover, social capital is relevant for gaining access to information that is necessary for discovering empty market niches (Sequeira et al. 2009), and also allows migrants to create businesses as dissimilar as possible to that of local competitors (Vissak and Zhang 2014).

Hence, based on evidence suggesting that migrant innovation is a matter of diversity, interaction, and experimentalism (Engelen 2002), where the main problem of producing innovations is the availability of resources (Mueller 2014), including the lack of contacts and knowledge (Vissak and Zhang 2014; Bizri 2017); social capital may encourage migrants' firms to be more productive and efficient. This, via access to more accurate and relevant information which positively influences the process of creating innovations (Samuelson and Davidsson 2008). Accordingly, the impact of social capital is intensified under a migrant context where social ties confer positive benefits, such as the transfer of technological know-how, information exchange, remittances, market opportunities, credit, and knowledge of consumer preferences, among others. Thus:

- **H3:** *Migrant entrepreneurs belonging to a network that includes one or more entrepreneurs have a higher likelihood of engaging in innovative new ventures than local entrepreneurs.*

## Methods and data

### Sample

Our source for individual-level data is the Global Entrepreneurship Monitor (GEM). The GEM conducts annual surveys through the Adult Population Survey (APS), which covers a representative random sample of the population nested in each participating country for each year. The survey includes questions associated with entrepreneurial aspirations, attitudes, and activities (Autio et al. 2013; Bosma et al. 2008; Reynolds et al. 2005).

The GEM survey for Chile has more observations than the average data collected for other countries. This is due to the regional representativeness the survey, in which participants within each region were randomly selected, and the survey conducted by telephone and through face-to-face procedures (Amorós et al. 2014). In this paper, we use data for three years covering 2016, 2017 and 2018. The selection of these specific years relates to the availability of information concerning the country of origin of the respondents, which was specifically gathered through a special topic on migrant entrepreneurship. We drew a sub-sample of entrepreneurs that initiated a business in the last 42 months, denominated early-stage entrepreneurs. The final sample comprises 5713 observations.

## Variables

### Dependent variable

*New product market combination index* (TEANPM), the variable takes the value of 1 if “product is new to all /most customers and there are no /few competitors.” This variable is constructed in the GEM methodology as a proxy for innovation: new product and new market, and has been applied in previous studies (Koellinger 2008; Castaño-Martínez 2012).

### Independent variables (predictors)

*Migration status*, this variable refers to the classification of entrepreneurs as native-born or first-generation immigrants. The GEM measures migration status through the following question: “Were you born in this country?” Responses are coded as 0 for YES, or 1 for NO. (Peroni et al. 2017; Poblete and Mandakovic 2017; Ashourizadeh et al. 2020).

*Perceived entrepreneurial self-efficacy*, this variable is based on the “Yes” (coded 1) or “No” (coded 0) answer to the following question: “Do you have the knowledge, skills, and experience required to start a new business?” This variable captures individuals’ self-confidence in their entrepreneurial capabilities (Arenius and Minniti 2005; Koellinger 2008; Evald et al. 2011).

*Social capital* is proxied by a variable in the GEM that is based on knowing other entrepreneurs. Other authors have used it in the literature as a proxy of “networking with others” (Evald et al. 2011). The variable is based on the “Yes” (coded 1) or “No” (coded 0) answer to the following question: “Do you personally know someone who started a firm in the past two years?”

*Entrepreneurial experience*, this variable is based on the “Yes” (coded 1) or “No” (coded 0) answer to the following question: “Have you, in the past 12 months, sold, shut down, discontinued or quit a business you owned and managed, any form of self-employment, or selling goods or services to anyone?”. This variable controls for the entrepreneur’s specific prior knowledge or experience and it is relevant for recognizing innovative entrepreneurial opportunities (Koellinger 2008).

### Control variables

In order to test the previously presented hypotheses centered on the likelihood of engaging in innovative new ventures, we include a set of individual and firm-level controls. At an individual level we controlled for age (Amorós et al. 2019; Lee and Eesley 2018), gender (Cliff et al. 2006; Koellinger 2008), education (Hart and Acs 2011; Hunt 2011), fear of failure (Koellinger 2008), full-time dedication (Hunt 2011; Koellinger 2008), necessity-driven entrepreneurs (Engelen 2002), and opportunity recognition (Engelen 2002; Koellinger 2008). At a firm level, we included the number of employees and the use of technology (Koellinger 2008). Our model also includes time (years) and regional control variables. Table 1 presents, a detailed description of the control variables.



**Table 1** Description of the control variables

<i>Control Variables</i>	<i>Description</i>
Age	Declared age of the respondent the year he or she answered the survey
Female	Takes the value of 1 if the respondent is male and 0 if the respondent is female
Higher education degree	Dichotomous variable created using answers from the question about whether the individual had achieved more than a secondary education
Fear of failure	Takes a value of 1 if respondents specifically answered yes when asked whether fear of failure would prevent them from starting a business
Full time entrepreneur	Takes value of 1 if the respondent declares to be full time working in the new business
Necessity driven entrepreneur	Takes a value of 1 if they agreed with the following: “I’m in this start-up because I have no better choices for work.” Otherwise, the respondents were given the value of 0
Opportunity recognition	Takes value of 1 if the individual considers that in the next six months, there will be good opportunities for starting a business
Number of employees	Not counting the owners, how many people are currently working in the business
Use of technology	Takes a value of 1 if they agreed with the following: “Were the technologies or procedures used new or very latest (less than 5 years)” Otherwise, the respondents were given the value of 0

## Methods

To validate the hypotheses, a binary choice model is specified and estimated in which the probability of engaging in an innovative new venture depends on the previously specified variables (Mc Fadden 1973; Maddala 1986). Specifically, the Logit Model allows estimating the probability that an event occurs, the error terms (residuals) do not need to be normally distributed and homoscedasticity is not required. (Greene 2002; Arafat et al. 2020). However logistic regression requires little or no multicollinearity among the independent variables, therefore independent variables should not be highly correlated with each other (Midi et al. 2010). To validate the use of a logistic model, we estimate a Pearson correlation matrix between the predictors of our model and variance inflation factor (VIF). Table 2 presents the correlation matrix and shows that no independent variable is highly correlated. We also calculate VIFs for all our variables (Table 3). VIF values greater than 10 indicate reasons for concern due to collinearity among the variables, and tolerance values less than 0.1 indicate collinearity among variables. Therefore, our values do not suffer from collinearity.

We model the decision of an entrepreneur to start an innovative venture using the following specification:

$$\begin{aligned}
 Prob(TEANPM = 1) = & \beta_0 + \beta_{1-3}(Predictors) + \beta_{4-9}(Individual\ Control) \\
 & + \beta_{10-11}(Firm\ Control) + \beta_j + \beta_t + \varepsilon,
 \end{aligned}$$

Where *TEANPM* is the dependent variable; *Predictors* are the independent variables; *Individual Control* and *Firm Controls* are respectively the control variables included at an individual and firm-level;  $\beta_j$  and  $\beta_t$  are the region and time coefficients that are included in the regression. Finally,  $\varepsilon$  is the error term.

**Table 2** Pearson Correlation Matrix

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(1) Migrant	1												
(2) Female	0.0140	1											
(3) Full time entrepreneur	−0.0310	0.0409	1										
(4) Age	−0.0585	0.0248	0.1419	1									
(5) Higher education degree	0.0309	−0.1192	−0.1302	−0.0721	1								
(6) Opportunity recognition	0.0481	−0.0136	−0.0181	−0.0580	−0.0049	1							
(7) Fear of failure	−0.0246	0.0383	−0.0298	0.0342	0.0110	−0.1045	1						
(8) Social capital	−0.0392	−0.0161	0.0533	−0.0701	0.1349	0.0504	−0.0148	1					
(9) Self Efficacy	−0.0044	−0.0636	0.0538	0.0810	0.0206	0.0224	−0.1527	0.0956	1				
(10) Entrepreneurial experience	−0.0304	0.0000	0.0266	0.0427	−0.0274	−0.0376	−0.0113	0.0132	0.0396	1			
(11) Number of employees	−0.0035	−0.0212	−0.0069	−0.0156	−0.0033	0.0094	−0.0102	−0.0083	0.0114	−0.0023	1		
(12) Necessity driven entrepreneur	−0.0320	0.1110	0.1168	0.1805	−0.1975	−0.1204	0.069	−0.1113	−0.0228	0.0566	−0.0144	1	
(13) Use of technology	0.0351	0.0536	−0.0096	−0.0720	0.0019	0.0128	−0.0053	−0.0238	−0.0049	0.0257	0.009	0.0151	1

**Table 3** Value Inflation Factor Analysis

Variable	VIF	1/VIF
Necessity driven entrepreneur	1.11	0.8984
Higher education degree	1.08	0.9219
Age	1.07	0.9324
Full time entrepreneur	1.05	0.9495
Social capital	1.05	0.9519
Self Efficacy	1.05	0.9529
Fear of failure	1.04	0.9596
Opportunity recognition	1.03	0.9695
Female	1.03	0.9702
Migrant	1.01	0.9883
Use of technology	1.01	0.9903
Entrepreneurial experience	1.01	0.9907
Number of employees	1.00	0.9984
Mean VIF	1.04	

## Results

Table 4 presents a descriptive analysis of the sample. We observe that among early-stage entrepreneurs 54,5% of the sample are innovators who declare to have a new product-market combination. This percentage is slightly higher in the migrant sample (56,1%). The average entrepreneurial perceived self-efficacy in migrant and non-migrant groups is similar (58%) and social capital is on average higher in the non-migrant group than in the migrant group (64,5% vs 53,1%, respectively).

Table 5 shows the logit model estimation results.<sup>1</sup> Model 1 shows the control variable models, Model 2 introduces the relevant predictors, and Model 3 introduces interaction terms for the previous specification between the variable Migrant and the relevant predictors.

In all the specifications, the coefficients associated with the control variables (individual and firm-level) consistently have the same magnitude and significance, showing the robustness of the model. In particular, we observe that age, gender and the number of employees are not relevant in the likelihood of being an innovative entrepreneur (among individuals that already declare themselves to be early-stage entrepreneurs). Instead, fear of failure has a significant and negative impact. The same behavior applies when an individual started the business for necessity motives. We also found that when starting an innovative business, entrepreneurs tend to stay in their original job, which explains why being a full-time entrepreneur has a negative and significant coefficient. Opportunity recognition, higher levels of education and the use

<sup>1</sup> We introduced a dummy variable for taking into consideration the distance in terms of the development of the country of origin and Chile, we included this as an interaction variable and did not result significantly. 78% of the migrants came from less developed countries. The migration flow comes primarily from neighbour countries with less GDP per capita during the study period (Peru (30%), Argentina (22%) and Venezuela (10%)).

**Table 4** Descriptive Statistics

Variable	Mean	Std.Dev.	Migrant = 1	Migrant = 0
			Mean	Mean
TEANPM	0.545	0.498	0.561	0.544
Migrant	0.037	0.189	—	—
Female	0.430	0.495	0.456	0.429
Full time entrepreneur	0.606	0.489	0.531	0.609
Age	41.003	13.717	36.899	41.150
Higher education degree	0.542	0.498	0.614	0.539
Opportunity recognition	0.612	0.487	0.731	0.607
Fear of failure	0.223	0.416	0.171	0.224
Social capital	0.631	0.483	0.531	0.635
Self Efficacy	0.858	0.349	0.855	0.858
Entrepreneurial experience	0.104	0.305	0.061	0.106
Number of employees	1.423	38.914	0.784	1.449
Necessity driven entrepreneur	0.315	0.465	0.246	0.318
Use of technology	0.414	0.493	0.521	0.410

of technology have a significant and positive impact on the likelihood of engaging in a TEANPM venture.

In Model 2, where predictors were included, neither of them shows statistically significant coefficients. In Model 3, interactions were included to test the proposed hypotheses. We find that self-efficacy has a positive impact on TEANPM only in the case where the individual is a migrant. The interaction coefficient is positive and significant ( $\beta = 0.682, p < 0.1$ ). Thus, our results provide support to hypothesis 1 that migrant entrepreneurs with self-efficacy have a higher likelihood of engaging in innovative new ventures than local entrepreneurs.

The prior entrepreneurial experience of the individual is not significant in the case of migrant entrepreneurs or of local entrepreneurs in our econometric exercise. Therefore, hypothesis 2 is not supported by the evidence.

Concerning the third interaction term included in the analysis, we observe that social capital is relevant in the decision to create a TEANPM, but this positive impact is not conditional to the migrant status of the individual. The impact of social capital on the likelihood of TEANPM is positive and significant ( $\beta = 0.0998, p < 0.1$ ). Despite this effect, hypothesis 3 is not supported. This, because the interaction term between social capital and migrant is not significant, meaning that social capital is relevant for TEANPM only in the case of locals.

As complement, we estimated the marginal effects of the logit regression reported in the appendix 1, showing that the significance levels and also the impact remain stable. We also estimate a pull model only for the metropolitan region (that gathers the most number of early-stage entrepreneurs in the country) using logit estimation (available from the authors upon request) to verify the robustness of our results.

**Table 5** Results of the logit estimation, coefficients reported

VARIABLES	(1) TEANPM	(2) TEANPM	(3) TEANPM
<i>Individual Level Controls</i>			
Age	−0.00298 (0.00203)	−0.00249 (0.00207)	−0.00256 (0.00207)
Female	0.0666 (0.0555)	0.0698 (0.0560)	0.0718 (0.0560)
Higher education degree	0.149*** (0.0566)	0.134** (0.0574)	0.133** (0.0575)
Fear of failure	−0.278*** (0.0653)	−0.261*** (0.0664)	−0.259*** (0.0665)
Full time entrepreneur	−0.278*** (0.0568)	−0.293*** (0.0574)	−0.292*** (0.0575)
Necessity driven entrepreneur	−0.227*** (0.0611)	−0.222*** (0.0616)	−0.223*** (0.0616)
Opportunity recognition	0.254*** (0.0567)	0.257*** (0.0571)	0.257*** (0.0571)
<i>Firm Level Controls</i>			
Number of employees	0.000672 (0.00135)	0.000746 (0.00147)	0.000753 (0.00147)
Use of technology	0.449*** (0.0560)	0.451*** (0.0564)	0.451*** (0.0564)
<i>Predictors</i>			
Migrant		0.0124 (0.143)	−0.475 (0.406)
Self Efficacy		0.0924 (0.0798)	0.0646 (0.0814)
Social capital		0.0933 (0.0579)	0.0998* (0.0591)
Entrepreneurial experience		0.00366 (0.0892)	0.0221 (0.0903)
<i>Interaction Terms</i>			
Migrant*Self efficacy			0.682* (0.405)
Migrant*Societal capital			−0.0855 (0.288)
Migrant*Entrepreneurial experience			−0.767 (0.616)
Constant	0.05056 (0.155)	−0.0969 (0.170)	−0.0784 (0.171)
Observations	5775	5713	5713

Standard errors in parentheses

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

Model 1, 2 & 3 dependent variable: early stage entrepreneurial activity of a new product in the market

Year and regional controls

## Discussion

The study of migrant entrepreneurship requires a better understanding of the contingency elements as a structural base if certain types of entrepreneurial activity, such as innovative entrepreneurship, are to be fostered (Ozgen et al. 2012; Vissak and Zhang 2014). It seems to us that the study of migrant entrepreneurship provides fertile territory for further research, particularly in emerging economies where institutional and contextual conditions differ from the reality evidenced in developed countries (Foo et al., 2020), which used to be the traditional destination of migrant flows (Lee and Eesley 2018). From a migrant perspective, our findings reveal that innovative new ventures are linked with individuals who strongly believe in their entrepreneurial self-efficacy. However, our findings also demonstrate the importance of social capital in encouraging innovation in the overall entrepreneurial population. Consequently, the specific programs and public policies that are fostered in an emerging economy are imperatively

relevant in terms of what entrepreneurial outputs will be manifested. Because an entrepreneur's venture strategy is shaped by environmental and cognitive aspects, on balance, a greater understanding of the effects of each component suggested in the social cognitive theory (i.e., behavior, cognition, and environment) will contribute to a better understanding of the phenomenon.

This research aims to test whether and how behavior is regulated in terms of cognitive processes and contextual elements. Consistent with social cognitive theory (Bandura 1999), our results suggest that there is a link between behavior and expected outcomes, and with how cognition regulates behavior. In other words, not all migrant entrepreneurs will create innovative ventures, instead only those migrants with self-perceived entrepreneurial capabilities may be willing to shift their business strategy from acting like others to endorsing disruptive managerial strategies. In this sense, we expand Hunt's (2011) observation about migrants in a developed country (US) by providing more evidence about migrants in an emerging economy (Chile) that also a migrant entrepreneur will be more likely to innovate if she perceives herself as high-skilled. This finding provides more empirical evidence complementing prior literature about the role of beliefs in encouraging subsequent behaviors (e.g. Bullough et al. 2014; McGee et al. 2009).

With regard to prior entrepreneurial experience, our results suggest that it does not interact significantly with the migrant status on the likelihood of developing innovative entrepreneurship. One possible explanation for this (lack of) finding can stem from studies suggesting that it may be incorrect to assume that prior experience in running a business *per se* may play a significant role in differentiating entrepreneurs' ventures strategies (D' Souza and Kemelgor 2008). The rationality of this argument relies on the distinction between the experience itself and the knowledge structure created, in terms of learning, based on that experience (Bontis et al. 2002; Shepherd et al. 2016; Evald et al. 2011). Since we measure only whether the migrant possessed, or not, previous ownership experience, we did not cover any potentially relevant information such as features about the industry where she was involved, firm size, years of experience, among others, that may lead to different results.

A somehow similar argument can be made regarding social capital. Past research has found that migrant entrepreneurs tend to copy the entrepreneurial strategies of their compatriots (Engelen, 2002). Based on this evidence, it may be likely that social capital drives certain outcomes at a different level from what we have hypothesized (Vissak and Zhang 2014). For instance, it may be possible that migrant entrepreneurs use their social capital only at an operational level. If so, it may not influence the core strategy of the firm such that it can be categorized as imitative or innovative. Moreover, it is important to consider that the specific circumstances of the social networks, relationships and its uses were not measured in this study. In view of the evidence suggesting that particular kinds of social relationships may lead to different settings in the firms' strategy (Gargiulo and Benassi 2000), different results may potentially emerge. The findings of this study suggest that social capital is indeed a relevant aspect in encouraging innovative ventures (Nahapiet and Ghoshal 1998; Presutti and Odorici 2019), however, when interacted with the migrant status its impact was not significant.

## Implications

Our findings contribute to the existing literature in several ways. First, we directly reply to recent calls pointing out that further study of migrant entrepreneurship in emerging

economies is needed as it has remained a largely ignored topic by scholars (Dabić et al. 2020; Dheer 2018; Vershinina and Rodgers 2019). Developed countries have been experiencing migrant waves for many years ago, and numerous studies attempted to explain why. Despite the above, during the last decade or so, the migratory paths have been also expanded to under-developed and developing countries. Considering that migrant entrepreneurial activity is largely influenced by the institutional settings of the local economy (Stephan et al. 2015; Poblete 2018), focusing on the cognitive processes confers novel and unique insights for a deeper understanding of how and why migrant entrepreneurs behave in certain ways (Rath and Kloosterman 2000; Ram et al. 2017; Morgan et al. 2018). By doing so, we have highlighted the importance of pursuing complementary approaches concerning different dimensions influencing entrepreneurs' strategic choices about their businesses (Douglas 2017; Brixy et al. 2013).

Second, this study contributes to the social cognitive theory by adding the migration perspective approach to enrich the analysis of the phenomena. Specifically exposing how migrants' self-regulatory mechanisms—which directly influence the likelihood of being an entrepreneur, but not the strategy they will pursue—can play a key role in mediating the relationship between the migrant status and developing innovative ventures (Hunt 2011; Engelen 2002). While the origin of social cognitive theory is purely psychological (Bandura 2001), studies have found that it successfully explains several outcomes related to entrepreneurship, such as entrepreneurial optimism (e.g., Hmieleski and Baron 2009), self-employment goals (e.g., De Carolis et al. 2009) and entrepreneurs' motivations (e.g., Boudreaux et al. 2019); but to the best of our knowledge, no studies are applying this theory to migrant contextualization. Hence, through this new approach, we have remarked how symbolic conceptions perceived among migrants are translated into appropriate courses of action (i.e., innovative entrepreneurial behavior).

Third, it provides practical insights about emerging economies and migration flows, for the design of policies that encourage a smooth and positive integration. If policymakers are willing to encourage entrepreneurial activity could simplify migration policies, however, there may be no control over the type of firm and subsequent market spin-offs. In this sense, we interpret the findings such that there is an imperative role of migrant entrepreneurs' beliefs of capability in the way they behave. In other words, the foundation of innovative ventures among migrants seems to strongly depend on his/her perceived self-efficacy, where images of self-capabilities in a foreign context orientate them toward differentiation strategies. Therefore, policies designed to increase the self-efficacy levels of migrant entrepreneurs can have positive spillovers in their communities and directly into the economy through innovation.

### Limitations and future research

Future research may build upon the results of this study in several ways. For example, this study is limited in its scope in that it centers on a single country, Chile. Every nation possesses a unique compilation of culture, history, institutionalism, so it may be unreasonable to assume that an identical setting will be found in other emerging economies. Similarly, although it seems that our findings could be generalized to other countries, especially Latin-Americans; country-level differences in these settings may not necessarily lead to the same conclusions. In this regard, findings and further

extensions should be taken with caution. To extend the generalizability of this study, additional research could theorize about and empirically investigate a variety of other contexts, including extending the timeframe. Subsequent research could also explore differences across migrants in terms of their nationality and the role of conational communities in the local economy and whether they may influence the entrepreneur in pursuing innovation.

Another limitation arises from the way the theory was tested empirically. The social cognitive theory explains that behavioral, cognitive and other personal factors, as well as environmental events, operate as interacting determinants that influence each other. However, this does not mean that they are of equal strength or that they occur simultaneously (Wood and Bandura 1989). Along this line, while prior entrepreneurial experience and social capital can play a role from a migrant perspective, the manifestation of it appears not to be directly aligned with the likelihood of migrant innovativeness. Nevertheless, literature about the role of entrepreneurial knowledge and social capital influencing different outcomes based on the source of learning, shows that a limitation of our results may reside in the fact that we do not have information about the amount of knowledge, nor the quality of information each individual had. By applying a dichotomy variable to measure prior entrepreneurial experience, we did not focus on what you know or how much you know, but on whether what you do with that prior knowledge makes any difference or not. A similar logic applies to social capital.

## Conclusions

Research relating to migrant entrepreneurship is still at an early stage, especially in emerging economies. While efforts have been made to bridge this gap, opposing evidence tends to restrict a consolidated understanding of how to foster adequate incentives to encourage migration and entrepreneurship. On the one hand, studies have observed that migrant entrepreneurs tend to copy their compatriots and are overwhelmingly active in markets with low or limited growth potential (e.g., Rath and Kloosterman 2000; Engelen 2002). On the other hand, studies like Martin (2013) and Nathan and Lee (2013) pose that immigrants are more active in entrepreneurship and innovation. According to Middleman (2020), migrant entrepreneurs are characterized by their willingness to take risks and Chaganti et al. (2008) suggest that migrant firms utilize more aggressive strategies than locals firms. In a nutshell, migrant entrepreneurship is filled with heterogeneity.

Naude et al. (2017) suggest that in some contexts, entrepreneurship and migration policies are often ineffective and, more importantly, may lead to undesired outcomes. Therefore, with the awareness that different types of entrepreneurial activity create different spillovers (Minitti and Lévesque 2010), we examine the determinants of innovative ventures among migrant entrepreneurs in an emerging economy using the case of Chile. Thus, the advance of migrant entrepreneurship literature must consider as a unit of social interaction “person-in-situation” due the heterogeneity of the phenomenon. In order to contribute in the implementation of focalized policies more suitable for specific situations and conditions.



## Appendix

**Table 6** Results of the logit estimation, marginal effects reported

Variable	dy/dx	Std. Err.
Age	−0.00063	0.0005
Female	0.01772	0.0138
Higher education degree	0.03285 **	0.0142
Fear of failure	−0.06425 ***	0.0165
Full time entrepreneur	−0.07165 ***	0.0140
Necessity driven entrepreneur	−0.05535 ***	0.0153
Opportunity recognition	0.06360 ***	0.0141
Number of employees	0.00019	0.0004
Use of technology	0.11042 ***	0.0136
Migrant	−0.11831	0.1002
Self Efficacy	0.01598	0.0202
Social capital	0.02466 *	0.0146
Entrepreneurial experience	0.00546	0.0223
Migrant*Self efficacy	0.15730 *	0.0843
Migrant*Societal capital	−0.02119	0.0717
Migrant*Entrepreneurial experience	−0.18840	0.1431

\*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

Marginal effects after logit reported

Dependent variable: early stage entrepreneurial activity of a new product in the market

Year and regional controls

Other models (1 and 2 from Table 5), available upon request

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