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# **The relationship between cognitive and contextual factors: a self-regulatory mechanism underlying persistence in nascent entrepreneurs**

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**Abstract:** In this study, we present a new approach to understanding the persistence of nascent entrepreneurs, by examining the role played by context and cognition through the mediation of a self-regulatory mechanism. Drawing on a sample of 316 nascent entrepreneurs from the Panel Study of Entrepreneurial Dynamics (PSED II), we first consider whether entrepreneurial self-efficacy and goal commitment predict persistence in nascent entrepreneurs. We then evaluate the role of perceived institutional support, both formal and informal. Finally, we examine the relationships between cognitive and contextual variables and their impact on entrepreneurial persistence. Our results show that goal commitment has a direct effect on entrepreneurial persistence, while self-efficacy acts indirectly through goal commitment, from which we infer the existence of a self-regulatory mechanism impacting on persistence in nascent entrepreneurs. Among the contextual factors, only informal institutional support presents a direct relationship to persistence, while perceived formal support exerts an indirect influence through cognitive self-regulation. From a practical standpoint, our findings may be useful for institutions that design policies and programmes to foster sustained economic growth through the promotion of entrepreneurship.

**Keywords:** Nascent entrepreneurship, Entrepreneurial persistence, Self-efficacy, Goal commitment, Institutional context, Self-regulation.

## **1. Introduction**

National economic growth depends crucially on entrepreneurship (Urbano and Aparicio, 2016), which plays a vital role in job creation and social development (Liñán et al., 2011) through innovation and increased competition (Forbes, 1999). Accordingly, many governments allocate significant resources to promoting entrepreneurial activity through the design and implementation of policies aimed at facilitating new business formation (Biru et al., 2021).

Many countries have applied national and regional policies to foster venture creation and performance, by means such as subsidies, training and educational programmes and venture capital initiatives. However, for every successful intervention, many fail (Lerner, 2010), with the consequent loss of public and private resources. To alleviate these negative outcomes, it would be useful to identify aspects of the business start-up process that significantly guide and determine effective entrepreneurial action.

The series of actions driving new business formation, which has been termed gestation process (Reynolds, 2007), is the focus of research attention into nascent entrepreneurship. In the center of the process is the nascent entrepreneur, i.e. the individual actively engaged in the new venture gestation process (Reynolds and White, 1997) and hence involved in the start-up phases (Dimov, 2010). More specifically, the nascent entrepreneur is a person who has initiated start-up activities addressed to culminate in an operational new firm (Reynolds, 1994, Hechavarria et al., 2012), such as having sought for external funding, prepared a business plan, looked for a business location, or invested own money in the start-up, among others (Reynolds and Curtin, 2008).

Many nascent entrepreneurs do not bring the gestation process to fruition, and fail to meet their primary goal of constituting the proposed new company. New venture gestation normally requires significant inputs from the nascent entrepreneur (effort, time, money, etc.), and often runs into problems. Accordingly, persistence by the would-be entrepreneur is an element of critical importance (Cardon and Kirk, 2015). Therefore, to better understand the dynamics of nascent entrepreneurship, it is important to analyse the factors that may promote or inhibit persistence (Holland and Shepherd, 2013).

Persistence has been defined as the continuation of action and efforts in spite of impediments, failures or threats (Cardon and Kirk, 2015), and it is expressed when entrepreneurs decide to continue with their business idea despite adversity or the emergence of any alternatives during the process (Holland and Shepherd, 2013). Some authors have used entrepreneurial persistence as a proxy for success, in the view that establishing a new company requires tenacity (Tietz et al., 2018), and that entrepreneurs who are tenacious in pursuit of their goals will be more likely to succeed (Timmons et al., 2004). Although these two concepts are related, recent studies have emphasised the need to study persistence separately from success (Davidsson and Gordon, 2012; Tietz et

al., 2018). To our knowledge, however, the factors that affect the nascent entrepreneur's decision to persist during the business gestation phase have received scant research attention, with a few notable exceptions (e.g., Freeland and Keister, 2016; Holland and Shepherd, 2013).

In previous research it has been widely acknowledged that beliefs, expectations and perceptions are crucially important in the entrepreneurial process (McCann, 2017; Baron, 2004), especially while the company is at early stages of gestation and development (Forbes, 1999). In addition, however, business start-up takes place within a given political, economic and social context, which must be taken into account (Reynolds et al., 2004). Therefore, the decision to persist in the entrepreneurial endeavour depends both on the person driving the project and also on the environment in which this takes place (Holland and Shepherd, 2013; Adomako et al., 2016).

In view of these considerations, the present study addresses the following research questions: What role is played by relevant cognitive and contextual factors in determining the persistence of nascent entrepreneurs during new venture gestation? Moreover, what are the interrelationships between those factors? And how these interrelationships affect entrepreneurs' persistence?

The main cognitive factors considered are entrepreneurial self-efficacy and goal commitment. The first of these is a key element in entrepreneurship, and in entrepreneurial persistence in particular, because individuals' perceptions of their capacities and abilities directly influence the persistence of their endeavours to achieve the desired results (Bandura, 1977). Also fundamental is the question of commitment to accomplishing the goal established; the greater the commitment, the less likely the project will be abandoned (Davidsson and Gordon, 2016).

Regarding contextual determinants, in this study we focus on entrepreneurs' perceived support from their formal and informal contexts, as both dimensions are relevant to entrepreneurial behaviour (Boudreaux et al., 2019). Previous research has shown that institutions contingently affect the way in which certain cognitive aspects may impact on nascent entrepreneurs' decisions (Raza et al., 2019). However, to our knowledge no previous studies have considered the impact made by institutions on nascent

entrepreneurial persistence through cognitive factors. Therefore, we believe it useful to examine how the entrepreneur's perceptions of support from the institutional context are reflected in decisions and behaviours via cognitive information processing.

This paper contributes to entrepreneurship research in various ways. First, we broaden the scope of nascent entrepreneurship studies by addressing this phenomenon from the standpoint of persistence in the process of new venture gestation. Second, we enhance theoretical understanding of the institutional context in entrepreneurship, by incorporating its impact on persistence during this process. Finally, we analyse the interrelationships among individual and contextual variables in order to explain persistence in nascent entrepreneurship, a question that has received little previous attention. This research is based on a new approach in which we consider the role of self-regulation as a mediator between context and cognition, in order to better explain persistence in nascent entrepreneurs.

## **2. Literature review and study hypotheses**

### **2.1 Entrepreneurial persistence**

Creating a new company involves a series of actions, including developing a business plan, attracting financial resources and obtaining supplies (Carter et al., 1996). This process is usually dynamic and complex, requiring crucial decisions to be taken and a wide range of activities performed (Reynolds and White, 1997). Therefore, when an entrepreneur decides to implement a business idea, and the future company enters the gestation phase, ultimate success heavily depends on his/her persistence throughout this process (Tietz et al., 2018). Studies have shown that individual persistence is particularly important in the field of entrepreneurship (Cardon and Kirk, 2015; Shane et al., 2003), and that entrepreneurs who are persistent in working to achieve their goals have a greater probability of success (Timmons et al., 2004), especially when the company is still in an incipient phase, requiring much time and effort (Yang and Danes, 2015).

Entrepreneurial persistence has been defined as “the continuation of effortful action despite failures, impediments, or threats, either real or imagined” by Cardon and Kirk (2015, pp. 1029), who followed Gimeno et al. (1997). According to Davidsson and

Gordon (2012), persistence in new venture gestation involves persevering with the process until a successful outcome is attained. For other authors persistence is displayed when the entrepreneur resolves to continue action rather than give up (Kim et al., 2013; Klyver et al., 2018). More recently, Walsh and Martin (2021) indicate that entrepreneurial persistence is evidenced when continuing to pursue an opportunity of value creation through a new firm, regardless of barriers and alternative pursuits. Relatedly, Seo et al. (2004) observed that entrepreneurial persistence involves energy directed towards the goal and sustained over time, suggesting also continued action.

Although the decision to persist in business gestation is an essential aspect of the entrepreneurial process, little research has been conducted in this respect (e.g., Freeland and Keister, 2016; Holland and Shepherd, 2013). Nevertheless, to properly understand the dynamics of nascent entrepreneurship it is important to analyse the factors that may promote or inhibit persistence (Davidsson, 2012; Holland and Shepherd, 2013).

Entrepreneurial persistence depends on both individual and contextual factors (Holland and Shepherd, 2013; Adomako et al., 2016). Therefore, it is subject to the influence of characteristics such as self-efficacy (Cardon and Kirk, 2015; Shane et al., 2003), commitment (Davidsson and Gordon, 2016) and feedback from the environment (Holland and Shepherd, 2013). To our knowledge, no prior study has been undertaken to analyse the relations between these individual and environmental factors, and their impact on entrepreneurial persistence during business gestation. Accordingly, an important research gap remains to be clarified.

## **2.2. Cognitive factors: self-efficacy and commitment**

Human cognition plays an important role in the entrepreneurial process, especially during new company formation (Forbes, 1999). Individual beliefs, perceptions and expectations, among other factors, may crucially influence both the course of action adopted (McCann, 2017) and the effort made to achieve the goals established (Baron, 2004). At the same time, some research has emphasized that many of the obstacles facing entrepreneurs during business start-up are perceptual in nature (Van Gelderen et al., 2011). In this respect, cognitive factors such as entrepreneurial self-efficacy (Shane et al., 2003; Cardon

and Kirk, 2015) and commitment (Hopp and Sonderegger, 2015; Davidsson and Gordon, 2016) play an important role in the persistence of nascent entrepreneurs.

Therefore, our study draws on concepts from social cognitive theory (Bandura, 1977) by considering self-efficacy, defined as the judgement of one's own competences and capabilities to execute the actions required to accomplish tasks and achieve the results expected. In relation to persistence, confidence in one's own abilities and capacities may influence not only the choice of course of action, but also the intensity and the continuance of effort made (Bandura, 1989). Thus, positive self-belief upholds the individual's confidence that the desired results will be achieved despite the obstacles that may be encountered (Bandura, 1989), leading to greater persistence. In contrast, most people avoid activities they believe exceed their capacities and abilities, preferring to adopt and persist with those in which they feel most capable (Bandura, 1982).

In entrepreneurship literature, entrepreneurial self-efficacy (Chen et al., 1998) is a prominent determinant of entrepreneurial action (e.g., Newman et al., 2019; Pollack et al., 2019; Miao et al., 2017), and has been acknowledged specifically as a decisive driver of persistence in the entrepreneurial process. New firm formation requires great confidence in one's own capacities and abilities to carry out the diverse tasks and actions involved (Cardon and Kirk, 2015), in order to face future challenges and to continue despite possible setbacks and obstacles, which makes self-efficacy a relevant factor in the study of nascent entrepreneurs (Cavich and Chinta, 2021). Thus, when entrepreneurs have confidence in their abilities and skills to perform the tasks associated with the creation of a new company, they will expect to be successful (Shane et al., 2003) and so will persist and exert themselves more. Following recent works, it has been evidenced a positive relationship between self-efficacy and entrepreneurial persistence (Asante et al., 2022), as well as it has been posited as a reliable predictor of entrepreneurial persistence change over time, from a longitudinal point of view (Pollack et al., 2019).

In summary, self-efficacy is an important cognitive component that influences persistence (Bandura, 1977), both in general and in the nascent entrepreneur in particular (Pollack et al., 2019; Cardon and Kirk, 2015). Therefore, we propose the following hypothesis:

**H1:** *Entrepreneurial self-efficacy increases the likelihood of a nascent entrepreneur persisting with venture gestation.*

In the context of entrepreneurship, various studies have found commitment to be a crucial cognitive factor (Salvato et al., 2010; Adam and Fayolle, 2015), and therefore a determinant variable in the understanding of entrepreneurial processes and how new ventures emerge (Fayolle et al., 2011). Specifically, commitment has been posited as one of the most important factors in driving persistent action directed to strive for goals (Uy et al., 2015).

Commitment is a psychological state that prompts the individual to adopt and maintain a given course of action in order to achieve a predetermined goal (Meyer and Herscovitch, 2001). Commitment has been defined in various ways. For Locke and Latham (1990), goal commitment is a person's level of determination to achieve a specific objective. According to Austin and Vancouver (1996), commitment is defined as how long an individual is willing to strive for a specific goal. In the present study, we adopt the conceptualisation given by De Clercq et al. (2009), in line also with Locke and Latham (1990), according to which the nascent entrepreneur's goal commitment reflects his/her determination to exert high levels of effort to achieve the objective of new business creation.

Our view of commitment as a factor encouraging entrepreneurial persistence is drawn fundamentally from goal-setting theory, according to which resolute commitment towards difficult goals will extend effort over time (Locke and Latham, 1990, 2002), based on stronger motivation to achieve the goal (Klein et al., 1991). In the framework of new venture gestation, the association between commitment and effort means, for example, that a highly committed entrepreneur will be less likely to abandon the project, even in a context of economic crisis (Davidsson and Gordon, 2016). This is so because persons who are strongly committed to their goal of new business creation will dedicate more time to this task and will be less prone to discouragement if obstacles and challenges arise (Uy et al., 2015). A lower likelihood of disengagement under high commitment means alternatively a higher propensity to persist in the entrepreneurial action.

Taking these questions into consideration, we propose the following hypothesis:



**H2:** *Goal commitment increases the likelihood of a nascent entrepreneur persisting with venture gestation.*

In disentangling the relevant underlying mechanisms explaining venture gestation, self-regulation emerges as a key element of individual persistence and hence of the likelihood of achieving the start-up goal (Bateman and Barry, 2012). Several authors have acknowledged the importance of self-regulation in entrepreneurship (Nambisan and Baron, 2013; Baron and Henry, 2010, Brockner et al., 2004). Although interactive effects within cognitive processes play a key role in entrepreneurial actions, that of self-regulation has received scant attention (O'Shea et al., 2017).

Self-regulation is a systematic process in which goals are set and behaviour is directed towards achieving them (Zeidner et al., 2000). Self-regulatory mechanisms help individuals to set achievable objectives depending on the resources, capacities and abilities available, to maintain a constant and persistent orientation towards the goals, and to accurately interpret the feedback received, effort invested and the progress made (Nambisan and Baron, 2013). Studies suggest that self-regulatory processes determine not only the success of personal endeavour (Brockner et al., 2004), but also influence the decision to persist or give up in the attainment of a given goal (McMullen and Kier, 2016).

Bandura (1989) observed that self-efficacy affected individual behaviour through various self-regulatory processes, one of which was the motivation to set and pursue goals despite difficulties. In this respect, too, goal setting theory holds that motivation implies commitment, among which a key factor is that of self-efficacy (Locke and Latham, 2002). Consequently, goal commitment may play a significant role in self-regulation (Latham and Locke, 1991; Locke and Latham, 2002), by mediating between self-efficacy and behaviour. Such a mechanism might be the key to maintain long-term persistence in working to achieve goals (Bateman and Barry, 2012).

Empirical evidence has been reported of the effect of self-efficacy and goal commitment on entrepreneurial persistence. Khan et al. (2014) analysed the direct effects of entrepreneurial self-efficacy and goal commitment in the disengagement of the venture gestation process. The results obtained indicate that the presence of high self-efficacy and

high goal commitment reduced the likelihood of nascent entrepreneurs' to disengage, suggesting thus their promoting role in nascent entrepreneurial persistence. In a related study, however, Hechavarria et al. (2012) found no evidence that entrepreneurial self-efficacy and the establishment of specific objectives positively influenced the likelihood of nascent entrepreneurs persisting in their project to create a new company, compared to quitting.

However, and according to our previous arguments, self-efficacy and goal commitment may not only act conjointly, but be also interrelated in promoting entrepreneurial persistence through self-regulation. To our knowledge, no empirical evidence has been offered concerning the potential role of this self-regulatory mechanism in explaining persistence in nascent entrepreneurs. We thus propose the following hypothesis:

**H3:** *Nascent entrepreneurs' goal commitment positively mediates the relationship between entrepreneurial self-efficacy and persistence in venture gestation.*

### **2.3. Contextual factors: the perception of institutional support**

In studies of entrepreneurship, the consideration of the context is determinant, as it creates differences between entrepreneurs and their behaviour (Welter et al., 2016). As stated by Reynolds et al. (2004), the entrepreneurial process takes place within a given political, economic and social context, in which individuals interact with their environment and are subject to rules affecting business behaviour. In this study, we focus on the institutional environment, due to its importance in explaining entrepreneurial behaviour (De Clercq et al., 2013; Boudreaux et al., 2019). Institutions may be viewed as man-made restrictions that structure political, economic and social interaction, providing the incentive structure of an economy, together with the order and the framework for action (North, 1991). In prior literature, it has been shown that factors such as support programmes, entrepreneurial education and certain social and cultural norms may promote the development of entrepreneurial structures and new business creation (Boz-Smerci and Çimen, 2017). Furthermore, institutional factors may condition how cognition affect entrepreneur's decisions and behaviour (Raza et al., 2019).

Institutions may be formal or informal (North, 1991). Formal ones include regulatory policies (for example, fiscal and economic policies) and associated instruments such as fees and taxes (Chowdhury et al., 2019). Educational bodies and the banking and financial system also form part of the formal institutional environment (Fuentelsaz et al., 2015).

Previous research has shown that the formal institutional context may influence entrepreneurial activity (Aparicio et al., 2021; Henrekson and Stenkula, 2009), and many studies have considered this relationship with respect to institutional dimensions such as the legal system (Lim et al., 2010), economic freedom (Boudreaux et al., 2019) or state incentives (Meek et al., 2010). Busenitz et al. (2000) or Raza et al. (2019) highlighted that the regulatory framework provides with support for new ventures, and may effectively assist would-be and actual entrepreneurs in obtaining and managing resources. Other studies have focused on the relevance of educational and financial institutions, such as that of De Clercq et al. (2013), who argued that new firm creation was more likely in countries whose financial and educational systems were more entrepreneurship-oriented.

In the framework of nascent entrepreneurship, recently Cavich and Chinta (2021) have highlighted the relevant role of government support for nascent entrepreneurs, and Thomassen et al. (2020) pointed out its role as an influential element, both in the promotion of new venture creation, but also as a barrier through bureaucracy and complicated legislation. In this line, the formal institutional context may be crucial to determine entrepreneurial persistence. For example, a high level of regulatory and administrative complexity will reduce the time and energy available to perform start-up activities, making it less likely that the venture will be seriously pursued (Shambharya and Musteen, 2014), and so the entrepreneurial persistence maintained over time. On the other hand, ready access to economic and/or educational institutions could benefit business persistence by facilitating financial and human capital (Freeland and Keister, 2016). Finally, the existence of an advanced, effective financial sector will limit the risk of the entrepreneur being discouraged by difficulties in this respect (Beck, 2007), providing access to the resources needed for business start-up (Raza et al., 2019), and thereby encouraging persistence in the venture gestation process.

Informal institutions have received less consideration in terms of how they may support or restrict entrepreneurial action (Webb et al., 2020). Informal institutions can be defined

as the body of social and cultural norms within a given territory that influence the behaviour and relationships of its inhabitants (North, 1991). These institutions consist of learned preferences, beliefs and values (Hofstede, 1980) that are transmitted from one generation to the next and shape the framework of individual thought and behaviour (Boz-Semerci and Çimen, 2017). Although economic regulations and government policies are of course important for business creation and development, this kind of formal support might be insufficient in the absence of a social and cultural environment that encourages and facilitates entrepreneurship. Prior research confirms that social and cultural norms related to entrepreneurship influence the rate at which new companies are created (Uhlener and Stephan, 2010), and that cultural values play an important role in explaining the behaviour of entrepreneurs (Hechavarria and Reynolds, 2009). Moreover, the support obtained from the immediate social environment not only has behavioural consequences favouring the probability of an individual engaging in the process of new venture creation, but also influences his/her persistence in the process (Kim et al., 2013).

In this framework, nascent entrepreneurs may be affected differently depending on the cultural context in which they operate, and this difference will influence the decisions adopted and the steps they take in the entrepreneurial process (Shook et al., 2003). Moreover, given that entrepreneurial culture is a phenomenon that is strongly rooted in the local context (Hopp and Stephan, 2012), attitudes towards entrepreneurial persistence will be influenced by the entrepreneur's perceptions of the cultural norms in his/her particular context. Therefore, whether a certain contextual factor is viewed as a supportive element or as an impediment will depend to a large extent on the entrepreneur's subjective perception and assessment (Van Gelderen et al., 2011). Accordingly, in the present paper we focus on the nascent entrepreneur's perceptions of certain aspects of his/her formal and informal environments, particularly with respect to the support provided for entrepreneurial activities.

Therefore, we propose the following hypothesis:

**H4:** *The perception of a favourable (a) formal / (b) informal institutional context increases the likelihood of an entrepreneur persisting in venture gestation.*

The process of business creation entails interaction between the individual and the environment (Shook et al., 2003; Raza et al., 2019). Specifically, previous studies have highlighted the need for further research to determine the role of the interaction between the institutional context and the cognition of nascent entrepreneurs (Boudreaux et al., 2019). Under this approach, therefore, to obtain a more complete understanding of persistence in the entrepreneurial process, we must jointly analyse both individual and contextual factors (Holland and Shepherd, 2013), since the impact of the institutional environment on entrepreneurial behaviour is reflected in the entrepreneur's cognition and attitudes (Lim et al., 2010). However, to our knowledge, no study has yet been undertaken of the interrelationships between institutional and cognitive factors with respect to nascent entrepreneurial persistence.

In examining how personal and contextual factors interrelate to impact on entrepreneurial persistence, it is necessary to understand how perceptions of the environment are translated into individual behaviour through cognitive processes. This idea has been explored and approached in some previous related studies. For instance, Lim et al. (2010) suggest that relationships among new company formation and legal, financial and educational systems are mediated by individual cognitive characteristics. In this vein, Muñoz and Kibler (2016) suggest that the configuration of the institutional environment might influence entrepreneurs' confidence in their management abilities. In relation to this, Hopp and Stephan (2012) suggest that a favourable socio-cultural context can provide a basis not only for entrepreneurial motivation, but also promote perceptions of entrepreneurial self-efficacy, which in turn may favour successful venture emergence.

Our above considerations regarding the self-regulation mechanism led us to the idea that self-efficacy might influence entrepreneurial persistence by reinforcing commitment. Furthermore, and if the institutional context is relevant to the entrepreneur's perceptions of self-efficacy, it would be interesting to consider how the environment might influence the self-regulatory adjustment between self-efficacy and commitment. Accordingly, we suggest that the perception of institutional support might enhance entrepreneurial persistence through the cognitive self-regulatory mechanism, and propose the following hypothesis:

**H5:** *The self-regulatory mechanism of self-efficacy – commitment positively mediates the relationship between the perception of a favourable (a) formal / (b) informal institutional context and nascent entrepreneurial persistence in venture gestation.*

The relationships proposed in H1 to H5 are shown in Figure 1.

**Figure 1.** Conceptual model

## **METHODOLOGY**

### **Sample**

The data for our empirical analysis were obtained from the Panel Study of Entrepreneurial Dynamics (PSED II). The PSED research programme seeks to enhance our understanding of the business start-up process (Reynolds and Curtin, 2008), by providing accurate, relevant data concerning the early stages of entrepreneurial activities (Martinez et al., 2011) and the mechanisms involved in nascent entrepreneurial activity (Reynolds, 2017). Moreover, the PSED are the only US datasets that contain significant details about nascent entrepreneurs (Blair and Shaver, 2020). According to the PSED methodology, several criteria should be met to consider the individual as a nascent entrepreneur (Reynolds, 2007), namely: (1) consider themselves as starting a business, (2) have engaged in start-up activities within the past year, (3) expect to own all or part of the new firm, and (4) have not experienced more than three months with positive cash flow (Reynolds, 2007).

PSED II began in 2005, involving 1,241 nascent entrepreneurs in total. To obtain our study sample, several selection and refinement criteria were applied to the initial PSED sample of 1,241 cases. Following Reynolds (2017), in the first step of this process we selected the nascent entrepreneurs who were at that time actively involved in the gestation process of their ventures. In the second step, we selected cases in which entry time in the start-up process corresponded to 2005, when the Wave A interviews took place. This step was necessary in order to prevent retrospective bias from influencing the cognitive variables considered. In this respect, Bandura (1977) claimed that the success or failure of an activity has a retroactive influence on perceptions of self-efficacy regarding the actions to be undertaken in the future. In the same line, McCann and Vroom (2015)

suggested that, for entrepreneurs, self-efficacy levels tend to vary during business gestation.

In the present study, given the definition and operationalisation of the outcome variable, we applied a third step in selecting the cases for analysis, focusing on the time period considered. The relevance of this consideration is that entrepreneurial persistence has been defined as “an individual’s continued active, behavioural involvement as a founder-owner in a business start-up attempt at a particular point in time” (Davidsson, 2012, p. 309). For our purposes, the time point considered was 24 months from when the entrepreneur first became involved in the venture gestation process (i.e., entry time), following previous research in this field (e.g., Freeland and Keister, 2016). As concerns persistence, we believe a period of 24 months from the start of the process is sufficient, this being long enough for the entrepreneur to evaluate the probability of success and the advisability of continuing or abandoning the project, yet short enough that persistence may still be justified (Freeland and Keister, 2016). Therefore, we selected those cases that, after 24 months since entry in the gestation process, had abandoned or were still persisting with the entrepreneurial project. Application of this third selection filter reduced the final sample to 316 nascent entrepreneurs.

As for the main sample descriptives, regarding demographic characteristics 59.5% of the nascent entrepreneurs in the sample were male, and 40.5% female; they were 43.7 years old on average; as for the educational level, 34.5% had some college studies, 22.2% a bachelor’s degree and 17.4% a postgraduate degree. The demographic information has been detailed and summarized in Table 1.

**Table 1.** Demographic characteristics of the sample

As for characteristics more related to the entrepreneurial venture, 51.3% of the cases had no previous entrepreneurial experience and 25.0% had no experience in the industry in question. Among the entrepreneurial projects, 84.8% were in the services sector, while 10.4% and 4.7% corresponded to the secondary and primary sectors, respectively. Nearly half (48.4%) of the respondents believed their product was novel in nature. A similar proportion (49.4%) were acting alone, as solo entrepreneurs.

### Measurement of study variables

**Dependent variable:** The PSED II identifies three separate outcome states: new firm creation, active in the start-up process or abandoned. Given the third selection criterion explained above, the first outcome state is not relevant for our study purposes. In relation to this, previous studies have operationalised entrepreneurial persistence by distinguishing between continuing versus abandoning the project (Kim et al., 2013; Klyver et al., 2018; Davidsson, 2012; Davidsson and Gordon, 2012). Using the harmonised PSED II dataset, in the present study **entrepreneurial persistence** is thus operationalised as a dichotomous outcome variable, which is assigned the value 1 if at 24 months the nascent entrepreneur is still continuing the process and 0 if it has been abandoned.

**Independent variables:** All our independent variables are measured on a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree) (see Appendix). For every construct, we validated the corresponding measuring instrument, which produced satisfactory results both for convergent (Hair et al., 2014) and for discriminant validity (Fornell and Larcker, 1981). Detailed results of the analyses of reliability and convergent validity can be seen in Table 2, which displays satisfactory values. The results for the assessment of discriminant validity are shown in Table 3, which shows that the square root of the AVEs for each construct were greater than the correlations between constructs.

**Table 2.** Analysis of reliability and convergent validity

**Table 3.** Analysis of discriminant validity

**Entrepreneurial self-efficacy** was assessed according to the scale proposed by Schjoedt and Craig (2017), based on the PSED II items (Y6, Y7, Y8). However, measurement validation analysis led us to exclude one of the items from the scale (Y8), due to cross-loading issues with the goal commitment construct.

To measure **goal commitment**, we employed a two-item scale (Y9 and Y10), following previous studies based on PSED II data (Hopp and Sonderegger, 2015; Khan et al., 2014).

To measure **perceptions of institutional support**, both **formal** and **informal**, we took as a benchmark the items proposed by Hopp and Stephan (2012) regarding perceptions of the environment. In our case, we assessed the perceived support from the formal institutional context using items P7, P8 and P9 to obtain the construct. These items refer to the support provided by national and local governments, banks, other investors and community groups. The perceived support from the informal context was measured using items P1 to P5, which refer to the nascent entrepreneur's perceptions of the social and cultural norms of the environment.

**Control variables:** As controls, we first included a set of sociodemographic variables: sex (1 male, 0 female), age and education (continuous variables). The PSED II shows that almost 45% of the start-ups were created by teams (Martinez et al., 2011). In the view of that, and considering also that this factor might determine the will to continue in the start-up process in the face of difficulties (Cerqueti et al., 2020), and hence entrepreneurial persistence, we considered a team variable. Third, we included the perceived level of competition in the sector (scored as high, medium or low), assuming that intense competition could be considered a potentially adverse environmental factor for new ventures (Khan et al., 2014). Fourth, we considered the entrepreneur's expectations of future venture growth, as this might influence the nascent entrepreneur's motivation (Edelman et al., 2010) and hence persistence. We measured whether the entrepreneur had (1) or did not have (0) high growth expectations. We also considered prior industry experience (in years) (Hopp and Sonderegger, 2015; Freeland and Keister, 2016) and the entrepreneur's previous experience in business start-up (measured as the number of businesses created previously), recalling that previous experience can influence the level of persistence presented by the nascent entrepreneur (Tietz et al., 2018). Finally, we included the type of economic activity undertaken, since this question could have an immediate impact on the actions carried out and the effort exerted in the start-up process (Reynolds et al., 2004), and hence on persistence. Sectoral activity was measured through dummy variables for the primary, secondary and tertiary sectors, taking the secondary sector as the reference category.

### Analysis and results

Descriptive statistics and correlations can be seen in Table 4, which shows that entrepreneurial persistence is positively correlated with the perception of a favourable informal institutional context ( $p < 0.01$ ), entrepreneurial self-efficacy ( $p < 0.01$ ) and goal commitment ( $p < 0.01$ ). Among the control variables, entrepreneurial persistence also correlates positively with prestart-up industry experience ( $p < 0.01$ ) and with primary sector affiliation ( $p < 0.01$ ).



**Table 4.** Descriptive statistics and correlations

The study hypotheses were tested by performing logistic regression analysis on the proposed direct relationships (H1, H2, H4a, H4b). The indirect relationships considered (H3, H5a and H5b) were tested by a bootstrapping analysis using the Process 3.14 macro for SPSS (Hayes, 2013; Hayes and Scharkow, 2013), a tool that examines and characterises complex models such as multiple mediation, thereby overcoming the limitations of traditional approaches.

The results obtained are shown in Tables 5, 6 and 7. Table 5 shows the results for the logistic regression estimating the probability of a nascent entrepreneur persisting in the venture creation process (H1, H2, H4a and H4b). We include in the table the calculations for the model goodness of fit (Greene, 2003), that is, global significance of the model, Pseudo-R<sup>2</sup>, Hosmer-Lemeshow test and the proportion of correctly classified observations.

**Table 5.** Logistic regression for entrepreneurial persistence

As shown in Model 1, entrepreneurial self-efficacy seems to have no predictive power in this respect (Exp = 1.346;  $p > 0.1$ ), and therefore H1 cannot be confirmed. However, goal commitment is a positive and statistically significant predictor (Exp = 1.447;  $p < 0.05$ ), and so H2 is accepted. In concrete terms, a high level of commitment increases the probability of persistence by 42.3%. Model 2 incorporates the factors related to perceptions of the context. These results show that the perception of formal institutional support is not statistically significant (Exp = 0.849;  $p > 0.1$ ), and therefore hypothesis H4a cannot be confirmed. However, the perception of informal institutional support (Exp = 1.627;  $p < 0.05$ ) has a direct positive effect on the probability of a nascent entrepreneur persisting in the start-up process. We thus accept hypothesis H4b according to which a nascent entrepreneur's perception of support from the informal institutional environment increases the probability of persistence by 62.7%.

The results for the second step of our analysis, in which we tested the proposed indirect relationships (H3, H5a and H5b), can be seen in Tables 6 and 7. As shown in Table 6, the hypothesised self-regulatory mechanism between self-efficacy and commitment appears to play a significant role in determining persistence in nascent entrepreneurs (LL95CI = 0.0056; UL95CI = 0.2730). This finding confirms H3, suggesting that although self-efficacy does not directly influence persistence, it does exert an indirect positive effect via commitment. We conclude, therefore, that a relevant self-regulatory mechanism affects the decision to persist of nascent entrepreneurs.

**Table 6.** Indirect effect of self-efficacy on entrepreneurial persistence through goal commitment (self-regulatory mechanism)

Once we have found evidence of the existence of a self-regulatory mechanism between self-efficacy and commitment in determining the tendency of a nascent entrepreneur to persist, we tested if this mechanism may act as mediator between the perceived institutional context and entrepreneurial persistence. Table 7 shows the results of the evaluation of the hypothesised indirect effects of the perception of institutional support on persistence. With regard to formal institutions, while the direct effect is non-significant (LL95CI = -0.2967, UL95CI = 0.3605), the results show a significant and positive double mediation effect (LL95CI = 0.0003; UL95CI = 0.0393). These results provide evidence that the effect is indirect and transmitted through the cognitive self-regulatory mechanism. For informal support this indirect effect is not statistically significant (LL95CI = -0.0035; UL95CI = 0.0392), with the direct effect being confirmed as positive and significant (LL95CI = 0.0137; UL95CI = 0.6977). Therefore, hypothesis H5a is confirmed, but not H5b. These results suggest that the perception of supportive social and cultural norms has a direct influence on the probability of the entrepreneur persisting in the start-up process, while perceived formal institutional support exerts an indirect influence through cognitive self-regulation, giving rise to perceptions of self-efficacy and commitment, ultimately impacting on entrepreneurial persistence.

**Table 7.** Indirect effect of the institutional support on entrepreneurial persistence through the self-regulatory mechanism

#### **4. Discussion and conclusions**

Studies of nascent entrepreneurship focus on a fundamental stage in the entrepreneurial process, that of business gestation (Reynolds and Curtin, 2008), in which diverse activities aimed at company creation are performed (Carter et al., 1996). Findings from this stream of research are attracting considerable interest in the academic sphere, as a vital element to promote future job creation and social development (Liñán et al., 2011). In the institutional arena, entrepreneurship policies have mainly sought to foster the entrepreneurial spirit, to provide training for entrepreneurship and to implement support and funding programmes for effective business creation and optimal new venture performance (Lucas et al., 2018). However, many companies fail to become established despite the personal and financial effort invested by entrepreneurs during the start-up process and the public resources they may have received for this purpose. Prior to firm creation, a long, complex process must be completed, during which some entrepreneurs will abandon their project, while others continue. In this process, the quality of persistence is

essential, and will largely determine the success or otherwise of the start-up (Timmons et al., 2004). Nevertheless, and despite the relevance of persistence in accounting for entrepreneurial success, not enough attention has yet been paid to this element of the new venture gestation process (Holland and Shepherd, 2013; Holland and Garret, 2015).

With the present study, we produce new knowledge about entrepreneurial persistence during new venture gestation, by focusing on the role played by relevant cognitive and institutional contextual factors, and by determining their interrelationships. With respect to cognitive factors, our results show that the level of goal commitment is significantly associated with the likelihood of the nascent entrepreneur persisting in the venture gestation process. This finding is in line with previous studies (for example, Davidsson and Gordon, 2016; Khan et al., 2014) according to which stronger commitment makes the entrepreneur more motivated to create a new company, and thus more persistent in the process of venture gestation.

Another of the main drivers and predictors of entrepreneurial persistence is self-efficacy (Shane et al., 2003; Holland and Shepherd, 2013; Cardon and Kirk, 2015). However, our own results for the prediction power of entrepreneurial self-efficacy do not confirm this, revealing no direct effect of this cognitive variable on the probability that the nascent entrepreneur will persist in the process of venture gestation.

Our analysis of indirect effects sheds some light on this finding. Although self-efficacy does not appear to be a significant predictor of entrepreneurial persistence, it has a notable indirect positive effect via goal commitment. This suggests that a cognitive self-regulatory mechanism may enhance the likelihood of entrepreneurial persistence in the new venture gestation process. Indeed, this conclusion is in line with insights obtained from goal setting theory, according to which resolute commitment to a goal is a self-regulating element that determines the level of motivation (Locke and Latham, 1990). Furthermore, this view chimes with the idea that self-efficacy plays a significant role in enhancing goal commitment (Locke and Latham, 2002). Our finding extends these observations by confirming the relationship between self-efficacy and goal commitment, and ratifying its impact on entrepreneurial persistence as a self-regulatory mechanism.

As concerns contextual factors, prior literature has suggested that formal institutional support plays an important role in the maintenance of entrepreneurial persistence (Freeland and Keister, 2016, Sambharya and Musteen, 2014). However, we found no evidence of the expected direct relationship between perceived formal institutional support and persistence. Beyond this, our results suggest there is an indirect effect via the self-regulation mechanism provided by the cognitive variables of self-efficacy and goal commitment, such that the perception of support from the formal institutional context would favour persistence in business creation through the cognitive processing of information perceived from the environment. These results are consistent with research studies that have highlighted the importance of the impact made by the environment on entrepreneurial behaviour through an individual's cognition (Lim et al., 2010), particularly as concerns the contingent role played by formal institutions (Raza et al., 2019). This finding represents an important advance in the literature on nascent entrepreneurship, since it corroborates the interrelationships assumed to exist between the institutional context and the cognitive mechanisms involved in entrepreneurial behaviour and decision-making, with particular regard to their impact on entrepreneurial persistence during new venture gestation.

Finally, the promotion of an entrepreneurial culture through educational institutions, the media or government initiatives is of crucial importance to the creation of new companies, which in turn contributes to economic development (Wennekers and Thurik, 1999). Our study shows that the perception of support from the social and cultural environment directly influences nascent entrepreneurs' persistence in the venture start-up process, as social and cultural support usually forms the entrepreneur's closest and most direct environment. This finding corroborates previous studies according to which the support obtained from the immediate social environment influences the persistence of entrepreneurs engaged in entrepreneurial processes (see, for example, Kim et al., 2013).

From a theoretical perspective, this study contributes new understanding to the field of nascent entrepreneurship, by analysing the interrelationships between cognitive and contextual factors to explain entrepreneurial persistence during the venture gestation process. To our knowledge, no previous research evidence has been offered as to how the environment may influence the cognitive aspects of nascent entrepreneurs, favouring or inhibiting persistence in the process via self-regulatory mechanisms. Specifically, our results evidencing the existence of a self-regulatory mechanism mediating between the formal context and the decision to persist shed light on the question of how nascent entrepreneurs deal effectively with the challenge of creating a business. Moreover, we directly contribute to overcome the limitations of nascent entrepreneurship literature in examining psychological processes (Hopp and Sonderegger, 2015; Chadwick and Raver, 2020), and particularly about their cumulative or interactive effects (O'Shea et al., 2017). The attention in self-regulation when approaching nascent entrepreneurial phenomena can be useful promising for further theoretical developments about the process complexity that occurs when nascent entrepreneurs make decisions and take action.

Our conclusions may serve also to complement advancements in the recent research on entrepreneurial resilience (e.g., Shepherd et al., 2020; Chadwick and Raver, 2020). Given that persistence resonates with the concept of resilience, our conclusions about the underlying mechanisms of nascent entrepreneurial persistence may be useful for the development of integrative models explaining resilience. Specifically, our findings connecting context and cognitive self-regulation may provide with a base for future empirical developments in the field of entrepreneurial

resilience, which conceptualisation focuses on the positive adaptation and adjustment to the environment despite the adversity (Williams et al., 2017; Hartmann et al., 2022).

In practical terms, our findings could be useful for institutions responsible for designing policies and programmes aimed at contributing to sustained long-term economic growth through new business creation and growth. Our results highlight the importance of entrepreneurship programmes developed by formal institutions, such as universities, associations and governments, showing that they can be especially effective if they are aimed at entrepreneurs who are actively engaged in new venture gestation processes. Moreover, the formal environment plays a key role in developing capacities and personal abilities to perform business activities, since levels of self-efficacy may be derived, modified and/or improved by changes in formal institutional factors (Shook et al., 2003; Boudreaux et al., 2019). In this respect, it seems particularly important to consider entrepreneurs' perceptions of these initiatives, as awareness of a favourable formal environment may have an indirect promoting effect on their decision to persist in the entrepreneurial process, via individual interconnected factors such as self-efficacy and commitment.

As any research, the present study is not exempt from limitations. First, like in many entrepreneurship studies, our variables are self-reported, given the nature of the PSED data. Second, although PSED collects data in several points in time during the gestation process of the projects in the sample, the variables in our study are not dynamic, given the purposes of our research. However, future studies on nascent entrepreneurial persistence could consider a dynamic perspective by examining fluctuations in self-regulatory processes and their outcomes (O'Shea et al., 2017), as concepts such as persistence and self-efficacy are malleable and may change over time (Pollack et al., 2019).

As for other avenues for future research, it would be interesting to consider the issue of interactions between formal and informal contexts in the explanation of entrepreneurial persistence in new venture creation. In relation to this, prior literature has pointed out that informal institutions may condition the efficiency of formal ones and vice versa (Aparicio et al., 2016), such as the long-term impact that entrepreneurship policies may have on social norms and culture. It would therefore be interesting, for example, to address how the perceived support from government, educational and/or financial institutions could favour an entrepreneurial culture, which in turn encourages nascent entrepreneurs to persist during the new venture gestation process. Also in relation to the context, it would be interesting to explore our research questions in contexts other than the western one, such as Arab countries, as a way to count on different institutional conditions, and hence contribute to context theorizing (Krueger et al., 2021).

The consideration of other cognitive factors in the configuration of self-regulatory mechanisms could offer directions for future research on the study of the mediation role of cognition in the relationship between contextual factors and entrepreneurial persistence. It would be particularly interesting considering the role of passion, whose link with self-efficacy has been previously suggested in prior literature (e.g., Cardon and Kirk, 2015). In another vein, the study of family ties in the new venture could offer new perspectives to the research on nascent entrepreneurial processes (e.g., Muñoz-Bullón et al., 2020), as well as would provide new insights into the linkages between start-up processes and context in entrepreneurial families (Krueger et al., 2021). Moreover, the idea of supporting ties connects with the possibilities of exploring in the future the role of entrepreneurial teams in the study of the self-regulatory mechanisms guiding venture gestation processes, by considering team variables as explanatory factors, such as collective self-efficacy, or differences among team members in commitment to the project (e.g., Diakanastasi et al., 2018).

Finally, our approach to the question of individual and contextual interrelationships could subsequently be applied to focus on the result of the gestation process, i.e. the successful creation of a new firm. This analysis would provide new evidence on how the self-regulatory mechanisms that mediate between the context and the person influence the outcomes of new venture creation processes.

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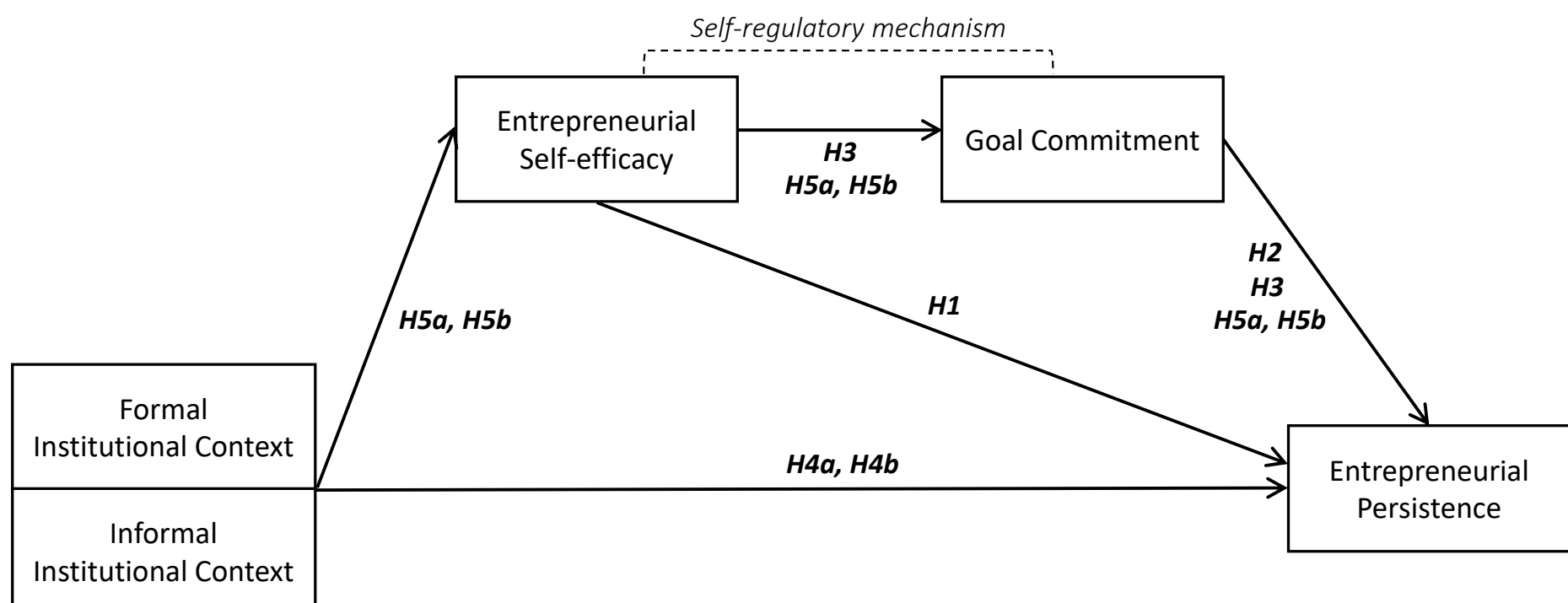
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**Figure 1.** Conceptual model



**Table 1.** Demographic characteristics of the sample

<b>Sex</b>	<b>Percentage</b>
Male	59.50%
Female	40.50%

<b>Age (years)</b>	Mean = 43.65
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<b>Educational level</b>	
High school incomplete	5.40%
High school complete	19.90%
Some college	24.70%
Associate's degree	9.80%
Bachelor's degree	22.20%
Postgraduate degree	17.40%
DN/NA	0.60%

**Table 2.** Analysis of reliability and convergent validity

Indicator	Outer loading	Cronbach's alpha	CR	AVE
Entrepreneurial self-efficacy		0.674	0.831	0.711
Y6	0.854			
Y7	0.832			
Y8	Dropped			
Commitment		0.715	0.847	0.734
Y9	0.858			
Y10	0.856			
Formal institutional context		0.695	0.801	0.574
P7	0.816			
P8	0.734			
P9	0.720			
Informal institutional context		0.833	0.864	0.562
P1	0.780			
P2	0.783			
P3	0.805			
P4	0.750			
P5	0.615			

**Table 3.** Analysis of discriminant validity

	Entrepreneurial self-efficacy	Commitment	Formal institutions	Informal institutions
Entrepreneurial self-efficacy	<b>0.843</b>			
Commitment	0.235	<b>0.856</b>		
Formal institutional context	0.114	0.137	<b>0.758</b>	
Informal institutional context	0.188	0.201	0.450	<b>0.75</b>



**Table 4.** Descriptive statistics and correlations

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Entrepreneurial persistence	0.650	0.478	1															
2. Entrepreneurial self-efficacy	4.427	0.653	0.147**	1														
3. Commitment	4.117	0.831	0.160**	0.235**	1													
4. Formal institutional context	3.132	0.826	0.061	0.114*	0.137*	1												
5. Informal institutional context	3.816	0.758	0.179**	0.188**	0.201**	0.450**	1											
6. Sex	1.405	0.492	-0.050	-0.071	-0.090	-0.049	-0.021	1										
7. Education	4.761	1.553	0.066	0.053	-0.163**	0.060	-0.166**	0.032	1									
8. Age	3.727	0.326	0.066	0.060	-0.044	0.200**	0.092	-0.027	0.255**	1								
9. Team	1.705	0.996	-0.101	-0.073	-0.102	0.014	0.110	-0.066	0.010	-0.014	1							
10. Competition	2.179	0.707	0.004	-0.022	-0.079	-0.057	0.039	0.012	0.040	-0.042	-0.006	1						
11. High growth aspiration	0.210	0.408	-0.009	-0.110	-0.044	-0.029	0.041	-0.029	0.070	-0.145*	0.065	-0.119*	1					
12. Industrial experience	8.231	10.014	0.160**	0.201**	0.066	0.041	0.039	-0.156**	0.067	0.285**	0.009	0.032	-0.116*	1				
13. Entrepreneurial experience	1.104	1.960	-0.023	0.129*	-0.052	-0.107	-0.026	-0.146**	0.136*	0.183**	-0.046	-0.120*	0.112*	0.011	1			
14. Primary sector	0.047	0.213	0.166**	0.014	0.067	0.013	0.051	-0.002	-0.023	-0.011	0.141*	0.070	-0.042	0.129*	-0.004	1		
15. Secondary sector	0.104	0.306	-0.018	0.046	-0.030	-0.038	-0.021	-0.155**	-0.074	-0.037	0.018	0.001	-0.049	0.088	-0.045	-0.076	1	
16. Tertiary sector	0.848	0.359	-0.084	-0.047	-0.015	0.024	-0.012	0.134*	0.077	0.038	-0.099	-0.043	0.066	-0.152**	0.041	-0.527**	-0.807**	1

Notes: \*\*p < 0.01; \* p < 0.05

**Table 5.** Logistic regression for entrepreneurial persistence

	B	SE	Wald	Exp(B)
Constant	-4.310	1.999	4.648	0.013
Entrepreneurial self-efficacy	0.297	0.210	2.011	1.346
Commitment	0.369*	0.168	4.830	1.447
Formal institutional context	-0.163	0.194	0.707	0.849
Informal institutional context	0.486*	0.209	5.393	1.627
Sex	-0.057	0.282	0.041	0.945
Education	0.104	0.092	1.277	1.110
Age	0.021	0.448	0.002	1.021
Team	0.009	0.029	0.092	1.009
Competition	-0.060	0.193	0.096	0.942
High growth aspiration	0.084	0.338	0.061	1.087
Industrial experience	0.029 †	0.016	3.229	1.029
Entrepreneurial experience	-0.050	0.067	0.556	0.951
Primary sector	20.592	9973.780	0.000	0.998
Tertiary sector	0.193	0.427	0.204	1.213
<b>Model diagnosis</b>				
-2LL	334.02			
Chi-Squared	40.018***			
Cox and Snell Pseudo R <sup>2</sup>	0.13			
Nagelkerke Pseudo R <sup>2</sup>	0.18			
Hosmer-Lemeshow test	2.71 (n.s)			
Correct predictions (overall %)	69.20			

Notes: N=316; \*\*\*p < 0.001; \*\*p < 0.01; \*p < 0.05; †p < 0.1

**Table 6.** Indirect effect of self-efficacy on entrepreneurial persistence through goal commitment (self-regulatory mechanism)

	Estimate	SE	CI Lower (LL95CI)	CI High (UL95CI)
Direct effect (Self-efficacy → Persistence)	0.3306	0.2016	-0.0646	0.7257
Indirect effect (Self-efficacy → Commitment → Persistence)	0.1098	0.0685	0.0056	0.2730

**Table 7.** Indirect effect of the institutional context on entrepreneurial persistence through the self-regulatory mechanism

	Estimate	SE	CI Lower (LL95CI)	CI High (UL95CI)
Direct effect (Formal context → Persistence)	0.0319	0.1677	-0.2967	0.3605
Indirect effect (Formal context → Self-efficacy → Commitment → Persistence)	0.0364	0.0103	0.0003	0.0393
Direct effect (Informal context → Persistence)	0.3557	0.1745	0.0137	0.6977
Indirect effect (Informal context → Self-efficacy → Commitment → Persistence)	0.0122	0.0111	-0.0035	0.0392

## **Appendix**

### **Measurement scales**

Please tell me if you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with whether these statements accurately describe you:

#### **Entrepreneurial Self-efficacy**

**Y6:** Overall, my skills and abilities will help me start this new business.

**Y7:** My past experience will be very valuable in starting this new business.

#### **Goal Commitment**

**Y9:** There is no limit as to how long I would give maximum effort to establish this new business.

**Y10:** My personal philosophy is to “do whatever it takes” to establish my own business.

Now I would like to talk to you about the community in which you now live. Would you say you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree?

#### **Formal Institutional Context**

**P7:** State and local governments in your community provide good support for those starting new businesses.

**P8:** Bankers and other investors in your community go out of their way to help new businesses get started.

**P9:** Community groups provide good support for those starting new businesses.

#### **Informal Institutional Context**

**P1:** The social norms and culture of the community where you live are highly supportive of success achieved through one’s own personal efforts.

**P2:** The social norms and culture of your community emphasize self-sufficiency, autonomy, and personal initiative.

**P3:** The social norms and culture of your community encourage entrepreneurial risk-taking.

**P4:** The social norms and culture of your community encourage creativity and innovativeness.

**P5:** The social norms and culture of your community emphasize the responsibility that the individual has in managing his or her own life.