ARE BUSINESS GROWTH AND ENTREPRENEURIAL MOTIVATIONS COMPETING WITH ENVIRONMENTAL INTENTION AMONG NASCENT ENTREPRENEURS?

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Abstract

Purpose - The aim of this research is to investigate whether business growth intention and entrepreneurial motivations enhance the explanatory power of the Theory of Planned Behavior (TPB) to predict environmental intention among nascent entrepreneurs.

Design/methodology/approach - In the context of nascent entrepreneurship, the authors collected data from 193 nascent entrepreneurs in France. To test the hypotheses, stepwise multiple regression was performed.

Findings - The results show that business growth intention has a positive influence on environmental intention. This indicates that it is possible for French nascent entrepreneurs to plan the simultaneous pursuit of business growth and environmental goals. However, entrepreneurial motivations have a mixed effect on environmental intention. If necessity motivations negatively influence environmental intention, opportunity motivations have no significant effect on the latter.

Originality/value - To the best of our knowledge, this research is among the first to extend the TBP model with additional factors, namely business growth intention and necessity/opportunity motivations, to study environmental intention. Moreover, the extended TBP model is validated in the under-research context of nascent entrepreneurship.

Keywords - business growth, entrepreneurial motivations, environmental intention, extended theory of planned behavior, nascent entrepreneurship.

Paper type - Research paper

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1. Introduction[1]

Nascent entrepreneurs, i.e., individuals in the process of starting new businesses (Thompson, 2009) consider environmental concerns at the very early stages before launching their ventures (Horne and Fichter, 2022). Consequently, they are more likely to integrate environmental issues into their future firms' goals (Hörisch *et al*., 2019). Thus, nascent entrepreneurship is a sensible starting point for considering environmental concerns (DiVito and Bohnsack, 2017) that should be reflected in the *intention* to exploit environmental opportunities (Patzelt and Shepherd, 2011).

As highlighted by Tounés (2023), we define environmental intention as the willingness of nascent entrepreneurs to adopt environmentally friendly behaviors in a new business. That is, environmental intention serves as a prerequisite among nascent entrepreneurs for the establishment of environmentally oriented businesses. Despite its infrequent application in environmental research (Hua and Dong, 2022), the Theory of Planned Behavior (TPB) (Ajzen, 1991) is robustly employed to elucidate environmental and sustainable intention (Jain *et al*., 2020; Yi, 2021) in different areas, such as waste recycling (Wan *et al*., 2017), mobility (Gansser and Reich, 2022), and tourism (Lin *et al*., 2022). However, the TPB has faced criticism for its narrow focus on its three core predictors, with insufficient attention given to other individual and external factors relevant to researchers' topics (Ahmad *et al*., 2020; Fan *et al*., 2019; Hua and Dong, 2022). Critics argue that intentional TPB models are static and should consider new variables and methods that support environmentally friendly choices and behaviors (Mancha and Yoder, 2015; Le Loarne Lemaire *et al*., 2022).

Our knowledge about how environmental intention is formed at the nascent entrepreneurship context is still ripe for additional exploration (Hörisch *et al*., 2019; Tounés, 2023) at least in two aspects. First, while economic goals are inherent in new business creations (Patzelt and Shepherd, 2011), TPB is not very specific about how the co-existence of business

growth and environmental goals influence the environmental intention among nascent entrepreneurs (Thelken and de Jong, 2020; Tounés, 2023). Other than pointing out that the more favorable intention will be carried out (Ajzen, 2020), the TPB does not explain how individuals deal with situations that include competing goals, such as growth and environmental goals.

Second, the TPB is inadequate when regarding motivations; if the core components of TPB provide reasons for acting, they do not incorporate explicit motivational content needed to induce an intention to act (Perugini and Bagozzi, 2001). In the field of environment, authors have made calls for further exploration of entrepreneurial motivations because they explain much of the inclusion of environmental practices in launching new ventures (Font *et al*., 2016). Accordingly, we fill this gap, broadening and deepening the TPB by considering the initial motivations of nascent entrepreneurs as a key factor for predicting environmental intention.

The objective of this study is to investigate these two gaps. More particularly, and compared to the original model, is the question of whether the inclusion of business growth intention and entrepreneurial motivations enhances the explanatory power of the TPB to predict environmental intention among nascent entrepreneurs. We extend the TPB model with two additional predictors, namely business growth intention and entrepreneurial motivations. Thus, two novel research questions are asked: (i) do nascent entrepreneurs pursue simultaneously both business growth and environmental intention? And (ii) opposed to opportunity motivations, do necessity motivations of nascent entrepreneurs conflict with their environmental intention?

To reach these objectives, we conducted an empirical study among French nascent entrepreneurs using a survey method during January 2023. We focused not only on nascent environmental entrepreneurs, but on regular nascent entrepreneurs (Hoogendoorn *et al*., 2019). These latter pursue different opportunities and goals and not only those based on environmental

products/services and processes. Our empirical results elicited from among 193 French nascent entrepreneurs demonstrate that the the explanatory power of extended TPB model is particularly higher than that of the original model in explaining the environmental intention. Thus, we contribute to the research mainstream and move beyond the baseline environmental intention models in in the under-researched field of nascent entrepreneurship (Muñoz and Cohen, 2018; Ploum et al., 2018).

The remainder of this article is structured on five sections. Elaborating on the extended TPB model, the second section presents the conceptual framework and the hypotheses. In the third section, we present the methodological approach. In the fourth section, we present the results of the measurement models and those of hypotheses testing. Subsequently, in the fifth section we discuss the impacts of the core components of TPB, as well as the effects of growth intention and entrepreneurial motivations on environmental intention regarding the literature. In the last section, we conclude by highlighting the implications of the findings for future research and the limits of our results.

2. Theoretical framework

The intention is widely used as a fundamental concept to study human conduct. Because intention is the best predictor of behavior (Ajzen, 1991, 2010), a large body of research mobilizes this concept as a key proxy for determining environmental behavior in a wide range of environmental contexts. As already defined, and in line with Tounés (2023), in this study environmental intention is seen as the willingness of nascent entrepreneurs to adopt environmentally friendly behaviors within a new business and, as such, it is a critical precursor of environmental behavior. This concept denotes the willingness to dedicate efforts toward environmental objectives (Bhatt and Ghuman, 2022) and the readiness to incur costs or make sacrifices for the environment (Mayerl and Best, 2019).

Different theoretical frameworks are deployed to study intention in the field of environment. Among these theories, we identify social identity perspective (e.g., Barth *et al*., 2016), Value-Belief-Norms theory (e.g., Ahmad *et al*., 2020; Lee *et al*., 2018), institutional theory (e.g., Yang *et al*., 2021), and the theory of planned behavior (e.g., Lin *et al*., 2022). However, regarding the coherence of its conceptual core components (Mancha and Yoder, 2015; Swaim *et al*., 2014), the theory of planned behavior (TPB) (Ajzen, 1991) is one of the most frequently deployed theories to explain environmental intention (Gansser and Reich, 2022; Joensuu-Salo *et al*., 2022).

The TPB focuses on volitional and goal-oriented intention (Ajzen and Dasgupta, 2015) and suggests that an individual's intention to perform a behavior is driven by three core predictors: the positive evaluation of the outcome behavior (attitudes), social pressure from important individuals encouraging it (subjective norms), and the perceived ease or difficulty of engaging in the behavior (perceived behavioral control). The robustness and validity of the TPB had been demonstrated in diverse environmental and sustainable areas (Jain *et al*., 2020; Joensuu-Salo *et al*., 2022). However, the meta-analytic review of Thompson (2009) identifies certain problems in the TPB model constructs. Although there is no doubt that the TPB offers a parsimonious framework of intentional behavior, its sufficiency can be questioned and it must be personalized for specific purpose (Jain *et al*., 2020).

According to Gansser and Reich (2022), this theory can be extended in a goal-oriented way depending on a specific sustainable and environmental subject. Likewise, in the domain of social entrepreneurship, Zaremohzzabieh *et al*. (2019) claim that TPB can integrate additional factors to better explain the intent to start up a socially driven business. Indeed, several scholars propose refining the TPB model by incorporating methods and variables that support environmentally friendly intention (Ahmad *et al*., 2020; Hua and Dong, 2022).

To overcome this criticism, Ajzen (1991, p. 199) himself asserts that the TPB is *"... open to the inclusion of additional predictors if it can be shown that they capture a significant proportion of the variance in intention or behavior"*. Exploiting this opportunity, scholars have extended the baseline TPB model by introducing additional predictors that improve the model's validity, such as motivations (Font *et al*., 2016), moral norms (Wan *et al*., 2017), egoistic, altruistic, and biospheric concerns (Gansser and Reich, 2022), cosmopolitanism (Lee *et al*., 2018), sustainable entrepreneurship competences (Joensuu-Salo *et al*., 2022), and affect (Lin *et al*., 2022), all which have enhanced the predictive power of the TPB original model.

Inspired by these efforts and respecting "*the principle of compatibility*" (Ajzen, 2020, p. 317), we extend the TPB model by integrating two predictors in the context of nascent entrepreneurship, namely business growth and entrepreneurial motivations. First, we know that growth drives, among others, biodiversity loss and climate change (McMullen, 2022). Finding ways to deal with the tension between profit and environmental responsibility is of great importance for aspiring entrepreneurs (Venâncio and Pinto, 2020). Balancing business growth with sustainable development is an increasing source of tension (Edwards, 2021). In the realm of nascent entrepreneurship, business growth is a critical determinant of the value of a new venture and stands out as a pivotal indicator for long-term success (Miroshnychenko *et al*., 2021). This phenomenon necessitates meticulous planning. In this regard, business growth intention emerges as a central concept for scrutinizing business growth to achieve economic objectives; thus, business growth intention can be considered as a key predictor of actual growth (Zampetakis et al., 2016). Consequently, business growth is recognized as a planned and intentional behavior, making it pertinent for intention models (Bort and Totterman, 2023; Zampetakis *et al*., 2016).

Second, according to Schlaegel and Koenig (2014), the TPB does not describe how motivational predictors act in the formation of intention. Moreover, Perugini and Bagozzi

(2001) argue that the TPB does not incorporate an explicit motivational component. In fact, an in-depth analysis of the motivations of sustainable entrepreneurs is crucial, because they could be a strong predictor that transforms intention into action. Fan *et al*. (2019) claim that the TPB model should consider different types of motivations that importantly influence environmental intention. More particularly, in the context of nascent entrepreneurship, we do not know to what extent entrepreneurial motivations, that is necessity and opportunity motivations (Reynolds *et al*., 2002), can explain environmental intention as additional predictors in the TPB model. The overall framework highlighting the extending TPB model is shown in figure 1.

----- Place Figure 1 about here-----

In the following section, we develop arguments to support the proposed extended TPB model in explaining environmental intention of nascent entrepreneurs.

2.1. Baseline hypotheses of the TPB model and environmental intention

An attitude is an evaluative response towards an act that, once learned, is triggered automatically when one is exposed to the act (Perugini and Bagozzi, 2001). In the TPB model, attitudes are based on a rational choice of the consequences of a behavior, as well as an estimation of the likelihood of its outcomes (Ajzen, 1991).

In the field of sustainable entrepreneurship, Gansser and Reich (2022) and Ul-Mulk and Reynaud (2019) assert that environmental attitudes are concerned with the evaluation of the consequences of sustainable behavior in relation to the environment and climate. Sustainable attitudes have important benefits for sustainable intentions (Ul-Mulk and Reynaud, 2019). Positive environmental attitudes are significantly related to sustainability-oriented entrepreneurial intention (Joensuu-Salo *et al*., 2022; Thelken and de Jong, 2020). They significantly increase intention to reduce construction and waste demolition (Jain *et al*., 2020), energy saving (Bhatt and Ghuman, 2022), and to invest in renewable energies (Gansser and

Reich, 2022; Ul-Mulk and Reynaud, 2019). In keeping with the TPB relationship between attitudes and intention, we hypothesize the following:

H1a. *Positive environmental attitudes positively influence the environmental intention of nascent entrepreneurs.*

Concomitantly to attitudes, we pay particular interest to *injunctive norms* in predicting environmental intention. According to the theory of normative conduct (Cialdini *et al*., 1990), the injunctive norms represent the perceived degree of social approval/disapproval for a given behavior. An important body of research suggests that these norms are robust across contexts and powerful enough to predict behavior when there is no consensus for the given behavior. In the context of environment, the processes by which injunctive norms drive compliance remain largely unknown (Tounés, 2023). However, these norms are perceived as the expectations raised by social and institutional pressures to perform an environmental behavior (Jain *et al*., 2020).

In the field of nascent entrepreneurship, institutional theory (DiMaggio and Powell, 1983) can help in understanding these different types of pressures (e.g., civil, political, and institutional) and their effects on future entrepreneurs who would implement environmental practices. Because institutional actors and governments provide entrepreneurs with different "green" resources relative to funding, information, and technology, they pose demands that reinforce their commitment to environmental practices (Yi, 2021).

Regulatory pressures, including the frameworks enforced by governments, can have positive effects on the adoption of sustainable practices (Jain *et al*., 2020). Institutional referents could result in action for sustainable activities and motivate individuals to start new ventures in environmental fields; actors such as legislators (Jain *et al*., 2020), public authorities (Bhatt and Guman, 2023), and public environmental organizations (Yi, 2021) influence

entrepreneurs to commit to environmental practices. In keeping with the TPB model's relationship between injunctive norm and intention, we hypothesize the following:

H1b. *Environmental injunctive norms related to institutional and civil referent groups (public authorities, environmental organizations and associations) positively influence the environmental intention of nascent entrepreneurs.*

Perceived behavioral control can be understood as an individual's perception of the inherent ease or difficulty of completing a particular behavior (Ajzen, 1991). The TPB posits that the more individuals believe they possess the necessary abilities and resources to enact the behavior, the more likely they will be to perform it (Ajzen and Dasgupta, 2015; Ajzen, 1991).

In the context of environment, the concept of perceived environmental behavioral control concerns how easy or hard individuals perceive environmental and climate-friendly behavior to be. If people evaluate environmental behavior as challenging to conduct, they are less likely to behave in an environment and climate-friendly way (Gansser and Reich, 2022; Jain *et al*., 2020). Perceived environmental behavioral control has an important influence on behavior intention (Gansser and Reich, 2022) because environmental challenges are perceived as difficult to solve (Thelken and de Jong, 2020). In keeping with the TPB model's relationship between perceived behavioral control and intention, we hypothesize the following:

H1c. *Environmental perceived behavioral control positively influences the environmental intention of nascent entrepreneurs.*

2.2. Extended hypotheses of the TPB model and environmental intention

To extend the above baseline TPB, we integrate two complementary predictors to explain environmental intention, namely business growth intention and entrepreneurial motivations. Based on a literature stream on the simultaneous existence of economic and environmental goals (Horne and Fichter, 2022), balancing economic goals with sustainable

development is an increasing source of conflict pointed out by mainstream research (Edwards, 2021; Thelken and de Jong, 2020; Font *et al*., 2016).

Ajzen (2020) asserts that the TPB model predicts behavior in a choice situation of competing goals and that it holds that individuals can choose the option that is associated with the strongest intention. However, the literature has less to say about the extent to which TPB can predict how nascent entrepreneurs are able to pursue business growth and environmental goals simultaneously and integrate them into their plans (Tounés, 2023). When individuals intend to attain goals that conflict with each other, evaluating their intention to achieve one goal but not evaluating intention associated with the other goal produces relatively low intention-behavior correlation (Ajzen and Dasgupta, 2015).

Venâncio and Pinto (2020) and Kirkwood and Walton (2010) point out that there is little knowledge about the extent to which, and under what conditions, entrepreneurs have the ability to achieve business growth and environmental goals in the same plan. The simultaneous existence of business growth and sustainable goals remains a poorly understood phenomenon (Horne and Fichter, 2022). More particularly, the existing literature seems to be divided on how entrepreneurs reach business growth simultaneously to environmental intention and behavior (Muñoz and Cohen, 2018). Indeed , there is considerable debate about whether green growth is sustainable. The viewpoints on this question are often radical and a source of conflict (Lux et al., 2023).

On the one hand, several authors have pointed out the wide tension between economic and sustainable logics in organizations because entrepreneurial growth leads to adverse environmental degradation (Font *et al*., 2016; York *et al*., 2016; Harlin and Berglund, 2021). Conflicts and difficulties between environmental commitment and business growth goals inevitably arise when nascent entrepreneurs take advantage of an entrepreneurial opportunity. Furthermore, proponents of degrowth, a prominent concept regarding the role of economic

growth in achieving environmental sustainability, question the viability of ongoing growth. They argue that the sustainable use of natural resources necessitates more fundamental changes, (Sandberg et al., 2019; Lehmann et al., 2022). Such perspectives may diminish the intention of nascent entrepreneurs toward pursuing sustainable ventures (Thelken and de Jong, 2020).

On the other hand, many scholars have asserted that entrepreneurs need to balance business growth and environmental goals (York *et al*., 2016; DiVito and Bohnsack, 2017). For example, Muñoz and Cohen (2018) defend an integrated conception of entrepreneurial targets and environmental impact and invite us to rethink the current normative frameworks in the fields of entrepreneurship and environment. One important goal of environmental entrepreneurship is thus to examine entrepreneurial activities that are not about pursuing economic and environmental objectives independently but combining their components in a systemic manner (Patzelt and Shepherd, 2011). This aligns with the green growth field, which posits that economic growth and environmental preservation are compatible goals. It argues that environmental sustainability can be achieved by decoupling natural resources from growth (Lehmann et al., 20022; Lux et al., 2023).

In the field of nascent entrepreneurship, business growth intention does not necessarily conflict with the environmental orientation of nascent entrepreneurs. This is of great importance for a founder of a firm who can maintain environmental commitments while operating a successful business (Venâncio and Pinto, 2020). In view of the theoretical debates above, we extend the baseline predictions of the TPB model by exploring the completing role of business growth in the formation of environmental intention. Therefore, we formulate the following hypothesis:

H2. *When integrated in an extended TPB model, business growth intention positively influences the environmental intention of nascent entrepreneurs.*

Motivations may be a strong predictor that transform a latent intention into real action (Carsrud and Brännback, 2011). They are hypothesized as being the most proximal determinant of intention. In the field of environment, the leading motivations of the goal determine the resulting intention to act. More specifically, initial motivations of nascent entrepreneurs have consequences for the management of the futur ventures (Galindo-Martín *et al*., 2021) and shape the ecological structure of the latter (Santini, 2017).

Entrepreneurial motivations are particularly discriminating for studying environmental intention (Le Loarne Lemaire *et al*., 2022). More precisely, Santini (2017) and Kirkwood and Walton (2010) claim that classification distinguishing push and pull motivations is highly adopted in ecopreneurial studies. Venâncio and Pinto (2020) assert that Reynolds *et al*.'s (2002) entrepreneurial motivations dichotomy influences entrepreneurs to create sustainable businesses. Indeed, the so-called necessity and opportunity motivations impact differently environmental opportunity recognition (Thelken and de Jong, 2020).

Necessity entrepreneurs are driven by survival-oriented motivations; starting a business is motivated by the fact that employment possibilities are either unavailable or insufficient (He *et al*., 2020). Opportunity entrepreneurs refer to individuals who are attracted to entrepreneurship by exploiting opportunity (Reynolds *et al.*, 2005). They are motivated by success and growth (Carsrud and Brännback, 2011; He *et al*., 2020).

Because these dichotomic entrepreneurial motivations can lead to differing goals in terms of job creation, company size, and goals (Block *et al*., 2015), they are likely to impact environmental intention differently (Venâncio and Pinto, 2020). Some drivers for engaging in an environmentally sustainable business are opportunity based, while others are necessity based. Opportunity-based entrepreneurs perceive an opportunity or market gap consisting of creating environmental value; necessity-based entrepreneurs are mostly motivated by earning money to support their families (Le Loarne *et al*., 2022).

In essence, opportunity motivations seem to drive environmental concerns among entrepreneurs (DiVito and Bohnsack, 2017; Muñoz and Cohen, 2018). Opportunity-based entrepreneurship has a positive relationship with environmental development (He *et al*., 2020) and is positively associated with the exploitation of sustainable business (Venâncio and Pinto, 2020). This can be argued by the fact that opportunity entrepreneurs are more oriented to the long-term and positive impact of their activities. In comparison to opportunity entrepreneurs, necessity entrepreneurs make a higher contribution to environment pollution; they are less oriented to environmental protection (Venâncio and Pinto, 2020; Kirkwood and Walton, 2010) because they have less time and fewer resources in terms of capital and knowledge. Moreover, necessity-based entrepreneurs are more concerned with daily economic survival than with longer-term issues (Reynolds *et al*., 2002).

In light of the theoretical evidence provided by entrepreneurship and the environmental entrepreneurship literature, we support that necessity motivations of nascent entrepreneurs negatively affect their environmental intention. In contrast, opportunity motivations may have a positive effect. Thus, we hypothesize:

> **H3.** *When integrated in the extended the TPB model, opportunity motivations, as opposed to necessity motivations, positively influence the environmental intention of nascent entrepreneurs.*

3. Research methodology

3.1. Data collection and sample representativeness

Since the 1980s, significant research has been conducted to identify predictive factors that illuminate environmental intention, thereby maturing this concept. The robustness of statistical associations between environmental intention and its antecedents has been explored

through positivist and quantitative approaches facilitating the development of measurement models for environmental intention (Mayerl and Best, 2019; Yang *et al*., 2021).

This study is the continuation of a global project on environmental entrepreneurship in France. We are interested in a population in the phase of setting up projects, namely nascent entrepreneurs, because they play an important role as future sustainable agents in the stage of developing new business (Ploum *et al*., 2018). These individuals are actively engaged in concrete activities regarded as indicative of formally setting up a new business (Thompson, 2009).

According to Hoogendoorn *et al*. (2019), entrepreneurs are categorized into regular and sustainable entrepreneurs. The former indicate entrepreneurs with traditional profit-seeking opportunities, whereas the latter indicate entrepreneurs who serve both self-interests and collective interests by addressing unmet social and environmental needs. In this research, the individuals targeted are regular nascent entrepreneurs and not specifically environmental nascent entrepreneurs. Any nascent entrepreneur, even if not explicitly aiming to launch a new product or service related to environmental issues, can address environmental concerns through the implementation of sustainable practices in the operational management. In addition, while social issues are gaining increasing importance in the field of sustainable entrepreneurship (Harlin and Berglund, 2021), our research does not focus on organizational challenges related to social conditions of employees, organizational structures, and social relationships. Instead, our interest is focused on investigating the environmental dimension of sustainable entrepreneurship because it is a major issue addressed in global agendas, notably that of the *Conferences Of Parties* on climate change at Dubai - COP 28 (United Nations, 2023). This choice is also motivated by the need to understand the difficulties of French entrepreneurs in integrating environmental issues into their plans (BPI, 2020).

We collected data through a survey carried out by the French Permanent Observatory of Nascent Entrepreneurs (OPPP). Belonging to the French Chamber of Commerce and Industry (CCI France), the role of this observatory is to improve the quality of entrepreneurial support provided by local CCIs for nascent entrepreneurs. To ensure an effective understanding of the survey, we describe at the beginning of the questionnaire the objective of the research, while providing a detailed explanation of the environmental measures likely to be implemented in a new company. Identified for their ability to reduce the polluting impact on nature, these environmental measures concern energy efficiency, waste reduction and management, harmful emissions to nature, consumption of water, energy and materials, design or production processes, and finally the choice of suppliers.

We extended invitations to 656 nascent entrepreneurs, listed in January 2023 in the observatory database, requesting their participation in an online questionnaire. A total of 193 nascent entrepreneurs responded to our survey via an internet link during the first quarter of 2023, yielding a response rate of 29.4%. A self-completion approach reduces the social desirability bias (Zikmund *et al*., 2013). Moreover, an online data survey offers faster, efficient, and better quality of responses as compared to an offline survey (Schillewaert and Meulemeester, 2005). Table 1 summarizes the socio-demographic characteristics of the respondents, as well as the activity domains of their intended business.

--- Place Table 1 about here ----

3.2. Validity and reliability of measures

To ensure the robustness of the study measures, we invited seven academics from the field of sustainable development and four startup experts to evaluate the questionnaire and provide feedback for potential modifications. Their insights led to minor corrections aimed at enhancing content validity. Subsequently, in the development of the final questionnaire, we conducted a trial with 15 business students majoring in entrepreneurship. During this phase,

certain survey items were reworded to bolster their face validity. All items for each measure in the present study utilize pre-validated scales for assessing various constructs through a Likert scale, as outlined by Tounés (2023). Using such scales reduces statistical problems (Fornell and Larcker, 1981).

To assess the content validity and reliability of the measures, analyses were performed with SPSS 27.0 and AMOS 27. Content validity was assessed through component rotated varimax factor analysis and the maximum likelihood method. The expected value for the factor loadings was above 0.5 (Hair *et al*., 2010). To estimate the reliability of the constructs, we performed Cronbach's alpha test; the items were repeatedly screened to improve reliability until item removal no longer notably enhanced the overall reliability of the construct. According to DeVellis (1991), test scores of an indicator between 0.65 and 0.70 are minimally acceptable, between 0.70 and 0.80 are respectable, and between 0.80 and 0.90 are very good.

For internal consistency, Cronbach's alpha showed good scores for all measures of the study ranged between 0.69 and 0.88. To optimize construct reliability and the measurement variables, we assessed the composite reliability of the constructs. The values of composite reliability ranged from 0.63 to 0.90, which shows that all value exceeded the recommended level of 0.6 and higher (Bagozzi and Yi, 1988). Thus, the measures showed adequate reliability.

3.3. Measures

All of the measures and their items are presented in Appendix A. Table 2 presents an overview of the items and reliability scores of the dependent and independent variables.

Environmental intention (EI). To measure the main dependent variable, environmental intention, we adopted Tounés's scale (2023). Inspired by Kautonen *et al*. (2013), this scale was validated among more than 400 nascent entrepreneurs. Measured through three items related significantly to the same component, EI presents good reliability (Cronbach's alpha = 0.88).

Environmental attitude (EA). The New Ecological Paradigm (NEP) construct of Dunlap *et al*. (2000) is widely used to operationalize attitudes in current behavioral research on sustainability and environmental protection, in particular within the TPB (Gansser and Reich, 2022). Thus, to measure EA, we adopted the NEP scale in the context of nascent entrepreneurship. The reliability of items was acceptable (Cronbach's alpha = 0.75).

Environmental injunctive norms (EIN). Drawing on the stakeholders' literature and environmental research, we identified public authorities (government and local authorities), public environmental organizations, and civil associations as three salient reference groups that approve or disapprove the implementation of environmental practices. Contextualized in nascent entrepreneurship, the respondents were asked to what extent these three stakeholders influenced them to undertake environmental measures or policies when starting their business. The reliability of the remaining five items was acceptable (Cronbach's alpha = 0.69).

Environmental perceived behavioral control (EPBC). To measure EPBC, we followed the example of Tounés (2023) who developed a measure made of four items. The reliability of the scale was good (Cronbach's alpha = 0.83).

Business growth intention (BGI). Business growth can be measured as profit maximization, shareholder orientation, sales, total assets, employment, expansion into new markets, and value added (Naldi and Davidsson, 2014; Miroshnychenko *et al*., 2021). In the field of nascent entrepreneurship, research suggests that employment and sales are the dominant measures and can be combined to measure business growth intention (Byrne *et al*., 2018; Lukeš *et al*., 2019).

Because entrepreneurial growth is a heterogeneous phenomenon among entrepreneurs (Bort and Totterman, 2023), it is particularly important to focus on more specific forms of growth rather than on an undifferentiated notion (Naldi and Davidsson, 2014). According to Autio and Acs (2010), growth creation requires substantial investments of resources; nascent

entrepreneurs need to decide how much resources they should invest into growing the venture. Thus, to have a more inclusive construct of business growth intention, we adopted the validate scale of Tounés (2023) in which job creation and sales items are complemented by an item related to investment. The reliability of the three items was good (Cronbach's alpha = 0.75).

Entrepreneurial motivations (NECESSIT and OPPORT). Necessity and opportunity motivations were each operationalized through one clear item. The first item measured necessity motivations and the second operationalized opportunity motivations. Although psychometric scales are often used, measuring variables with a single item is not uncommon if it is short and unambiguous (Devece *et al*., 2016).

We controlled for the effects of several factors outside the conceptual model that could potentially contribute to the environmental intentions of nascent entrepreneurs. First, in terms of *gender*, there is empirical evidence that females are more likely to be committed to environmental issues compared to their male counterparts (Ul-Mulk and Reynaud, 2019). Second, Ul-Mulk and Reynaud (2019) note the consistent effects of *age* on environmental intention and behavior. Third, in terms of *education*, it seems that more educated individuals are more motivated to commit to environmentally responsible behavior because they are more aware of the potential damage (Font *et al*., 2016; Jain *et al*., 2020). A dummy variable was created to measure the respondent's level of education: bachelor's degrees and below (coded 0) or master's level education and above (coded 1). Fourth, according to previous studies, environmental intentions and behavior vary across *sectors of activity*. Dummy variables were created to capture variation across: (i) trade, hospitality and catering; (ii) services; (iii) new technologies; (iv) construction and public works and (v) industry. The industry sector served as the reference category for each of the five dummy variables.

--- Place Table 2 about here ----

3.4. Common method variance, validity and reliability assessment

Our data collected from the same respondents using self-reported measures were criticized (Meade *et al*., 2007; Joensuu-Salo *et al*., 2022) because common method deviation could arise (Podsakoff *et al*., 2012). To address this bias, we conducted Harman's single-factor test without rotation to assess the level of the spurious covariance among the variables. We included all the survey items in exploratory analysis and extracted eigenvalues equal to 1. The results of the exploratory factor analysis for all of the items indicated the existence of 27 factors. The first factor explained 18.60% of the total variance. This result accounted for less 50% indicating that the deviation of homologous methods was not serious. Thus, common method bias did not seem to be a major threat to validity.

Furthermore, the correlation coefficients between the variables (see Table 3) showed that the maximum value coefficient was 0.582, which is less than 0.7. In conclusion, the common method deviation of the data used in this research was acceptable and would not have a serious impact on the study results.

--- Place Table 3 about here ----

4. Results

The analyses are presented in two steps. First, we estimated the fit indices of the different analytical models; second, we performed the adequate analyzes to test hypotheses. To this end, we ran a stepwise multiple regression to select the independent variables. With this method, the variables were examined at each stage to see whether they were included in the model. Regression analysis is suitable for testing a known theory with additional explaining variables (Hair et al., 2016). Moreover, this statistical analysis is recommended as being the most appropriate and is particularly sensitive to multicollinearity. Table 4 presents the results of the analytical models.

To evaluate the measurement of the models, we estimated the fit indices of the different analytical models. In Table 4, model 1 (M1) includes the control variables; model 2 (M2) adds the main independent variables of the baseline TPB model; model 3 (M3) adds the extended factors: business growth intention (BGI), necessity motivation (NECESS), and opportunity motivation (OPPORT).

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As shown in Table 4, the control variables model (M1) explained 1.8% of the variance in environmental intentions (Adj R^2=.018). When the baseline TPB variables were added in M2, the explained variance increased to 40.5%, and the change in the F statistic was significant ($\Delta F = 31.503$; $p<.001$). Finally, when the extended factors (BGI, NECESSIT, and OPPORT) were added in M3, the explained variance increased to 49.2%, and the change in the F statistic was significant ($\Delta F = 5.717$; $p<.001$). Therefore, we concluded that the model fit obtained through multiple stepwise regression was satisfactory. The explanatory power of the whole extended TPB model (M3) was robust and showed a statistically significant increase compared to model 1 and model 2.

4.2. Hypotheses testing

The results of the multiple regressions in Table 4 were also used to test the hypotheses and analyze the contribution and the significance of every independent variable to the overall explained variance in each model. This was assessed using fully standardized coefficients and their associated t-tests.

In regards hypothesis H1a, the examination of Beta and t-values in model 2 (M2) and model 3 (M3) indicated that environmental attitudes positively and significantly influence environmental intention (M2: β=.219; t=3.045, $p<.01$; M3: β=.287; t=4.066, $p<.001$). Hypothesis H1a was therefore supported. Relative to hypothesis H1b, model 2 indicated that environmental injunctive norms of institutional and civil actors (public authorities,

environmental organizations, and civil associations) significantly and positively influence environmental intention (M2: β=.151; t=2.277, p<.05). Therefore, H1b was supported. However, when the independent variables of the extended model were integrated in the regression, we failed to observe statistically significant support for the injunctive norms (M3: β=.119; t=1,714, n.s).

The last core factor of TPB was consistent with hypothesis H1c and showed that environmental perceived behavior control has positive and significant impact on the environmental intention of French nascent entrepreneurs. Indeed, the scores of the coefficients Beta and t of the environmental perceived behavioral control confirmed hypothesis H1c (M2: β=.512; t=7.186; p<.001; M3: β=.446; t=6.375; p<.001).

Considering the effects of extended hypotheses on the environmental intention of nascent entrepreneurs, the results in model M3 indicated that business growth intention has a significant and positive relationship with environmental intentions (β=.258; t=3.930; p<.01). Thus, hypothesis H2 was supported. The tests of the last hypothesis showed that entrepreneurial motivations have mixed influence on environmental intention of French nascent entrepreneurs. While entrepreneurial necessity motivation influences negatively and significantly environmental intention (M3: β=-.135; t=-1.957; p<.05), we failed to observe statistically significant support for the influence of opportunity motivation on environmental intention (β=-.057; t=-.840; p. n.s.). Thus, hypothesis H3 was partially supported.

Finally, the results of other variables that might explain environmental intention of French nascent entrepreneurs indicated that two controls have significant influence (M1). The domains of services and new technologies seem to negatively and significantly predict nascent entrepreneurs' behavioral intention to implement environmental practices (respectively M1: β=-.484; t=-2.498; p<.05; β=-.304; t=-2.111; p<.05).

5. Discussion

The objective of our study was to assess to which extent business growth intention and entrepreneurial motivations extend the TPB model in explaining environmental intention of French nascent entrepreneurs. While few empirical studies have tested extended TPB models (Ahmad *et al*., 2020; Jain *et al*., 2020) and not focused directly on the early stages of new business creation (Kirkwood and Walton, 2010; Yi, 2021; Tounés, 2023), our tests found such a model to be particularly robust in predicting environmental intention of French nascent entrepreneurs. As such, our study supports the parsimoniousness of the proposed extended TPB model in explaining the environmental intention.

Indeed, the extended TPB model explains 49.2% of the environmental intentions of French nascent entrepreneurs, while the original model explains 40.5%. This level of explained variance is higher than that observed in previous studies on extended TPB models (e.g., 17.3% in Ahmad *et al*., 2020; 41.7% in Lee *et al*., 2018; 44,8% in Joensuu-Salo *et al*., 2022). Moreover, the variation of the coefficient of determination of the linear regression between extended and original models of our research is remarkable. The variation of adjusted R^2 = (+8.7%) is higher to that observed in recent studies in the field of environment (-0.3% in Joensuu-Salo *et al*., 2022; 2.3% in Lee *et al*., 2018).

In relation to the original TPB model, an important result evokes the relevance of environmental perceived behavior control in the field of the environment. This implies that the more nascent entrepreneurs perceive controlling and mastering the abilities and the ease of implementing environmental practices, the more their environmental intention is higher. Even if this result is contrary to Shepherd et al.'s (2013), our study is consistent with previous research in the fields of sustainable development showing the predominance of the perceived behavior control in explaining environmental and sustainable intention (Gansser and Reich, 2022; Hua and Dong, 2022; Tounés, 2023). In the specific domain of social entrepreneurship,

the meta-analysis of Zaremohzzabieh et al. (2019) shows that perceived behavior control is also prevailing. Indeed, this variable is the most relevant predictor of social intention within the framework of TPB.

The significant effect of environmental attitudes in explaining environmental intention comes second. This is an interesting finding because changing sustainable attitudes is one of the most important requirements for sustainable behavioral (Ul-Mulk and Reynaud, 2019). This result shows that French nascent entrepreneurs who have positive environmental attitudes in favor of nature seem to want to implement environmentally friendly practices. This finding corroborates that of Ul-Mulk and Reynaud's (2019) and Gansser and Reich's (2022), and more importantly, that of Mayerl and Best's (2019) tested in thirty developed and developing countries.

Injunctive norms relative to public authorities, environmental associations, and organizations seem to have a significant relationship with environmental intention. Setting up environmental and sustainable actions means that nascent entrepreneurs aim for legitimization and reputation as a way of gaining social capital (Yi, 2021). The role of institutional and civil actors in the formation of environmental intention has been earlier observed (e.g., Jain *et al*., 2020; Yi, 2021); their support promotes entrepreneurs' behavior in line with dominant social norms, such as environmental protection. This significant finding highlights the importance of adherence to a government's regulatory framework in shaping the environmental intentions of nascent entrepreneurs (Jain *et al*., 2020).

However, the influence of injunctive norms to predict environmental intention becomes insignificant when the extended factors are integrated in the whole model. Furthermore, injunctive norms are the weakest predictor of environmental intention in the TPB original model; this result is confirmed in individualistic cultures (Joensuu-Salo *et al*., 2022). Moreover, in the domain of social entrepreneurship, we remark that the predictive power of social norms

on social intention is the weakest in different countries around the world (Zaremohzzabieh *et al*. (2019).

Regarding the extended TPB model, our study points out the big debate on whether the relationship between sustainability efforts and business growth are a competing goal within environmental issues. The findings of our survey would suggest that it is possible for nascent entrepreneurs to plan the simultaneous pursuit of business growth and environmental goals. This result aligns with Font *et al*. (2016) who advocate that business growth and financial performance success seem to drive environmental and sustainable goals of owner-managers. This result is also supported by social entrepreneurs who adeptly balance social and financial goals, considering subjective interactions with stakeholders (Argiolas *et al*., 2024). Thus, entrepreneurial action can be both sustainable and productive, fostering genuine growth (McMullen, 2022).

However, the pursuit of a balance between economic growth and environmental impact control warrants caution. While launching a business often emphasizes growth, it's essential to recognize that green growth may not be inherently beneficial, as it merely minimizes environmental degradation rather than promoting preservation. (Lux et al., 2023). Mainstream research suggests that relying solely on green growth is unlikely to halt environmental degradation. Although it remains a relatively marginal viewpoint in academic and policy discussions, degrowth emerges as an alternative approach for entrepreneurs seeking environmental sustainability (Sandberg et al., 2019). This perspective calls for entrepreneurs to reduce natural resource consumption and advocates for redefining human well-being by lowering consumption levels.

A nuanced analysis of entrepreneurial motivations to engage with sustainability is needed. It seems that entrepreneurial motivations have either no influence or negative influence on environmental intention of French nascent entrepreneurs. The fact that opportunity

motivation does not seem to drive environmental intention is somewhat surprising compared to earlier findings (e.g., He *et al*., 2020; Muñoz and Cohen, 2018). At the same time, we have to be cautious with this because the recognition of sustainable development opportunities is a complex process (Patzelt and Shepherd, 2011) that depends on the owner's lifestyle (Font *et al*., 2016). Identifying green opportunity does not happen right from the start, but it emerges through a longitudinal process (Le Loarne Lemaire *et al*., 2022).

More importantly, the negative impact of necessity motivations on environmental intention is not a surprise, as this has been observed in prior studies (Kirkwood and Walton, 2010). A more in-depth debate on the role of entrepreneurial motivations suggests that necessity motivations conflict with long-term goals. Necessity-driven nascent entrepreneurs are focused on short-term survival issues. As such, the economic improvements of the undertaken sustainability actions are perceived by entrepreneurs few years later (Font *et al*., 2016). When focused on survival, necessity entrepreneurs ignore opportunities with a longer payback period, because they need to earn money immediately to support themselves and their families (Carsrud and Brännback, 2011).

6. Conclusion and implications for future research

Given the importance of pro-environmental behavior in the under researched context of nascent entrepreneurship (York *et al*., 2016), our empirical results have important implications for both academia and practitioners. Without clear guidance in the environmental and entrepreneurial literature, the main contribution of this research enhances our existing knowledge by conceptualizing an extended TPB framework to predict environmental intention in the context of nascent entrepreneurship. The baseline results support widely held beliefs regarding the importance of the three core predictors of intention in the baseline TPB model (e.g., Gansser and Reich, 2022; Jain *et al*., 2020; Thelken and de Jong, 2020).

Human behavior cannot be captured by a uniform model (Jain *et al*., 2020), therefore we improved the TPB model to enrich the existent literature by considering competing goals - i.e., business growth and necessity motivations - as important predictors of environmental intention. Compared to the original model, we found such a model to be particularly robust and more powerful in explaining environmental intention of nascent entrepreneurs. Our extended model successfully demonstrates that business growth is not in conflict with environmental intention. Moreover, the importance of entrepreneurial motivations demonstrates that it is time to move beyond the baseline models to identify significant factors explaining environmental intention, especially in relation to nascent entrepreneurship.

From a practical viewpoint, elucidating the antecedents of intention among nascent entrepreneurs to implement environmental practices is a crucial issue for policymakers, green businesses, educators, and entrepreneurial ecosystems interested in enhancing pro-environmental behaviors. A large lag between the causes affecting behavior and the realization of actual behavior implies that sustainable practices require a sustained awareness campaign and an effort to long-term behavioral changes towards an environmental lifestyle.

These efforts imply that policy makers need to have a more thorough understanding of entrepreneurial motivations so as to provide a better platform to encourage environmental behavior changes. They should profile the nascent entrepreneurial support market according to the necessity/opportunity motivations framework of nascent entrepreneurs to set policies and appropriate environmental support for new business creations. It would be important to sensitize nascent necessity-entrepreneurs to the likely negative effects of their future business on environment, especially during this risky period of economic recession when necessity-driven entrepreneurs are even more numerous and less oriented to business growth than during an economic growth period (Devece *et al*., 2016; Galindo-Martín *et al*., 2021). Moreover, the fact that opportunity entrepreneurs will likely develop projects that do not consider

environmental aspects requires support policies to convince them about the business performance benefits on environmental issues.

Assuming that a profit maximization view of the world is unhelpful for understanding owner-managers (Font *et al*., 2016), the observation that nascent entrepreneurs can pursue both business growth goals and environmental intentions simultaneously ought to be of great interest to entrepreneurship related policies. Thus, the recommendation to set-up entrepreneurial support combining both environmental and business growth ambitions in the business plans and business models at the beginning of the business startup processes. Indeed, to transform value toward more sustainability should be complemented by business model innovations to decrease a firm's negative impact on the natural environment and incorporate sustainability as an integral part of the value proposition.

The new roles for different actors of the entrepreneurial ecosystems regarding new entrants in the field of sustainable entrepreneurship also suggest that any training and support related to entrepreneurship should emphasize developing sustainable competencies to reinforce environmental behavior control and shape the entrepreneurial sustainable careers (Joensuu-Salo *et al*., 2022) of nascent entrepreneurs.

While this research has important implications, we recommend considering its results with caution and propose research avenues. While we believe it is important to investigate how individuals form environmental intention even before they succeed in creating new businesses, the heterogeneity of entrepreneurs makes some people, but not others, go on in fact to develop entrepreneurial intention. The so-called "intention-action" gap and how intention leads to behavior is not yet adequately understood (Carsrud and Brännback, 2011; Gansser and Reich, 2022), especially in an environmental and sustainable entrepreneurship context (Hua and Dong, 2022; Jain *et al*., 2020; Yi, 2021). That is, while it is important to understand how nascent entrepreneurs develop environmental intention, this does not mean that all their new businesses

will adopt sustainable practices. Future studies building on our contribution could address the potential gap between environmental intention and the actual adoption of pro-environmental practices in newly started businesses. To this end, the time gap between intentions and actual behavior (Ajzen, 2020; Ajzen and Dasgupta, 2015) suggests adopting a longitudinal design study and following up on the progress of nascent entrepreneurs. It would be interesting to analyze if they succeed in implementing pro-environmental practices and how they manage a persistent dual entrepreneurial and sustainable orientation (DiVito and Bohnsack, 2017; Tounés, 2023), especially under financial pressures and stakeholders' concerns.

Since the promotion of environmental sustainability in startup businesses is a promising approach, studying how an entrepreneurial ecosystem can be adapted to be more "sustainable" and contribute more to the environmental behaviors of new entrepreneurs is an important theme in the fields of sustainable entrepreneurship. Finally, proposing more complex conceptual logics, such as moderating and mediating cognitive mechanisms leading to the formation of environmental intention (Joensuu-Salo et al., 2022) in the context of nascent entrepreneurship is needed to examine how TPB models provide more empirical support.

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Notes

1. Abbreviations: CCI France - French Chamber of Commerce and Industry; NEP - New Ecological Paradigm; OPPP - French Permanent Observatory of Nascent Entrepreneurs; TPB - Theory of planned behavior.

Appendix A - Main variables and their items.

A) Environmental Intention (EI) - Please indicate your intention for each of the following statements (ranging from "strongly disagree" =1 to "strongly agree" = 6).

1. I plan to undertake environmental measures or policies when I will start my business (EI1).
2. I intend to undertake environmental measures or policies when I will start my business (EI2).
3. I will try to undertake environmental measures or policies when I will start my business (EI3).

B) Environmental Attitudes (EA) - Please indicate your attitude for each of the following statements (ranging from "strongly disagree" =1 to "strongly agree" = 6).

1. When humans interfere with nature, it often produces disastrous consequences (EA1).
2. Humans are severely abusing the environment (EA2).
3. Despite our special abilities, humans are still subject to the laws of nature (EA3).
4. The balance of nature is very delicate and easily upset (EA3).
5. If things continue on their present course, we will soon experience a major ecological catastrophe (EA4).

C) Environmental Injunctive Norms (EIN) - *To what extent could the following political and civil groups influence you to undertake environmental measures or policies when starting your business*? Please indicate your perceptions for each of the following statements (ranging from "strongly disagree" =1 to "strongly agree" = 6)

1. Public authorities (government, local authorities) (EIN1)
2. Public environmental organizations (EIN2)
3. Civil associations (EIN3)

D) Environmental Perceived Behavioral Control (EPBC) - Please indicate your perception for each of the following statements (ranging from "strongly disagree" =1 to "strongly agree" = 6)

1. If I want to, I can easily implement environmental measures or practices in favor of the environment when I start my business (EPBC1).
2. If I undertake environmental measures or policies when I start my business, I will be able to control the situation to a great degree (EPBC2).
3. It will be easy for me to undertake environmental measures or policies when I start my business (EPBC3).
4. If I want to undertake environmental measures or policies when I start my business, no external factor independent of myself will hinder me from taking such measures or policies (EPBC4).

E) Business growth intention - BGI - In terms of growth perspectives, please indicate your intention for each of the following statements describing the growth goals of your future venture?" (ranging from "strongly disagree" =1 to "strongly agree" = 6).

1. Developing your future business in terms of employment (BGI1).
2. Developing your future business in terms of turnover (BGI2).
3. Developing your future business in terms of investment (BGI3).

F) Entrepreneurial motivation "*What are your principal motivations to launch your venture*?" - Please indicate your motivations for each of the following statements (ranging from "strongly disagree" =1 to "strongly agree" = 6).

1. You want to get out of unemployment and improve your economic and social status (NECESSIT).
2. You have an opportunity that you want to exploit (OPPORT).

Figure 1 - The extended TBP model of environmental intention of nascent entrepreneurs

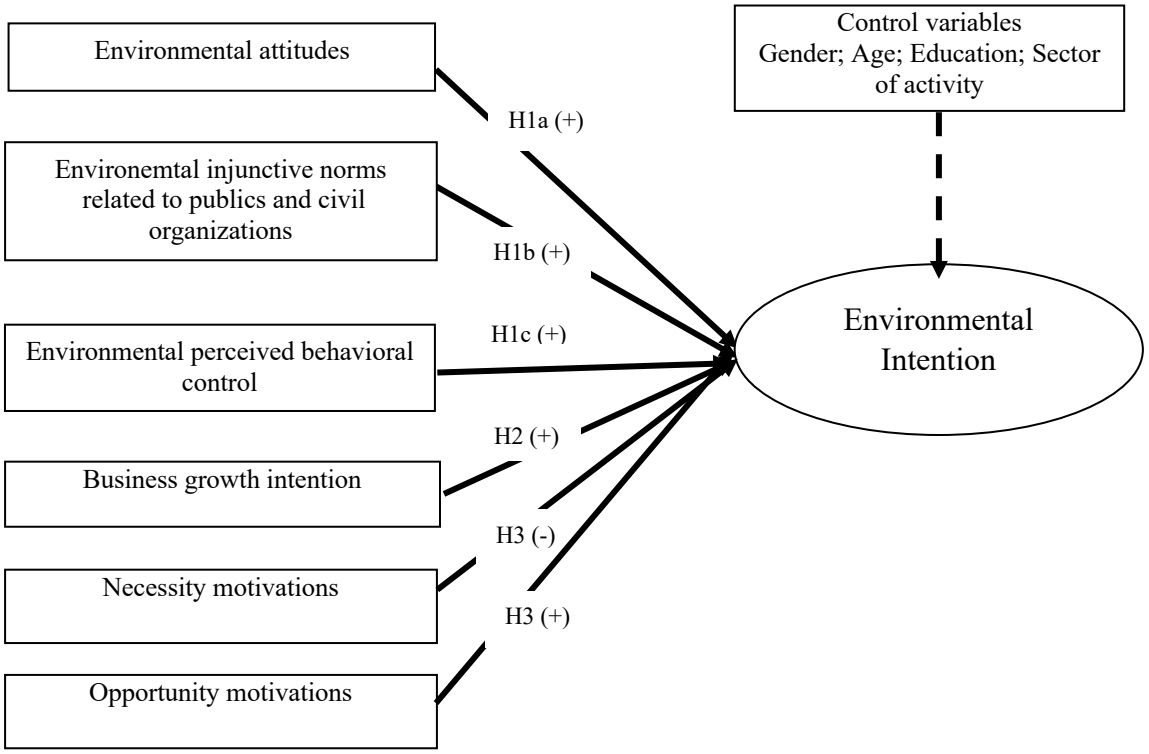

Table 1 - Sociodemographic characteristics of the nascent entrepreneurs

Items	Classification	Sample (n = 193)	
		No of respondents	%
Gender	Male	99	51.2
	Female	94	48.7
Age	Mean	35.7	
	Standard Deviation	10.47	
Education level	Technical high school	15	7.8
	High school	2	1.0
	Baccalaureate	33	17.1
	Bachelor's 2, +3	76	39.4
	Master's I + II	64	33.2
	Ph.D	3	1.5
Sector of activity	Services	65	33.7
	Trade, hospitality and catering	88	45.6
	New technologies	22	11.4
	Construction and public works	10	5.2
	Industry	8	4.1

Table 2 – Overview of the dependent, independents and control variables

Constructs	**Items**	**Reliability score (Cronbach's alpha coefficient**	**Composite reliability coefficient (C.R)**
Environmental intention (EI)	EI1 EI2 EI3	.88	.90
Environmental attitudes (EA)	EA1 EA2 EA3 EA4 EA5	.75	.75 .75
Environmental Injunctive Norms (EIN)	EIN1 EIN2 EIN3	.69	
Environmental Perceived Behavior Control (EPBC)	EPBC1 EPBC2 EPBC3 EPBC4	.83	.63
Business Growth intention (BG)	BG1 BG2 BG3	.75	.86
Entrepreneurial motivations			
Necessity motivations (NECESSIT)	NECESSIT		
Opportunity motivations (OPPORT)	OPPORT		

Table 3 - Correlation and descriptive statistics of the variables

	Mean	SD	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Environmental intention (1)	4.206	1.482	1														
Gender (2)	0.490	0.501	-.050*	1													
Age (3)	35.70	10.474	-.041	.118	1												
Education (4)	.36	.481	-.118	-.014	.115	1											
Trade, Hospitality and Catering (5)	.47	.500	.111	-.183**	-.013	-.100	1										
Services (6)	.34	.473	-.141*	-.088	.035	-.059	-.667***	1									
Construction and Public Works (7)	.05	.222	-.001	.144*	.067	.144*	-.126	-.165*	1								
Industry (8)	.04	.199	.170*	.055	-.083	.117	-.195**	-.147*	-.048	1							
New technologie (9)	.11	.318	-.043	.255***	-.041	.122	-.336***	-.254***	-.083	-.074	1						
Environmental attitudes (10)	5.097	.813	.415***	.055	-.102	-.024	.063	-.066	.110	.046	-.071	1					
Injunctive norms (11)	2.701	.058	.018	-.055	-.080	-.020	-.057	-.036	-.056	-.020	.093	-.228***	1				
Environmental perceived behavioral control (12)	4.006	.129	.582***	.013	.023	-.072	.005	-.034	.053	.125	-.078	.413***	-.106	1			
Business growth (13)	3.989	1.288	.256***	.132	-.098	-.107	.010	-.161*	-.034	.116	.193**	-.076	-.006	.164*	1		
Necessity motivations (14)	5.51	.978	.091	-.013	-.095	-.194**	.207**	-.237***	-.026	.078	-.020	.102	-.152*	.046	.151*	1	
Opportunity motivaions (15)	3.01	2.141	-.073	.092	.057	-.140*	-.036	-.065	.054	-.037	-.054	.148*	-.327***	.080	.085	-142*	1

Notes: Standardized coefficients. *p < 0 :05 ; **p < 0 :01 ; ***p < 0 :001.
N= 193

Table 4 - Regression results

Variables	**Model 1 (M1)**		**Model 2 (M2)**		**Model 3 (M3)**	
	Beta	t-stat	Beta	t-stat	Beta	t-stat
Controls						
GENDER	-.064	.738	-.071	-1.064	-.078	-1.204
AGE	-.012	-.148	.013	.194	.049	.771
EDUC	-.125	-1.486	-.077	-1.174	-.193	-1.309
ACTIVITY						
SERVIC	**-.484***	**-2.498***	-.248	-1.614	-.199	-1.339
THC	-.378	-1.892	-.145	-.923	-.106	-.700
NT	**-.304***	**-2.111***	-.121	-1.059	-.131	-1.203
CPW	-.153	-1.497	-.135	-1.692	-.128	-1.681
Main variables						
EA			**.219****	**3.045****	**.287*****	**4.066*****
EIN			**.151***	**2.277***	.119	1.714
EPBC			**.512*****	**7.186*****	**.446*****	**6.375****
BG					**.258****	**3.930****
NECESSIT					**-.135***	**-1.957***
OPPORT					-.057	-.840
Model statistics:						
R^2	.065		.445		.519	
Adj. R^2	.018		.405		.492	
F	1.397		11.064***		10.702***	
F-change	1.397		31.503***		5.717***	

Standardized coefficients. *p <.05; **p < .01; *** p<.001