Master Thesis Strategy Economics

ENVIRONMENTAL ENTREPRENEURSHIP AND GROWTH ASPIRATIONS: THE MODERATING ROLE OF THE LEVEL OF ENTREPRENEURIAL ENGAGEMENT

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Abstract

Entrepreneurs differ in their aspirations regarding the growth of their business, and hence, in their potential contribution to the economy. This study examines how the goals entrepreneurs pursue to create environmental (relative to economic) value influence growth aspirations, and in addition how the level of entrepreneurial engagement affects this relationship. On the one hand, it is theorized that entrepreneurs who pursue goals to create environmental (relative to economic) value deviate in their ability to identify opportunities, and hence, may have higher growth aspirations. On the other hand, it is theorized that they may avoid the competition and trade-offs associated with growth, and deliberately keep growth restricted. In addition, it is reasoned that the diversity in entrepreneurial experience among entrepreneurs at different levels of the entrepreneurial engagement is likely to affect the association between the goal to create environmental (relative to economic) value and growth aspirations, such that the level of entrepreneurial engagement positively moderates this association both in case of a positive and a negative association. OLS regression analyses on 13,059 entrepreneurs in 50 countries show that those entrepreneurs motivated by a strong drive to create environmental (relative to economic) value do have higher growth aspirations. However, when limiting the analysis to nascent and established entrepreneurs this association is found to be negative, and the level of entrepreneurial engagement is found to negatively moderate this relationship. This study demonstrates the relevance of taking into account other-regarding motives when explaining entrepreneurial outcomes by showing that pursuing other-regarding motives has important implications for the growth aspirations of entrepreneurs.

Keywords: Self-regarding versus other-regarding motives; Growth aspirations; Environmental entrepreneurship; Level of entrepreneurial engagement; Global Entrepreneurship Monitor.

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1 Introduction

Entrepreneurship in general has long been considered a key factor in the success of national economies through economic growth (Wennekers & Thurik, 1999; Carree, & Thurik, 2010). However, in recent years it has become apparent that some forms of entrepreneurship are more important than others. Recent contributions to the literature on entrepreneurship theory have shown that only a small proportion of entrepreneurs is responsible for most of the new economic activity, namely high-growth entrepreneurs (Wong et al., 2005; Stam et al., 2012; Autio, 2009). High-growth entrepreneurs are defined as those who strive to grow their businesses significantly in terms of size (employment) and or output (sales) over a number of years (Terjesen et al., 2016). These high-growth firms play an important role in solving crucial policy issues such as the creation of new jobs and the reduction of unemployment (Audretsch, 2012). Therefore, it is recommended that policymakers focus on high-growth firms rather than on promoting the creation of new firms and the self-employed in general (Pages et al., 2003). Nevertheless, for policymakers to be able to stimulate these high-growth firms, it is important to understand why some entrepreneurs have the aspiration to grow, whereas others do not. Understanding the motivational heterogeneity among entrepreneurs can help to explain this variation in growth aspirations and, subsequently, their potential contribution to the economy.

A substantial amount of research has been conducted on the drivers of high-growth entrepreneurship, most of which focus on individual-level characteristics such as age, gender, education and entrepreneurial experience (Welter, 2001). Over the last decade, however, researchers have increasingly addressed motivation a key factor when explaining variation in entrepreneurial activity (Shane et al., 2003). Nevertheless, the fundamental assumption that dominates in this literature is that individuals are primarily driven by economic self-interest (Cohen et al., 2008). This fundamental assumption has crowded out other-regarding motives to act and has led to a lack of research on the consequences of pursuing these other-regarding motives. This is problematic because there is ample evidence that individuals are driven by both self- and other-regarding interest. (Heinz & Koessler, 2021). This study aims to diminish this research gap by focusing on both self- and other-regarding motives using the following research question: how do the goals entrepreneurs pursue to create environmental (relative

to economic) value influence growth aspirations, and how does this relationship vary across different levels of entrepreneurial engagement?

Thus, this study examines how the goals entrepreneurs pursue affect their aspiration towards growth, and how the level of entrepreneurial engagement affects this relationship. In particular, the organizational goals that are considered in this study are the goal to create environmental value (other-regarding) and the goal to create economic value (self-regarding) which environmental entrepreneurs both possess, however, they do so in varying degrees. Therefore, these goals are combined into a relative measure defining the entrepreneur's drive to create environmental value relative to the drive to create economic value. Where previous research has extensively studied the impact of self-regarding interests, this study explores the consequences for both types of motives by merging them into a combined measure.

Based on findings from previous literature this study provides theoretical arguments for why the goal to create environmental (relative to economic) value can positively, as well as negatively affect growth aspirations. First, it is argued that pursuing other-regarding motives encourages empathy for the viewpoints and needs of others (Meglino & Korsgaard, 2004; De Dreu & Nauta, 2009), providing access to a broader and more complete view of opportunities, stimulating the ability to identify and exploit opportunities (Shane & Venkataraman, 2000), and consequently, the aspiration to grow (Tominc & Rebernik, 2007; Verheul & van Mil, 2011; Davidsson, 1991). On the other hand, it is argued that entrepreneurs with high environmental performance levels do not have the intention to grow and deliberately keep growth restricted because they do not want to compromise on social and environmental standards associated with growth of their business (Lockie, 2016; Vickers & Lyon, 2014), and they are well aware that established businesses could easily outperform them in R&D and distribution, should they decide to enter the market niche (Vickers & Lyon, 2014; Hockerts & Wüstenhagen, 2010). In addition, the variety of entrepreneurial experience among entrepreneurs at different levels of the entrepreneurial process is likely to influence the association between the goal to create environmental (relative to economic) value and growth aspirations. It is reasoned that the level of entrepreneurial engagement plays a moderating role in the association between environmental value creation and growth aspirations, such that the positive association is stronger for established entrepreneurs than for early-stage entrepreneurs, while established entrepreneurs regardless of their entrepreneurial motivation, due to their experience in and knowledge of the market are more likely to identify promising business opportunities than

early-stage entrepreneurs (Wiklund & Shepherd, 2003; Ardichivili et al., 2003). Moreover, the level of entrepreneurial engagement is also expected to play a moderating role in the negative association between the goal to create environmental (relative to economic) value and growth aspirations, such that the negative association is stronger for established entrepreneurs than for early-stage entrepreneurs, while established entrepreneurs are more likely than early-stage entrepreneurs to have experienced economic pressures that are expected to enable them to dissolve the trade-offs between environmental and economic goals associated with business growth.

To test the hypotheses stated above, multiple OLS regression analysis are conducted using data from the world's largest and foremost attainment on entrepreneurial activity, the Global Entrepreneurship Monitor (GEM). In particular, individual-level data is used resulting from the Adult Population Survey (APS) of the 2009 round of the GEM. The analysis is performed based on an estimation sample of 13,059 entrepreneurs in 50 countries of which 4,688 are early-stage entrepreneurs and 8,371 are established entrepreneurs. The results of these analyses reveal that investigating the role of other-regarding motives is relevant when explaining the variability in growth aspirations among entrepreneurs. The results show that entrepreneurs who are strongly driven by the goal to create environmental (relative to economic) value have significantly higher growth aspirations; however, this association is not significantly different for established entrepreneurs compared to early-stage entrepreneurs. On the other hand, when conducting robustness analysis with a sample restricted to nascent and established entrepreneurs, growth aspirations are found to be lower for those entrepreneurs who place stronger emphasis on environmental (relative to economic) value creation goals, and the level of entrepreneurial engagement is indeed found to play a moderating role in this relationship. Nevertheless, the negative association between the goal to create environmental (relative to economic) value and growth aspirations is found to be weaker for established than for nascent entrepreneurs, instead of stronger as expected.

These findings contribute to research on entrepreneurship theory in the following way: First, this study extends research on entrepreneurship theory by addressing the consequences of pursuing other-regarding (environmental value creation) motives relative to pursuing self-regarding (economic value creation) motives. Sustainable, social and environmental forms of entrepreneurship are characterized by the pursuit of other-regarding interest, and they have in recent years increasingly been discussed in previous literature, however the consequences

of pursuing these other-regarding interests have been less well-researched. Those researchers who have examined the impact of other-regarding motives on entrepreneurial outcomes have focused on innovation (Hoogendoorn et al., 2020; Hechavarría & Welter, 2015), organizational challenges (Battilana & Lee, 2014), and start-up success (Renko et al., 2013), and the present study extends this range of literature by focusing on the consequences for growth. When nascent, new and established entrepreneurs are included in the analysis, the results indicate that entrepreneurs who pursue environmental (relative to economic) value creation goals have higher growth aspirations, while, when new entrepreneurs are excluded, the results reveal that entrepreneurs who pursue environmental (relative to economic) value creation goals have lower growth aspirations.

Secondly, the findings advance literature on the variability in growth aspirations among entrepreneurs operating at different levels of the entrepreneurial process, that until this point only considered the direct effect of the different levels of engagement (e.g., Davidsson, 1991; Reynolds et al., 2005; Levie & Autio, 2013; Verheul & Van Mil, 2011; Bager & Schøtt, 2004). The present study demonstrates how the level of entrepreneurial engagements may play a key role in reconstructing the growth aspirations of environmental entrepreneurs. In contrast to the predictions, the level of entrepreneurial engagement is found to negatively moderate the negative association between environmental (relative to economic) value creation goals and growth aspirations. These findings point to the importance of recognizing the various challenges and constraints faced at each level of the process so that policymakers through policies and regulations can provide these entrepreneurs with the necessary capabilities and resources to overcome them.

The remainder of this study is organized as follows: The following section discusses relevant previous research related to entrepreneurial motivation and growth aspirations and formulates hypotheses accordingly. Then, the data and research methodology used to test the hypotheses are explained. Thereafter, the empirical results are reported and the findings are interpreted. Finally, the main findings are summarized and discussed, and limitations are identified, followed by recommendations for further research.

2 Theoretical background and hypotheses

In this section, first the concept of high-growth entrepreneurship is introduced. Then, the determinants of high-growth entrepreneurship that have been reviewed in previous literature are discussed. Next, the concept of environmental entrepreneurship is introduced, followed by a description of its differences from other forms of entrepreneurship characterized by the pursuit of other-regarding interests (sustainable and social entrepreneurship). Hypotheses are then formulated regarding the relationship between environmentally (versus economically) driven entrepreneurs and the aspiration to grow. Finally, the differences between levels of entrepreneurial engagement and their effect on growth aspirations are described and it is argued how these levels are likely to moderate the relationship between an entrepreneur's environmental (relative to economic) value creation goals and growth aspirations, developing the second hypothesis.

2.1 High-growth entrepreneurship: theory, concept and measurement

While entrepreneurial activity in general is already an important predictor of economic growth (Wennekers & Thurik, 1999; Carree, & Thurik, 2010), many academics and policy-makers in recent years have shown an interest in particular types of entrepreneurial activity. Over the last decade, increasing research attention has been paid to the concept of 'ambitious entrepreneurship', however, each of these studies have selected their own measure and label. According to Stam et al. (2012) an ambitious entrepreneur can be identified as someone who is "(1) involved in the process of entrepreneurship and (2) develops a new enterprise in this process with the goal of creating as much new value as possible". According to the GEM, this goal is reflected in entrepreneurship with innovative characteristics, international orientation and especially, with high growth expectations. However, because of the evident importance of high-growth firms to economy and society (Teruel & De Wit, 2017), this present study focuses on the determinants of high-growth entrepreneurship.

In recent years, many entrepreneurship scholars have shown that some entrepreneurs aspire growth more than others, and that differences in these aspirations have important policy implications. Several studies (Davidsson, 1989; Stam & Wennberg, 2009) have shown that the aspiration to grow is an important predictor of actual business growth. Moreover, those entrepreneurs who have the aspiration to grow their business significantly are found to

contribute significantly more to marco-economic growth than those entrepreneurs who do not have these aspirations (Stam et al., 2011; Kolvereid & Bullvag, 1996). Stam et al. (2012) suggest that entrepreneurs with high aspirations differ from their non-aspiring counterparts because they act out of different motivations. Entrepreneurial motivation has been found to influence the entrepreneurs decision to explore, evaluate, and seize opportunities (Carsrud & Brännback, 2011). Variations in these motivations can thus reveal which individuals have the aspiration to exploit these opportunities and pursue entrepreneurial activities by gathering the necessary resources and capabilities to exploit these opportunities (Shane et al., 2003). Since these motivations can influence the entrepreneur's growth aspirations, it is vital for academics and policy makers to understand the role of motivation in entrepreneurial activity since these aspirations in turn also influence economic outcomes (Hessels et al., 2008).

2.2 Entrepreneurial motivation

In order to understand the economic consequences of entrepreneurial activity, it is crucial to understand what drives entrepreneurial activity (Shane et al., 2003). Many studies have been devoted to examining the motivation of individuals to start a business. In general, these studies examine the motivational heterogeneity among entrepreneurs within a country and discuss three types of entrepreneurial motivations.

The first motivation theory that received special interest of entrepreneurship scholars is the Human Motivation Theory from McClelland (1961) which investigates the individual's behaviour and performance based on the need for achievement, power and affiliation (Lussier & Achua, 2007). Studies based on this theory suggest that there is a significant, but rather small positive relationship between the need for achievement and entrepreneurial activity (Rauch & Frese, 2007). McClelland (1961) has identified several situations that are favoured by individuals who exhibit a strong need for achievement. High-achieving individuals are found to be more likely to engage in innovative activities that require forward thinking and an individual's responsibility for task performance (Collins et al., 2004).

Secondly, there are studies that focus on the reasons of individuals to start a business. These reasons can be either opportunity- or necessity-based and are driven by 'pull' and 'push' factors respectively (van der Zwan et al., 2016; Reynolds et al., 2001; Acs, 2006). Studies that explore the differences between these two types of reasons mainly report pull motives such

as autonomy, wealth generation, recognition and status to be a primary driver of individuals to engage in entrepreneurial activities (Kolvereid & Bullvag, 1996; Carter et al., 2003; Wilson et al., 2004). One of the most influential pull factors addressed in previous research related to opportunity-based entrepreneurship is autonomy or independence (Kolvereid & Bullvag, 1996; Carter et al., 2003). Nevertheless, individuals may also be driven by necessity, and hence, may be pushed into entrepreneurial activity (Thurik et al., 2008). In general, these individuals are forced into self-employment due to lack of alternative work opportunities.

Thirdly, there are studies that focus on the individual's cost-benefit motivation to start a business (Campbell, 1992; Douglas & Shepherd, 2002). In these studies the individual's entrepreneurial decision-making process is based on a critical trade-off between economic factors (material and immaterial risk and gains). These studies suggest that entrepreneurial decisions are at least partially attributable to economic motivation.

In addition to these within-country studies, which focused primarily on examining the motivational differences between individuals, there are also researchers who have conducted research between countries, focused on examining the variation in entrepreneurial motives between countries. Baum et al. (1993) and Shane et al. (1991) have conducted research on the differences in entrepreneurial motivations between Israel and the USA and Norway, New Zealand and the UK, respectively. They argue that motives to start a business significantly differ between countries. In line with this, Reynolds et al. (2002) and Grilo and Thurik (2006) have pointed out that in developing countries, much more than in developed countries, necessity motives play an important role. Together, these studies provide relevant insights into the heterogeneity across individuals and countries regarding their motivation to start a business. However, to understand the macroeconomic implications of this heterogeneity in motivations, it is vital to examine how these motivational differences affect entrepreneurial aspirations (Shane et al., 2003).

2.3 Motivational drivers of high-growth entrepreneurship

A substantial amount of research has been dedicated to investigating the variation in growth aspirations among entrepreneurs by means of personal characteristics such as gender, age, educational attainment, entrepreneurial experience and prior experience as an informal investor (Welter, 2001). However, there are also a number of previous studies that have linked the aspiration to grow to motivation, and those studies generally found a close relationship.

McClelland (2005) and Kolvereid (1992) for instance find that the aspiration of entrepreneurial enterprises in terms of revenue and jobs are positively related to a high level of achievement. Mitra (2002) and Morris et al. (2006) find that women who are pulled into entrepreneurship due to the presence of opportunities are more growth-oriented than those who are pushed into entrepreneurship. Similarly, Verheul and Van Mil (2011), who study the determinants of growth aspirations for nascent entrepreneurs and young business owners, find that founding an enterprise because of the recognition of a business opportunity (relative to starting out of necessity) is an important driver of the aspiration to grow for both nascent and young business owners. Davidsson (1989) employs differences in expected impacts of growth to explain the willingness to grow of small firms. The results show that greater independence and financial reward are the main motivators to explain the entrepreneur's willingness to grow, while the fear that employee welfare will be reduced and the loss of regulatory control appear to be the main growth deterrents. Similarly, Wiklund et al. (2003) use the beliefs about the impact of growth of small firm' leaders to explain their willingness to grow. Contrary to Davidsson (1989) they find that income generation is not the most important motivator of attitude towards growth, instead employee well-being is found to be the strongest predictor for male business owners, and independence is found to be the strongest predictor for female business owners. Amit et al. (2001) suggests that rather than by personal wealth attainment, high-growth entrepreneurs are primarily motivated by non-financial concerns.

This review of literature on the role of motivation in high-growth entrepreneurship reveals that in addition to studies related to dominant economic growth theories that typically emphasize profit generation, there are also studies that provide evidence that non-economic motives such as employee well-being and freedom also impact aspirations to grow. However, although in recent years non-economic motives have received increasing research attention (e.g., Douglas & Shepherd, 2002; Cardon et al., 2009; Birley & Westhead, 1994), these studies have all focused on self-regarding interests. The dominant assumption prevalent in the entrepreneurship literature, which suggests that individuals are primarily driven by economic self-interest (Cohen et al., 2008), has pushed away the attention from other-regarding motives to act, and consequently has led to a lack of research on the role of other-regarding motives. Thus, although the non-economic determinants of high-growth entrepreneurship have raised the attention of academics, research aiming to address the impact of other-regarding motives on entrepreneurial outcomes has been limited.

At this point, most research investigating the consequences of the pursuit of other-regarding interests has been devoted to investigating the consequences on results of game-theoretic models. These studies assume that the results of game-theoretic models such as the ultimatum game and the dictator game (Bolton & Ockenfels, 2000; Fehr & Schmidt, 1999), and games involving gift exchange (Rabin, 1993) and the principal-agent problem (Itoh, 2004) cannot entirely be explained by utility-maximizing behaviour (self-regarding motive) assumed in traditional game-theoretical models. These studies attempt to explain the results of these game-theoretical models by taking into account motives directed at other-regarding interest. Despite the increasing availability of large-scale datasets, these studies are however limited to qualitative case studies and research based on an experimental design, often based on a small sample size. Those studies that have examined the role of other-regarding motives on entrepreneurial outcomes are empirical, however, these studies are scarce. Those who have investigated the consequences of pursuing other-regarding motives, have related this to innovation (Hoogendoorn et al., 2020; Hechavarría & Welter, 2015), start-up success (Renko et al., 2013) and organizational challenges (Battilana & Lee, 2014). The present paper attempts to address this research gap of the entrepreneurial consequences of other-regarding motives, by investigating why some entrepreneurs have higher growth aspirations than others by focusing on other-regarding goals pursued by entrepreneurs and in particular their drive to create environmental value relative to economic value. Previous research on the influence of other-regarding motives has already started quantitative research, and it would be of great importance to continue large-scale quantitative research, while it provides more reliable and accurate results.

2.4 Environmental entrepreneurship and other-regarding motives

The literature review on entrepreneurial motives shows that researchers have mainly investigated the role of self-regarding motives such as private wealth, independence, self-efficacy and freedom. This is problematic, while it is widely acknowledged that entrepreneurs are driven by a variety of entrepreneurial motivations (Cardon et al., 2009; Hessels et al., 2008; Shane et al., 2003). There is ample of evidence suggesting that individuals are driven by both self-regarding and other-regarding motives (Heinz & Koessler, 2021), yet other-regarding motives seem to receive considerably less research attention. This complicates policy making.

Policymakers heavily rely on the judgment of economists (Fourcade et al, 2015), their ideas form the foundation for the policies and regulations that facilitate the functioning of markets (Simons, 2017). Without full information about the entrepreneurial motivations that drive entrepreneurship in their country, policymakers may focus on the wrong target or even face the risk of missing their target. Considering that individuals can be driven by other-regarding motives, and investigating this, is therefore crucial as it may challenge the findings based on economic self-interest as a fundamental entrepreneurial motivation.

Literature on entrepreneurship theory reports three types of entrepreneurship that represent other-regarding motives and appear to create value for others in society beyond profit, namely social, environmental and sustainable entrepreneurship (Schaefer et al., 2015). These entrepreneurs create value for others in society by exploiting opportunities that relate to issues that are socially relevant, which according to Dean and McMullen (2007) are present in market failures. The present study particularly focuses on environmental entrepreneurship. What distinguishes environmental entrepreneurs from sustainable and social entrepreneurs is that besides their drive to create a financial profit, they are directly driven by the motivation to solve environmental degradation (Thompson et al., 2011; Pacheco et al., 2010; Hockerts & Wüstenhagen, 2010). Environmental entrepreneurs aim to discover and exploit opportunities related to societal relevant issues by creating profitable businesses, while sustainable and social entrepreneurs generally exploit these opportunities through economically sustainable businesses (York et al., 2016).

Although environmental entrepreneurs are found to be driven by both self-regarding and other-regarding motives (Heinz & Koessler, 2021), the extent to which they pursue these goals varies considerably. There are environmental entrepreneurs who recognize and seize opportunities to generate a financial profit, but there are also environmental entrepreneurs who contribute to the environment at the expense of economic goals (York et al., 2016). Yet, there is no universal threshold that determines when an entrepreneur can be characterized as environmentally or economically driven. Hoogendoorn et al. (2020), who have examined whether ‘greener’ start-ups are more innovative, studied the difference between these two types of start-ups by exploring the relative emphasis on environmental versus economic value creation goals at start-up based on GEM data. In the present study, this relative measure is used to distinguish between environmentally and economically motivated entrepreneurs for the independent variable of interest.

2.5 Heterogeneity in entrepreneurial motivation and growth aspirations

Besides the personality characteristics addressed in previous research (e.g., Verheul & Van Mil, 2011; Estrin et al., 2013) that make an entrepreneur more likely to aspire growth, entrepreneurship scholars have shown an increasing interest in the concept of opportunities (Shane & Venkataraman, 2000; Eckhardt & Shane, 2003). Kirzner (1979) even refers to the perception of opportunities as the most distinctive and important aspect of entrepreneurial activity. Entrepreneurs discover opportunities when they search for them in existing markets (Dean & McMullen, 2007). They monitor changing market conditions such as inefficiencies in the market, changing consumer preferences or the availability of new technologies (Eckhardt & Shane, 2003). However, individuals differ in their ability to recognize these opportunities because recognizing opportunities is a cognitive process (Shane & Venkataraman, 2000). The individual's ability to identify good opportunities appears to depend on characteristics shaping ones personality (Shane, 2003).

Carsrud and Brännback (2011) claim that differences in opportunity identification and the intention to exploit opportunities can largely be attributed to a variation in motivation among individuals. In particular, the pursuit of other-regarding motives is found to influence how information is acquired and processed by individuals, and hence, how opportunities are identified (Van de Ven et al., 2007). Consistent with this view, social entrepreneurship scholars suggests that altruism and the desire to help others, two forms of other-regarding motives, are important drivers of opportunity recognition (Hockerts, 2006; Patzelt & Shepherd, 2011; Doherty et al., 2006). These studies demonstrate that the ability of an individual to identify opportunities is dependent on both the drive to pursue self-interest, but also on their drive to pursue other-regarding interests (i.e. the collective interest) (Van de Ven et al., 2007). This is because entrepreneurs who pursue other-regarding motives are encouraged to empathize with other's views and needs by observing, asking questions, and building lasting relationships with them (Meglino & Korsgaard, 2004; De Dreu & Nauta, 2009). As these entrepreneurs seek to address unexplored socially relevant issues, understanding the preferences, values, and needs of others is critical for these entrepreneurs to effect meaningful change (Shepherd & Patzelt, 2018). Entrepreneurs who are strongly driven by other-regarding motives therefore have a broader and more complete view of perspectives, which Shane and Venkataraman (2000) argue facilitates the identification of opportunities.

Based on similar arguments, Hoogendoorn et al. (2020) have recently shown that the goal to create environmental (relative to economic) value is positively and significantly related to innovativeness, which in previous studies on the concept of 'ambitious entrepreneurship' is addressed as a specific type of ambitious entrepreneurship. In line with these findings, Davidsson (1991) argues that the motivation to grow is determined by the perceived ability, need and opportunity for growth. In line with this argument, many entrepreneurship scholars found a positive relationship between opportunity recognition and growth aspiration. In fact, Hermans et al. (2015) define highly ambitious entrepreneurs as "those entrepreneurs engaged in the entrepreneurial process with the aim to create value by identifying and exploiting new opportunities". Tominc and Rebernik (2007) report that the higher growth aspirations of start-ups in Slovenia compared to those in Croatia and Hungary can be largely attributed to a higher degree of alertness to unexploited opportunities among entrepreneurs in Slovenia. Similarly, Davidsson (1991) and Verheul and van Mil (2011) show that the variation in growth aspirations among Swedish and Dutch entrepreneurs respectively can largely be attributed to a variation in the entrepreneur's perception of opportunities. Nevertheless, it should be kept in mind that these studies make use of cross-sectional data from a specific set of countries. The results may not be generalisable to high-growth entrepreneurship in other countries.

Following these findings, goals that entrepreneurs pursue are expected to influence entrepreneurial growth aspirations through differences in the ability to identify and exploit opportunities. Environmental entrepreneurs are serving other-regarding interests, and hence, are argued to be more open to other's viewpoints (Meglino & Korsgaard, 2004). It is found that having a broader range of perspectives encourages the identification of opportunities (Shane & Venkataraman, 2000). Therefore, environmental entrepreneurs are likely to have a higher degree of alertness in identifying an exploiting opportunities than those entrepreneurs driven by self-regarding interests. A higher degree of alertness is found to positively influence the individual's growth aspirations (Davidsson, 1991; Verheul & Van Mil, 2011; Tominc & Rebernik, 2007). Therefore, entrepreneurs who are strongly motivated by the drive to create environmental value are hypothesized to deviate in their opportunity identification ability and consequently in their aspiration to grow. Therefore, the following hypothesis is formulated:

Hypothesis 1a: *Entrepreneurs who pursue environmental (relative to economic) value creation goals have higher growth aspirations*

In contrast to these suggestions, there is a select group of entrepreneurship scholars who suggest that entrepreneurs pursuing other-regarding interests may intentionally keep growth restricted. Hockert and Wüstenhagen (2010) and Vicky and Lyon (2014) suggest that small businesses with an explicit aim of providing social and environmental value and often choose to remain small even though they have the potential to grow. These sustainability start-ups have a select number of customers and stakeholders that are highly committed to the sustainability mission of the firm (Hockerts & Wüstenhagen, 2010). These sustainability start-ups may have the ability to attract more customers, but as growing also requires them to compromise or even abandon their ideals and lower their standards as a result of economic pressures they have no intention to do so (Lockie, 2016; Vickers & Lyon, 2014). In line with this, they are reluctant to cooperate with actors whose support is needed for the further development of their business because these actors may not share the same values (Vickers & Lyon, 2014). Moreover, besides the desire to remain compliant with their standards, there is also a strategic reasoning to this. Sustainability start-ups are constrained by their supply chain systems that often face difficulties in competing with the supply and distribution chains of large incumbents (Hockerts & Wüstenhagen, 2010; Vickers & Lyon, 2014). They know that large incumbents have the resources and capacity to easily outperform them in R&D and distribution once they enter a market niche. Therefore, these sustainability start-ups might prefer to keep their niche at a manageable scale, so they do not generate undue interest from incumbent competitors. Therefore, it is reasoned that firms that not only seek profit but also environmental and/or social value are expected to remain small and exclusive to avoid competition and compromise on their ideals. In contrast to prior arguments, these arguments claim that the relationship between the entrepreneur's goal to create environmental (relative to economic) value and growth aspirations is negative. Therefore, two opposing hypotheses are established regarding this relationship. The second hypothesis is as follows:

Hypothesis 1b: *Entrepreneurs who pursue environmental (relative to economic) value creation goals have lower growth aspirations*

2.6 Growth aspirations among different levels of entrepreneurial engagement

So far, this study has argued that variation in growth aspirations among entrepreneurs is strongly related to heterogeneity in entrepreneurial motivation. However, this variation is also reflected in the levels of entrepreneurial engagement: nascent, new and established. In a recent study of Henríquez-Daza et al. (2019) it is found that those entrepreneurs who are in the first level of entrepreneurial engagement have the highest growth aspirations. Similarly, Davidsson (1991), Reynolds et al. (2005) and Bager and Schott (2004) suggest that nascent entrepreneurs have higher growth aspirations than those in more advanced stages of the entrepreneurial process. Many studies have investigated the characteristics of each stage of the entrepreneurial processes to which these findings can be attributed, concluding that there are important differences that should be taken into account when studying growth aspirations (Davidsson, 1991; Reynolds et al., 2005).

The first reason why early-stage entrepreneurs tend to have higher growth aspirations than established entrepreneurs is that they have less realistic expectations than established entrepreneurs. Especially nascent, but also new entrepreneurs seem to base their growth aspirations more on passion than on realistic predictions of the market, which may cause over optimistic or even naïve expectations about the future of their business (Levie & Autio, 2013; Verheul & Van Mil, 2011; Bager & Schøtt, 2004). These expectations become less optimistic once these entrepreneurs mature and enter the entrepreneurial path and become acquainted with the challenges that arise in the market. Secondly, nascent entrepreneurs do not have the opportunity to build expectations on knowledge of the business and market from own prior experience (Penrose, 1959). A nascent entrepreneur has no reference from a prior stage that he or she learn from and use to shape or adjust the aspiration to grow like established entrepreneurs do. Since they have no reference based on their own previous experience, they tend to use other entrepreneurs who have been successful in the market and have grown their business significantly as a reference. As a result, these individuals do not observe or reflect on the difficulties and problems they will face while owning and running a business, because only the positive results are typically used as a reference (Henríquez-Daza et al., 2019). Finally, entrepreneurs in the nascent and new stage of the business process also experience greater difficulty in estimating the future of their business, primarily due to the more uncertain and complex business stage they are operating in compared to established entrepreneurs (Bager

& schøtt, 2004). When founding a new business, entrepreneurs are engaged in more complex and uncertain business activities related to the exploitation of opportunities that may or may not be successful, such as developing a business plan, applying for financial support, and building sustainable relations with potential customers and suppliers (Delmar & Shane, 2003; Delmar & Davidsson, 2000). Due to a combination of these factors, nascent and new (early-stage) entrepreneurs, tend to have less realistic, and consequently higher, expectations of the future of their business than entrepreneurs at a more advanced stage of the entrepreneurial process.

2.7 The moderating role of the level of entrepreneurial engagement

The previous section has shown that the level of entrepreneurial engagement has a direct association with growth aspirations (Davisson, 1991; Reynolds et al., 2005; Henríquez-Daza et al., 2019). Yet, in addition to this direct association, the level of entrepreneurial engagement is also expected to play a moderating role in the association between the goal to create environmental (relative to economic) value and growth aspirations. Nevertheless, the present study has established two opposing Hypothesis (1a and 1b), that theorize that creating environmental (relative to economic) value can have both a positive and a negative impact on growth aspirations. First, it is reasoned why entrepreneurs driven by environmental (relative to economic) value creation tend to adjust their growth aspirations depending on the level of entrepreneurial engagement in case of a positive association between environmental (relative to economic) value creation goals and growth aspirations.

During the evolution of their business, entrepreneurs develop capabilities to recognize and exploit opportunities. The entrepreneur's alertness to opportunities is critical to be able to take advantage of emerging business opportunities in the market and translate them into business growth (Kirzner, 1979). There exist many opportunities in the market, however, not every opportunities necessarily implies business growth. According to Wiklund and Shepherd (2003), the ability to identify and exploit business opportunities that are promising depends on the entrepreneur's prior experience and knowledge of the market, which an entrepreneur acquires during his time in the entrepreneurial process. Ardichivili et al. (2003) suggests that prior knowledge of the market a business is operating in, such as the needs and problems of their customers and the best way to serve them increases the probability to identify these

opportunities, while those elements stimulate the entrepreneur's alertness. Therefore, it is argued that entrepreneurs who have more knowledge of and experience in the market, know which opportunities are worth exploiting and which are not. The knowledge that Ardichivili et al. (2003) proposes is acquired by the entrepreneur over time in the entrepreneurial process. Therefore, it is argued that established entrepreneurs, who have been operating in the market for longer, are likely to have more experience in and knowledge of the market, and therefore are better able to recognize promising opportunities and make decisions that contribute to the growth of the business. On the other hand, an early-stage entrepreneur, who has spent a limited amount of time in the business process, is unlikely to have fully developed the ability to effectively identify those promising business opportunities. So, the moderating role of the level of entrepreneurial engagement can be explained by the fact that entrepreneurs in the early stages of the process, even when strongly driven by the motive to create environmental value, are expected to have lower growth aspirations than established entrepreneurs due to lack of prior knowledge of and experience in the market. In other words, it is expected that the positive association between environmental (relative to economic) value creation goals is stronger (more positive) for established compared to early-stage entrepreneurs. Based on these arguments the following hypothesis is proposed:

Hypothesis 2a: *The level of entrepreneurial engagement positively moderates the association between an entrepreneur's goal to create environmental (relative to economic) value and growth aspirations such that for established entrepreneurs the positive association is stronger compared to early-stage entrepreneurs.*

On the other hand, Hypothesis 1b theorizes that environmental (relative to economic) value creation goals are negatively associated to growth aspirations. In case of this negative association between the goal to create environmental (relative to economic) value and growth aspirations, the level of entrepreneurial engagement is also expected to play a moderating role.

A fundamental difference between early-stage and established entrepreneurs is that, unlike early-stage entrepreneurs who are still in the process of successfully starting a business, established entrepreneurs already own and manage a business that has successfully survived in the market. During the evolution of their business, these established entrepreneurs have

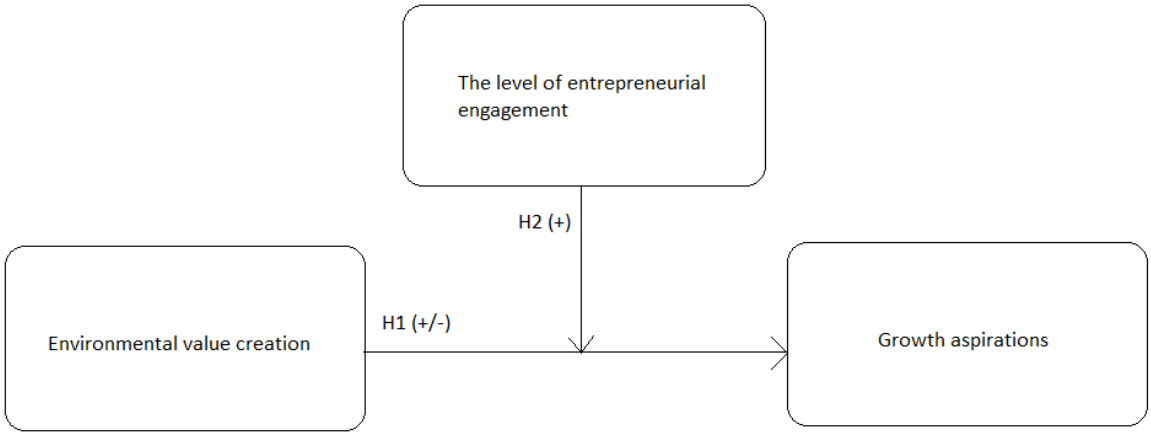
been faced, sometimes even repeatedly with economic pressures or dilemmas as suggested by Holt (2012) and Santos (2012). Holt (2012) suggests that environmental entrepreneurs face a trade-off between their initial entrepreneurial motive of creating environmental value and other economic objectives as they transition to more established stages of the entrepreneurial process. Similarly, Santos (2012) argues that conflicts may arise between environmental and economic objectives during the evolution of a business, demanding a decision about whether to create value, as initially intended, or capture value, which may have become increasingly attractive. Hypothesis 1b theorizes that environmental entrepreneurs deliberately restrict growth because they do not want to compromise on these environmental standards which they associate with business growth due to the expected tension between environmental and economic objectives when mainstreaming their product or service. Therefore, it is likely that experience with these kind of tensions between economic and environmental goals is needed in order to be able to adequately handle these trade-offs and eventually overcome them. It is reasoned that the negative association between environmental (relative to economic) value creation goals and growth aspiration is stronger (less negative) for established entrepreneurs than for early-stage entrepreneurs, while the prior experience of established entrepreneurs is expected to allow them to dissolve the trade-offs between economic and environmental goals that are likely to diminish their growth aspiration. Based on these arguments, the following hypothesis is proposed:

Hypothesis 2b: *The level of entrepreneurial engagement positively moderates the association between an entrepreneur's goal to create environmental (relative to economic) value and growth aspirations such that for established entrepreneurs the negative association between environmental (relative to economics) value creation goals is stronger compared to early-stage entrepreneurs.*

A conceptual framework of the hypotheses discussed in this section is shown in Figure 1. This framework shows that the individual's motivation for running a business, represented by the relative emphasis on environmental relative to economic value creation goals, can be either positively (Hypothesis 1a) or negatively (Hypothesis 1b) associated with their aspiration to grow. It is hypothesized that the level of entrepreneurial engagement plays a moderating role in this association. In case of a positive association, the level of entrepreneurial engagement

is expected to have a reinforcing effect on the association between environmental (relative to economic) value creation goals and growth aspirations, such that the positive association is stronger (more positive) for established entrepreneurs than for early-stage entrepreneurs (Hypothesis 2a). In case of a negative association, the level of entrepreneurial engagement is expected to have a dampening effect on the association between environmental (relative to economic) value creation goals and growth aspirations, such that the negative association is stronger (less negative) for established entrepreneurs than for early-stage entrepreneurs (Hypothesis 2b). Figure 1 shows these associations graphically.

Figure 1: Conceptual framework and hypotheses



3. Data and Methodology

3.1 Data sources

In order to test the hypotheses, individual-level data from the 2009 round of the GEM is used. The GEM is since its start in 1999 the world's largest and most prominent assessment of international entrepreneurial activity, covering activity from almost 200,000 entrepreneurs in over 100 countries across the world. Their annually updated databases allow for in-depth academic research, and this is reflected in the increasing amount of GEM-based research that has emerged in a wide range of entrepreneurship literature in recent years[1]. The GEM seeks to establish links between entrepreneurial activity and macroeconomic outcomes and tries to identify the mechanisms underlying this relationship. The GEM is split into two instruments: the Adult Population Survey (APS) which tracks the aspirations, motives and characteristics of individuals starting businesses, and the National Expert Survey (NES) which tracks the national context in which individuals start their businesses. This present study uses individual-level data from the APS because this study conducts analysis on the motivations and aspirations of the individual entrepreneur. More detailed information about the data collection design can be found in research of Bosma et al. (2013). In particular, this study will focus on the 2009 GEM round because this is the most recent year in which all respondents, not just a subset of those respondents are asked to answer questionnaire items on the goals they are pertaining. The final estimation sample contains only 13,059 entrepreneurs in 50 countries[2], because the analysis only considers those respondents who indicate being either a nascent, new or established entrepreneur and removes all observations that contain missing values on variables specified in the model. In this sample, 35.90% is either a nascent or new (early-stage) entrepreneur and 64.10% is an established entrepreneur.

[1] Previous research based on GEM data can be found on: https://www.gemconsortium.org/research-papers

[2] The 50 countries included in this study are: United States, Russia, South Africa, Greece, the Netherlands, Spain, Hungary, Belgium, Italy, Romania, Switzerland, United Kingdom, Norway, Denmark, Germany, Peru, Argentina, Brazil, Chile, Colombia, Malaysia, Japan, China, Iran, Korea, Algeria, Morocco, Uganda, Iceland, Finland, Latvia, Serbia, Croatia, Slovenia, Guatemala, Panama, Venezuela, Bosnia and Herzegovina, Ecuador, Uruguay, Tonga, Dominican Republic, Jamaica, Lebanon, Jordan, Syria, Saudi Arabia, Yemen, United Arab Emirates, Israel

3.2 Variable description and measurement

3.2.1 Dependent variable: growth aspiration

The dependent variable is measured as a continuous variable indicating the degree by which entrepreneurs expect to increase the number of jobs in the upcoming 5 years. The GEM, does not have a more accurate measure that solely focuses on the desire of entrepreneurs, as suggested by Verheul and Van Mil (2011). Therefore, in line with previous research based on GEM data (Estrin et al., 2013; Henríquez-Daza et al., 2019) the aspiration to grow is measured by the expected number of jobs created in the upcoming 5 years. Data on growth aspirations is obtained from answers to the following items of the APS survey of GEM: "How many people currently work for this business, excluding owners, but including exclusive contractors?" and "How many people do you think will work for this business five years from now, excluding owners, but including exclusive contractors?" This variable is measured as the difference between the log-transformed versions of the expected and current employment levels (Henríquez-Daza et al., 2019; Estrin et al., 2013). Several other previous studies utilizing GEM data instead use the expected level of employment within 5 years (Bowen & DeClercq, 2008; Autio & Acs, 2010), however, since job growth expectation can become zero or even negative when current employment levels are considered, it is not considered a valid measurement instrument (Estrin et al., 2013).

In some cases, respondents indicated being in multiple stages of the entrepreneurial process, meaning for example, that an entrepreneur who is starting a business is also currently the owner-manager of a new or established business. In that case, the highest indicated level of engagement by the respondent is used (Hessels et al., 2011) along with corresponding responses to questionnaire items related to growth aspirations and organizational goals.

3.2.2 Independent variables

3.2.2.1 Level of entrepreneurial engagement

Consistent with GEM, this study identifies three types of entrepreneurs: nascent, new and established. Nascent entrepreneurs are identified as those entrepreneurs who agree with the following questionnaire item: "You are, alone or with others, currently trying to start a new business, including any self-employment or selling any goods or services to others?" In

line with the research of Henríquez-Daza et al. (2019), the current study does not include entrepreneurs who have the intention to start a business, as proposed in the original measure of entrepreneurial intention by Grilo and Thurik (2008). At the entrepreneurial intention stage, the business has not yet been established, and thus the questionnaire items related to the current and expected employment levels are not provided by these respondents. A distinction is made between new and established entrepreneurs based on the establishment date of the business: if the business is between 3 and 42 months old, the entrepreneur is categorized as new and if it is older than 42 months, the entrepreneur is categorized as established. The variable of the level of entrepreneurial engagement is measured as a dummy variable that takes value 1 if the respondent is considered established and 0 if the respondent is considered nascent or new (early-stage). In line with the GEM and research by Szerb and Vörös (2019), nascent and new entrepreneurs are grouped into one category, based on the argument that they both have significantly less entrepreneurial experience than established entrepreneurs, making their growth aspirations significantly higher than those of established entrepreneurs (Bager & Schøtt, 2004; Levie & Autio, 2013; Verheul & Van Mil, 2011).

3.2.2.2 Environment value creation

This independent variable measures whether an entrepreneurs places more emphasis on pertaining environmental value creation or economic value creation goals. To measure this variable, a question from the 2009 GEM is used that asks respondents to assign 100 points to three goals of value creation: social, environmental, and economic. The specific questionnaire item in the 2009 round of the GEM reads as follows: "Organizations may have goals based on the ability to generate economic value, social value, and environmental value. Assign a total of 100 points to these three categories as it relates to your goals." This variable is measured as the difference in points assigned to goals for creating environmental value and economic value, as recommended by Hoogendoorn et al. (2020). In using this measure, it is suggested that a positive value of this measure indicates that the entrepreneur has allocated more points to environmental than to economic value creation goals, and vice versa (Hoogendoorn et al., 2020). In other words, the more points entrepreneurs allocate to environmental objectives, the more environmentally friendly their business.

3.2.2.3 Control variables

In the present study, the analysis is conducted on individual entrepreneurs, but within multiple countries. Therefore, in addition to the variables presented above, this study includes country fixed-effects to control for systematic differences across countries, as well as several characteristics of individual entrepreneurs obtained from the GEM:

First, this study controls for a number of variables that are usually taken into account when studying individual determinants of entrepreneurial aspirations. An individual's gender is controlled for, as men have been found to have significantly higher growth aspirations than women (Darnihamedani & Terjesen, 2020). This variable is measured as a dummy variable taking value 1 if the individual is a male and 0 if female. Similarly, an individual's age (in years) is controlled for, as age has been found to have a negative influence on growth aspirations (Puente et al., 2017; Kolvereid, 1992). Education level is also included. Previous studies based on GEM find that entrepreneurs with a high level of completed education are more likely to engage in high growth activities (Autio, 2005; Puente et al., 2017). Education is measured as a categorial variable consisting of three categories defining the individual's highest completed level of education: none/some secondary education, secondary education and post-secondary education.

To control for the degree of risk tolerance, the fear of failure is included as growing a business is associated with high risks. Entrepreneurs who fear failure of their business, are less likely to aspire growth of their business than entrepreneurs who do not fear the failure of their business (Autio, 2005; Verheul & Van Mil, 2011). The level of risk tolerance is measured as a dummy variable taking value 1 if the entrepreneur fears failure, and 0 if not. Furthermore, the wealth of the entrepreneur is expected to have a positive influence on the use of external funding and the entrepreneur's ability to scale new projects (Estrin et al., 2013). Therefore, a proxy for wealth is included that denotes whether someone is a business angel or not: "*You have, in the past three years, personally provided funds for a new business started by someone else excluding any purchases of stocks or mutual funds.*" A value of 1 is assigned when an individual has provided funds and 0 otherwise. Similarly, the quality of social relationships is controlled for. Through a social network, entrepreneurs can benefit from the knowledge, expertise and financial capital of the role models present in the network, thereby increasing the growth aspirations of the business (Minniti et al., 2005). Therefore, it is taken into account

whether the entrepreneur has some kind of entrepreneurial network: *"You know someone personally who started a business in the past 2 years."* A value of 1 is assigned when an individual knows someone and 0 otherwise. The individual's entrepreneurial experience is also controlled for because a higher level of experience positively affects the individual's aspiration to grow (Delmar & Davidsson, 2006). A general experience measure is included that controls for the self-reported experience required to start a business of the entrepreneur. The exact questionnaire item reads as follows: "*Do you have the knowledge, skill and experience required to start a new business?"* A value of 1 is assigned when an individual reports having the required knowledge, skill and experience and 0 otherwise.

Table 1: Definition of variables

Variable	Questionnaire item and data source	Measurement
Dependent variable		
Growth aspiration	**Current**: How many people currently work for this business, excluding owners, but including exclusive contractors? (GEM) **Expected**: How many people do you think will work for this business five years from now, excluding owners, but including exclusive contractors? (GEM)	Difference of logarithms of the expected (in 5 years) and current number of jobs (continuous)
Independent variables		
Environment value creation	Organizations may have goals according to the ability to generate economic value, societal value and environmental value. Please allocate a total of 100 points across these three categories as pertaining to your goals. (GEM)	Points allocated to environmental value minus points to economic value (continuous)
Level of entrepreneurial engagement	**Nascent**: You are, alone or with others, currently trying to start a new business, including any self-employment or selling any goods or services to others? (GEM) **New:** Manages and owns a business that is between 3 and 42 months old (GEM) **Established**: Manages and owns a business that is older than 42 months (GEM)	A dummy variable taking value 1 if established (reference) and 0 if nascent or new (early-stage)
Control variables		
Gender	What is your gender? (GEM)	A dummy variable taking value 1 if male (reference) and 0 if female
Age	What is your current age (in years)? (GEM)	Age in years (continuous)
Education	What is the highest level of education you have completed? (GEM)	A categorical variable; None or some secondary education (reference); secondary education; post-secondary education
Business angel	You have, in the past three years, personally provided funds for a new business started by	A dummy variable taking value 1 if Yes and 0 if No

	someone else, excluding any purchases of stocks or mutual funds. (GEM)	
Fear of failure	Would fear of failure prevent you from starting a business? (GEM)	A dummy variable taking value 1 if Yes and 0 if No
Entrepreneurial network	Do you know someone personally who started a business in the past 2 years? (GEM)	A dummy variable taking value 1 if Yes and 0 if No
Entrepreneurial experience	Do you have the knowledge, skill and experience required to start a new business? (GEM)	A dummy variable taking value 1 if Yes and 0 if No

Table 2 reports the descriptive statistics of all variables listed in Table 1. Table 2 reveals that the average difference in points allocated to environmental and economic objectives is -51.45. This implies that, on average, the respondents allocated significantly more points to economic value creation goals than to environmental value creation goals. Additional calculations reveal that respondents allocated an average of 63.27 points to economic value and an average of 14.47 points to environmental value. Furthermore, Table 2 shows that the minimum number of jobs expected to be created within 5 years is -8.87. This means that, there are also individuals in the sample who intend to scale down on employment within 5 years.

Table 2: Descriptive statistics

	Mean	**SD**	**Minimum**	**Maximum**
Dependent variable				
Growth aspiration	0.34	0.75	-8.87	13.30
Independent variables				
Environmental value creation (points difference)	-51.45	36.34	-100	100
Established entrepreneurship	0.64	0.48	0	1
Male	0.63	0.48	0	1
Age	42.75	12.22	16	99
None/some secondary education	0.33	0.47	0	1
Secondary education	0.32	0.47	0	1
Post-secondary education	0.35	0.48	0	1
Fear of failure	0.28	0.45	0	1
Entrepreneurial experience	0.85	0.36	0	1
Business angel	0.09	0.29	0	1
Entrepreneurial network	0.56	0.50	0	1

The values reported in this table are based on 13,059 entrepreneurs in 50 countries. In regressions none/some secondary education is used as the reference category for education.

Table 3: Bivariant analysis between levels of entrepreneurial engagement

	Early-stage		**Established**		
	Mean	SD	Mean	SD	Difference
Dependent variable					
Growth aspiration	0.55	0.86	0.22	0.67	0.33***
Independent variable					
Environmental value creation	-50.30	36.75	-52.10	37.66	1.8***

The values reported in this table are based on 13,059 entrepreneurs in 50 countries.
*** p<0.01, **p<0.05, *0.1

Table 3 shows the mean and standard deviation of growth aspiration and environmental value creation by level of entrepreneurial engagement. Independent sample t-tests are calculated to compare the averages between early-stage and established entrepreneurs to determine whether any difference is statistically significant. While early-stage entrepreneurs on average expect to create 0.55 jobs in 5 years, established entrepreneurs on average expect to create 0.22 jobs in 5 years. The difference of 0.33 is statistically significant. These descriptive results provide preliminary evidence for the expectation that early-stage entrepreneurs have higher growth aspirations than established entrepreneurs. Furthermore, the average difference in points allocated to environmental and economic goals for early-stage entrepreneurs is -50.30, while for established entrepreneurs the average difference -52.10. The difference of 1.8 is relatively small, but still statistically significant, suggesting that early-stage entrepreneurs place more emphasis on environmental value creation goals than established entrepreneurs.

Table 4 shows the correlation coefficients between all the variables listed in Table 1. The coefficients indicate that so far, there are no concerns for potential multicollinearity issues. The values of the Variance Inflation Factors (VIFs) reported in the Appendix confirm this, as 1.83, the highest VIF value, is significantly lower than the most commonly used threshold of 10 (O'Brien, 2007).

Table 4: Correlation matrix

	1	2	3	4	5	6	7	8	9	10
Growth aspiration	1.000									
Environmental value creation	0.020	1.000								
Established entrepreneurship	-0.212	-0.0231	1.000							
Male	0.036	-0.012	0.054	1.000						
Age	-0.180	0.052	0.316	0.043	1.000					
Education	-0.010	0.090	0.010	0.046	0.037	1.000				
Fear of failure	-0.064	-0.029	0.019	-0.061	-0.011	-0.058	1.000			
Business angel	0.054	0.031	-0.069	0.042	-0.040	0.033	0.009	1.000		
Entrepreneurial experience	0.076	-0.003	-0.034	0.077	-0.024	0.099	-0.140	0.053	1.000	
Entrepreneurial network	0.100	-0.015	-0.100	0.077	-0.158	0.085	-0.054	0.147	0.129	1.000

The correlation coefficients reported in this table are based on 13,059 entrepreneurs in 50 countries. In regressions none/some secondary education is used as the reference category for education

3.3 Methodology

To answer the research questions, multiple linear regression analyses are performed. Due to the continuous nature of the dependent variable, the analysis is performed based on Ordinary Least Squares (OLS) estimates. The correlation between the variables is displayed in Table 4. To rule out any potential multicollinearity issues, the variance inflation factor (VIF) is calculated for these variables (see Appendix). After excluding any potential multicollinearity issues, the following model is specified to test Hypothesis 2, the moderation effect:

(1) $$Growth\ aspiration_{ij} = \beta_0 + \beta_1(Environmental\ value\ creation)_{ij} + \beta_2(Established) + \beta_3(Environmental\ value\ creation * Established) + \beta_4(Male)_{ij} + \beta_5(Age)_{ij} + \beta_6(None\ or\ some\ secondary\ education)_{ij} + \beta_7(Business\ angel)_{ij} + \beta_8(Entrepreneurial\ network)_{ij} + \beta_9(Entrepreneurial\ experience)_{ij} + \beta_{10}(Fear\ of\ failure)_{ij} + \Theta + \varepsilon_{ij}$$

This model excluding the interaction term to test the moderation effect, is used to test the direct effect of environmental value creation (relative to economic value creation) on growth aspirations (Hypothesis 1). In the notation of the dependent and independent variables, the subscript i represents an individual entrepreneur in the sample. The subscript j represents a specific country in the sample. Together, the subscript ij refers to a specific entrepreneur-country combination. The error term, ε_{ij}, captures the unobserved heterogeneity across the explanatory variables. Hypothesis 1 forms an expectation about the relationship between the environmental value (relative to economic value) creation goal and growth aspirations. This hypothesis is tested using the coefficient estimate β_1. The second hypothesis focuses on the moderation effect. Hypothesis 2 theorizes how the relationship between environmental value (relative to economic value) creation and the aspiration to grow changes as a function of the level of entrepreneurial engagement. To test for this moderation effect, an interaction term, is added to the model specification. The coefficient of this interaction term (β_3) is used to test the second hypothesis. In the analysis there are no cross-level interaction effects, however individuals are observed within multiple countries. Therefore, country fixed-effects (Θ) are included to capture the systematic differences across countries. Additionally, in OLS linear regressions homoskedasticity is assumed, which implies that the variance of the error term is constant. While this study uses cross-sectional data, the presence of heteroskedasticity is

plausible. Therefore, heteroskedasticity is controlled for through the usage of robust standard errors.

As a robustness check, the middle category used in the GEM, owner-managers of new businesses who have already set up their business but have run it for less than 42 months is not considered in the analysis. Limiting the analysis to nascent and established entrepreneurs allows for a clear distinction between entrepreneurs who have no entrepreneurial experience and those who have, and moreover those who may not and those who may have experienced the tension between economic and environmental objectives, as suggested by Holt (2012) and Santos (2012).

4 Empirical results

This study investigates the impact of environmental (relative to economic) value creation goals on growth aspirations by carrying out OLS regression analyses. Column 1 of Table 5 presents the coefficient estimates for the control variables. The results of the control variables largely conform to the predictions and findings of previous research. The coefficient for age is negative and significant, such that older people have lower growth aspirations. The coefficient for fear of failure is also negative and significant, such that people who fear failure of their business compared to those who do not have lower growth aspirations. Furthermore, being a male, having presence in an entrepreneurial network, having previous experience as a business angel and having self-reported entrepreneurial experience and are positively and significantly related to growth aspirations. Furthermore, being an established entrepreneur compared to being an early-stage entrepreneur is negatively and significantly related to growth aspirations, such that growth aspirations are 19.5% lower for established than for early-stage entrepreneurs[3]. Nevertheless, the categories of education reveal a non-significant coefficient for which previous research found a positive significant relationship (Autio, 2005; Puente et al., 2017).

Table 5 Column 2 adds the environmental value creation variable to the specification of Table 5 Column 1. This variable measures the difference in points between environmental and economic value creation goals. The coefficient estimate for environmental value creation is positive and significant. This means that, entrepreneurs who pursue environmental (relative to economic) value creation goals have significantly higher growth aspirations. Therefore, this result is supporting Hypothesis 1a. Specifically, an increase in the difference in points between environmental and economic value creation goals by 10 points, increases the entrepreneur's growth aspiration by 7%.

The explanatory power of the models are measured as the proportion of variance explained by the variables included in the models (R^2). Comparing the explanatory power for the models reported in Table 5, Columns 1 and 2, one excluding and one including the variable

[3] This interpretation and the interpretation of the coefficient estimates of the models in the remainder of the paper are calculated based on the following formula: (100*(exp(coefficient)-1)).

environmental value creation, it can be concluded that including the variable environmental value creation to the model specification of Column 1 only slightly increases the explanatory power of the model. Specifically, the explanatory power of the model increases from 12.3% to 12.4%.

Table 5: OLS regressions with growth aspiration as dependent variable: control variables, environmental value creation and interaction term included

	(1)	(2)	(3)
Dependent variable	Growth aspiration	Growth aspiration	Growth aspiration
Environmental value creation		0.007***	0.001***
		(0.0001)	(0.0004)
Established entrepreneurship	-0.217***	-0.214***	-0.241***
	(0.015)	(0.015)	(0.027)
Environmental value creation x Established entrepreneurship			-0.001
			(0.0004)
None/some secondary education			
Secondary education	0.011	0.010	0.010
	(0.017)	(0.017)	(0.017)
Post-secondary education	0.029	0.029	0.028
	(0.018)	(0.018)	(0.018)
Male	0.071***	0.072***	0.072***
	(0.012)	(0.012)	(0.012)
Age	-0.006***	-0.006***	-0.006***
	(0.001)	(0.001)	(0.001)
Entrepreneurial network	0.064***	0.064***	0.064***
	(0.013)	(0.013)	(0.013)
Entrepreneurial experience	0.093***	0.093***	0.093***
	(0.016)	(0.016)	(0.016)
Business angel	0.060**	0.056**	0.056**
	(0.027)	(0.027)	(0.027)
Fear of failure	-0.061***	-0.059***	-0.059***
	(0.014)	(0.014)	(0.014)
Country fixed effects	Yes	Yes	Yes
Observations	13,059	13,059	13,059
R-squared	0.123	0.124	0.124

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Hypothesis 2a proposes that level of entrepreneurial engagement positively moderates the positive association between the goal of the entrepreneur to create environmental (relative to economic) value and growth aspirations. Table 5 Column 3 adds the interaction term that

measures this moderation effect to the specification of Table 5 Column 2. Environmental value creation still shows a positive and significant coefficient, but an increase in the difference in points between environmental and economic value creation goals by 10 points, only increases the entrepreneur's growth aspiration by 1%. The coefficient estimate of the interaction term reveals a negative, but insignificant coefficient meaning that the association between the goal to create environmental (relative to economic) value and growth aspiration is not significantly different for established entrepreneurs compared to early-stage entrepreneurs. Thereby, not supporting Hypothesis 2a. Additionally, country fixed effects are included in the above analysis to reflect the systematic differences between countries. Although it is not the aim of this study to shed light on the differences in growth aspirations across countries, the country coefficients indicate that for 31 out of 50 countries included in the sample, the results are significantly different from those of the United States, the reference category.

4.1 Robustness check

The analysis above does include new business owners, who have already set up their business but who have run it for less than 42 months. Whereas nascent entrepreneurs do not have previous experience in the entrepreneurial process, and established entrepreneurs do, new business owners may or may not have some experience. By excluding these new business owners and limiting the sample to nascent and established entrepreneurs, the analysis can clearly differentiate between entrepreneurs with and without entrepreneurial experience as described in Section 2. This variable is named the level of entrepreneurial experience and is measured as a dummy variable taking value 1 if the respondent is categorized as established (experienced), and 0 if categorized as nascent (inexperienced). Limiting the analysis to nascent and established entrepreneurs reduces the sample from 13,059 entrepreneurs in 50 countries to 8,763 entrepreneurs in 50 countries.

Table 6 Column 1 replicates the analysis of Table 5 Column 2 but uses a sample that is limited to nascent and established entrepreneurs. The coefficient estimate for environmental value creation is negative and significant, such that entrepreneurs who pursue environmental (relative to economic) value creation goals have lower growth aspirations. An increase in the difference in points between environmental and economic value creation goals by 10 points, decreases the entrepreneur's growth aspiration by 1%. Contrary to the positive association found in the analysis above, this results supports Hypothesis 1b. Table 6 Column 2 adds the

interaction term to Table 6 Column 1. Here, environmental value creation shows a positive, but insignificant coefficient. The interaction term however reveals a negative and significant coefficient, which indicates that the association between the entrepreneur's goal to create environmental (relative to economic) value and growth aspirations is negatively moderated by the level of entrepreneurial engagement such that the negative association is weaker (more negative) for established than for nascent entrepreneurs. In particular, those entrepreneurs who emphasize environmental (relative to economic) value creation and who are operating in the established phase of the entrepreneurial process have a 0.2% lower growth aspiration than entrepreneurs who emphasize environmental (relative to economic) value creation but who are operating in the nascent stage of the process. Thereby, not supporting Hypothesis 2b. Moreover, when adding the interaction term that measures the moderation effect to the model specification, there is no longer a direct effect, and thus no longer an association between environmental (relative to economic) value creation goals and growth aspiration. The joint effect of environmental value creation and the level of entrepreneurial experience are more influential in explaining differences in growth aspirations than either the main effect of environmental value creation or the level of entrepreneurial experience.

Table 6: OLS regressions with growth aspiration as dependent variable; new entrepreneurs excluded

	(1)	(2)
Dependent variable	Growth aspiration	Growth aspiration
Environmental value creation	-0.001***	0.001
	(0.0002)	(0.001)
Experienced entrepreneurship	-0.348***	-0.248***
	(0.050)	(0.078)
Environmental value creation x Experienced entrepreneurship		-0.002*
		(0.001)
None/some secondary education		
Secondary education	-0.019	-0.019
	(0.019)	(0.019)
Post-secondary education	-0.015	-0.015
	(0.019)	(0.019)
Male	0.046***	0.046***
	(0.014)	(0.014)
Age	-0.006***	-0.006***
	(0.001)	(0.001)
Entrepreneurial network	0.050***	0.050***
	(0.014)	(0.014)
Entrepreneurial experience	0.078***	0.078***
	(0.018)	(0.018)
Business angel	0.057**	0.056**
	(0.028)	(0.028)
Fear of failure	-0.059***	-0.059***
	(0.015)	(0.015)
Country-fixed effects	Yes	Yes
Observations	8,763	8,763
R-squared	0.125	0.125

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

5. Conclusion and discussion

Although entrepreneurial activity is in general recognized as a key factor in stimulating economic growth (Wennekers & Thurik, 1999; Carree, & Thurik, 2010), one particular type of entrepreneurship accounts for the majority of new economic activity, namely high-growth entrepreneurship (Wong et al., 2005; Stam et al., 2012; Autio, 2009). Entrepreneurs differ in their aspirations regarding the future growth of their business, and hence, in their potential contribution to economy and society. To explain this variability in growth aspirations among entrepreneurs, it is relevant to understand their differences in entrepreneurial motivations. This research examines whether the goals entrepreneurs pursue are related to their growth aspirations, and in particular the entrepreneur's goal to create environmental value relative to economic value. In addition, it investigates the role of the level of entrepreneurial engagement in this association. In other words: how do the goals entrepreneurs pursue to create environmental (relative to economic) value influence growth aspirations, and how does this relationship vary across different levels of entrepreneurial engagement?

Based on findings from previous literature, this study provides theoretical explanations to support why the goal of creating environmental value (relative to creating economic value) can have a positive, as well as a negative, impact on growth aspirations. On the one hand, it is theorized that the entrepreneurs' drive to create environmental value stimulates the ability to identify and exploit opportunities, and hence, the aspiration to grow. On the other hand, it is theorized that entrepreneurs driven by the motive of creating environmental value avoid competition and compromises that they associate with business growth, and therefore, deliberately keep growth restricted. In line with the first theory, this study finds that those entrepreneurs who emphasise environmental (relative to economic) value creation goals have higher growth aspirations. This suggests that, as entrepreneurs pursue environmental value creation goals, they are encouraged to emphasize with other's viewpoint as suggested by Meglino and Korsgaard (2004) and De Dreu and Nauta (2009), and through that build a broader and more complete view of perspectives that advances the ability to identify and exploit opportunities (Shane & Venkataraman, 2000).

Although a positive association is observed, there may still be entrepreneurs who aim to stay in their small and exclusive niche, and deliberately keep growth limited. The robustness analysis provides material this discussion while when the analysis is restricted to nascent and

established entrepreneurs, the goal to create environmental (relative to economic) value is negatively and significantly related to growth aspirations, such that entrepreneurs strongly driven by the motive to create environmental value have lower growth aspirations. A possible reason for the different result when using different samples is that owner-managers of new businesses may feel that they have built a reputation and knowledge base, that allows them to compete with incumbents in the market while they expect customers and shareholders to be loyal to the sustainable brand of the business and they therefore still aspire growth of their business. Nascent entrepreneurs on the other hand, have not officially started a business yet, and hence, have not built any reputation or brand around their ideas, making them well aware that they are vulnerable to the uncertainty and competition in the market. While there are only 253 nascent entrepreneurs in the estimation sample, the negative effect of these nascent entrepreneurs in the main analysis is probably offset by the positive effect of the 4,435 owner-managers of new enterprises. While two different but also two significant relationships are found depending on the sample of the analysis, it is recommended for future research to separate nascent entrepreneurs from new business owners.

Moreover, this model may suffer from reverse causality. In other words, it may be that part of the association between the goal of creating environmental (versus economic) value and growth aspirations stems from the fact that entrepreneurs with high growth aspirations are more likely to set goals on creating environmental value. Labella-Fernández et al. (2021) explain that the growth of a business, through the generation of income and an increase in the workforce, encourages investment in financial, human and time resources, which in turn influences the adoption of environmental practices. Moreover, it may be that entrepreneurs who aspire growth of their business have a larger focus on sustainability, while these firms are well aware that in order to grow, unmet needs have to be satisfied in order to identify new customer segments. These needs are often created by sustainability movements (McKinsey & Company, 2011). In that case, the model may suffer from an endogeneity problem, probably caused by an omitted variable bias. Instrumental variables can solve the omitted variables bias by using part of the variation in environmental value creation uncorrelated with the omitted variable, to estimate the relationship between environmental value creation goals and growth aspirations. As an example, in recent years, the implementation of environmental regulations has been a strong motivation for firms to focus on environmental practices (Muñoz-Pascual et al., 2019). Environmental regulations, such as environmental taxes or legislation, could be

a valid and relevant potential instrumental variable to control for the omitted variable bias while they are suggested to have a causal effect on the adoption of environmental objectives but do not independently affect the aspiration to grow. However, data on environmental regulations is not present in the GEM and cross-sectional data cannot address causality, thus for future research, it would be useful to construct IV regressions while using longitudinal data because it would allow for a stronger IV while repeated measured are used.

The second main findings of this research concerns the moderating role of the level of entrepreneurial engagement in the relationship between the entrepreneur's goal to create environmental (relative to economic) value and growth aspirations. In contrast to the positive moderation effect that is expected, the interaction term measuring the moderation effect shows a negative and non-significant result, meaning that the association between the goal to create environmental value (relative to economic value) is not significantly different for established compared to early-stage entrepreneurs. Although the results show an insignificant coefficient, one possible reason for the negative association is that entrepreneurs driven by other-regarding motives may have overoptimistic aspirations. Environmental, sustainable and social entrepreneurs are known for their strong ambitions to create value for others in society. It is possible that these ambitions may interfere with a realistic perception of the future of their business and that unlike early-stage entrepreneurs, established entrepreneurs who tend to have a more realistic perspective of the future (e.g., Levie & Autio, 2013; Verheul & Van Mil, 2011; Bager & Schøtt, 2004) may diminish these ambitions to a more realistic perspective. A second possible reason is that established entrepreneurs may have the skills and resources to identify and exploit promising business opportunities but they may also be constrained by their routines and existing assets that reflect their past investments, which prevent them from taking advantage of business opportunities because they could disrupt the current business operations (Hockerts & Wüstenhagen, 2010; Cecere et al., 2014). For that reason, established entrepreneurs may be more reluctant to invest and act than entrepreneur in the early stage of the businesses process while these early-stage entrepreneurs are not hampered by past experiences and fear of cannibalization, and thus may be more open to these 'more promising' opportunities.

Furthermore, after limiting the analysis to nascent and established entrepreneurs, as opposed to the expectations of this study, the level of entrepreneurial engagement is found to negatively moderate the negative association between the goal to create environmental

(relative to economic) value and growth aspirations such that the negative association is weaker (more negative) for established than nascent entrepreneurs. A possible reason for this is that although established firms may have the skills and resources to overcome trade-offs between environmental and economic objectives, they are likely to have an already higher current level of employment while they have successfully survived in the market for some time, which has been found to negatively affect the entrepreneur's growth aspirations (Estrin et al., 2013). A second reason may be that while established entrepreneurs are suggested to be considerably more realistic than nascent entrepreneurs, they are more aware of the market constraints and challenges, such as the uncertain demand. It is possible that these experienced entrepreneurs therefore deliberately choose not to overcome compromises on their environmental ideals, because they are more realistic about the costs which may not outweigh the benefits, due to the uncertainty in the market. For future research it would be interesting to further explore whether there are specific characteristics of entrepreneurs at different levels of the business process, that affect the association between environmental value creation and growth aspirations such as experience, the possession and availability of resources and gender.

5.1 Research contribution

The findings advance research on entrepreneurship theory in several ways. First, it extends research on the impact of the pursuit of other-regarding interests on entrepreneurial outcomes. Sustainable, social and environmental forms of entrepreneurship are characterized by the pursuit of other-regarding motivations, and they have extensively been discussed in previous literature, however the consequences of these other-regarding interests have been less well-researched. Those who have investigated the impact of pursuing other-regrading motives on entrepreneurial outcomes have focused on organizational challenges (Battilana & Lee, 2014), innovation (Hoogendoorn et al., 2020; Hechavarría & Welter, 2015) and start-up success (Renko et al., 2013). Nevertheless, previous studies examining the consequences of heterogeneity in motivation on growth aspirations have focused on self-regarding interest and have neglected the possibility that individuals may be driven by other-regarding motives. This study indicates the importance of taking into account both self- and other-regarding motives when explaining entrepreneurial outcomes, by showing that the pursuit of other-regarding

motives does have important consequences for growth aspirations. By taking into account both self- and other-regarding motives this study offers more accurate results when explaining entrepreneurial outcomes.

Secondly, the findings contribute to literature on the variability in growth aspirations among different levels of entrepreneurial engagement, that until this point only considered the direct effect of the different levels of engagement (e.g., Davidsson, 1991; Reynolds et al., 2005; Levie & Autio, 2013; Verheul & Van Mil, 2011; Bager & Schøtt, 2004). The results indicate how the level of entrepreneurial engagement may play a role in reconstructing the growth aspirations of environmental entrepreneurs. Even though the findings of the moderating role of the level of entrepreneurial engagement do not conform to our expectations, the results demonstrate the importance of recognizing the different challenges and constraints faced at each stage of the process so that policymakers can provide these entrepreneurs with the necessary capabilities and resources to overcome them.

5.2 Policy implications

The findings of this study provide several recommendations for policymakers. First, understanding the heterogeneity in entrepreneurial motivations among entrepreneurs, and hence, their contribution to the economy helps policymakers to develop effective targeting policies in a desired direction. Developing effective targeting policies towards high-growth entrepreneurs requires an understanding of what drives these entrepreneurs; however, such policies are often implemented without a correct understanding of the individual's motivation for running a business. One entrepreneurial motivation that not only for research economists, but also for policymakers seems to be a common focus is economic self-interest (Cohen et al., 2008). The results however demonstrate that entrepreneurs motivated by a strong drive to create environmental (relative to economic) value have higher growth aspirations. This finding challenges the appropriateness of the assumption that states that individuals are primarily motivated by economic self-interest which is embodied in many policy instruments. They suggest that also policymakers should start focusing on entrepreneurship motivated by other-regarding interests, as this type of entrepreneurship has important implications for growth and innovativeness (Hoogendoorn et al., 2020; Hechavarría & Welter, 2015). Entrepreneurs driven by the goal to create environmental (relative to economic) value have higher growth

aspirations possibly because they are better able to recognize and exploit opportunities. To encourage the arrival of high-growth entrepreneurs, policymakers could focus on encouraging other-regarding behaviour, and through that the identification of opportunities by for instance setting up educational programmes. According to Estrin et al. (2016) education and especially higher education is shaping the motivation of entrepreneurs regarding the pursuit of other-regarding motives relative to self-regarding motives. Nevertheless, it is important to consider that when the analysis is limited to nascent and established entrepreneurs, the association between environmental (relative to economic) value creation goals and growth aspirations is negative. This suggests that entrepreneurs at different levels of the entrepreneurial process may require different policy instruments to encourage high-growth entrepreneurship. Hence, further research is needed in order to gain a deeper understanding in this relationship across different levels of entrepreneurial engagement such that policies can effectively be targeted towards entrepreneurs at different levels of the process.

Second, the results demonstrate that it is highly important to recognize the differences in growth aspirations at the different levels of the entrepreneurial process and, consequently, the different support needs for each level, so that support and policies can be designed to ensure that both nascent and established businesses have a realistic perspective on the future growth of their business. It is especially important for nascent entrepreneurs, who tend to have overoptimistic or unrealistic aspirations, to be more realistic in defining their aspirations regarding the growth of their business. The downside of setting growth aspirations too high, that are not in line with the challenges and constraints of the market, is that many of these entrepreneurs eventually will drop out of the process (Renko, 2013; Dunne et al., 1988), and those entrepreneurs who continue, will scale back their growth aspirations. Helping nascent entrepreneurs familiarize themselves with challenges and constraints in the market and setting goals accordingly could reduce the number of nascent entrepreneurs who leave the process because they had unrealistically high expectations. This could be done, for example, through corporate training delivered by professionals, or support networks that include role models operating in similar industries.

5.3 Limitations and future research

The empirical part of this study also contains several limitations such as a small sample size and cross-sectional data. First, although GEM is a rich database that covers a wide range

of individuals and countries, this study has not been able exploit the data to its full potential. Limiting the analysis to nascent, new and established entrepreneurs and a significant number of missing values on questionnaire items related to current and expected employment levels and organizational goals led to a large deduction in the final estimation sample size.

Secondly, in line with several previous studies (e.g., Hessels et al., 2008; Wong et al., 2005; Autio & Acs, 2010; Tominc & Rebernik, 2007), this study uses job creation expectation as a measure for growth aspirations. This measure takes into account what an entrepreneur wants to achieve but also the opportunities and constraints he or she perceives. Hermans et al. (2015) and Verheul and Van Mil (2011) argue that the aspiration of entrepreneurs should not be defined according to what they expect, but rather on what they intrinsically desire. Based on the Panel Study of Entrepreneurial Dynamics (PSED) Verheul and Van Mil (2011) find entrepreneurs who report having an aspiration to grow without having an expectation to grow and visa-versa. It may be that entrepreneurs with high environmental performance want to remain small and exclusive to avoid competition and compromise on their ideals (Hockerts & Wüstenhagen, 2010; Vickers & Lyon, 2014), however, from a realistic perspective they may still expect to grow, for instance, due to pressure from large incumbents. Therefore, it would be interesting to disentangle the willingness from the expectation and examine, who wants to grow their business, and who expects to grow their business, and if these two are not aligned, investigated why that is, while it has important implications for policy. This could for instance be done based on growth aspiration and growth expectation measures of the PSED in line with Verheul and Van Mil (2011).

Thirdly, this study focuses on one particular year, 2009, while organizational goals are not an annual questionnaire item in the GEM survey. The timing of this study, and hence, the corresponding results are therefore not guaranteed to be representative. Moreover, due to the cross-sectional nature of GEM data, this data cannot be used to analyse behaviour over a period of time. It would be interesting to more in-depth investigate the relationship between environmental (relative to economic) value creation and growth aspirations by investigating how growth aspirations are adjusted throughout the entrepreneurial process depending on the entrepreneurial motivation, from the intention of starting a business until it is considered established. Several prior studies (e.g., Santos, 2012; Holt, 2012; Hockerts & Wüstenhagen, 2010: Hörisch et al., 2019) suggests that entrepreneurial motivation may significantly change over time, individuals who started a business from a desire to create environmental value may

become motivated by financial rewards once their business becomes successful. Moreover, in line with previous studies (e.g., Davidsson; 1991; Bager & Schøtt, 2004; Henríquez-Daza et al., 2019) this study finds growth aspirations to be significantly different among different levels of entrepreneurial engagement. How entrepreneurial motives change over time, and how this affects aspirations throughout the entrepreneurial process, however, currently cannot be explored by using GEM data as it does not have panel datasets with information on growth aspirations and motives for the same individual over time. Therefore for future research, it would be interesting to have longitudinal information on these variables corresponding to the different levels of entrepreneurial engagement. Thus, the impact of other-regarding motives still offers many opportunities for future research.

Overall, the findings of this study contribute to our knowledge on the drivers of high-growth entrepreneurship and provide an important step towards recognizing the importance of considering other-regarding motives when studying entrepreneurial outcomes. Conducting OLS regression analysis based on data from the GEM demonstrates that entrepreneurs who are strongly motivated by the goal of creating environmental (relative to economic) value have higher growth aspirations. However, when the analysis is restricted to nascent and established entrepreneurs, a negative association is found and the level of entrepreneurial engagement is found to negatively moderate the negative association between the entrepreneur's goal to create environmental (relative to economic) value and growth aspirations. Overall, it can be concluded that the heterogeneity in entrepreneurial motivation is an important source for understanding the variability in growth aspirations among entrepreneurs, and that further research is needed to gain a deeper understanding of this relation, and the factors associated with it.

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Appendix

Table 1: VIFs OLS regression including control variables and environmental value creation

Variable	VIF
Environmental value creation	1.17
Established entrepreneurship	1.17
Secondary education	1.71
Post-secondary education	1.83
Male	1.06
Age	1.31
Entrepreneurial network	1.13
Entrepreneurial experience	1.14
Business angel	1.06
Fear of failure	1.08