



Growth expectations of entrepreneurs during crisis: the role of social, environmental, and economic motivations

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Abstract Economically motivated entrepreneurship is argued to contribute to society by creating economic growth and jobs, while socially and environmentally motivated entrepreneurship is positioned as a way of addressing societal needs. We relate this heterogeneity in entrepreneurs' motivations to growth expectations and ask whether the effects of these motivations differ under conditions of adversity, specifically in the context of an economic crisis. We argue that during an economic crisis, socially and environmentally motivated entrepreneurs may expect

to grow, in contrast to economically motivated entrepreneurs who often scale back their growth expectations in times of adversity. We test our predictions in multilevel analyses of data from 5605 entrepreneurs across 48 countries collected during the Global Financial Crisis. We find that socially and environmentally motivated entrepreneurs had higher growth expectations than economically motivated entrepreneurs. These relationships were mediated by lower perceived market competition. For environmentally motivated entrepreneurs, higher opportunity perception also acted as a mediating mechanism. By bridging research on growth expectations with research on social and environmental entrepreneurship, our study contributes new insights to both streams of research. It also contributes to entrepreneurship research on crises and adversity by highlighting how motivations shape entrepreneurs' responses to crises and by unpacking the individual-level cognitive mechanisms involved.

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Plain English Summary Do socially and environmentally motivated entrepreneurs thrive when the economy shrinks? Surprisingly, we find that they hold higher growth expectations than their economically motivated counterparts during an economic crisis. While economic downturns often lead profit-driven entrepreneurs to scale back their growth expectations, our findings suggest that entrepreneurs with social and environmental motivations respond to

urgent societal needs that a crisis creates with *higher* growth expectations. Thus, socially and environmentally motivated entrepreneurs can play an important role not only in addressing broader societal challenges, but also in sustaining job creation during periods of adversity and possibly beyond. The implication is that policy makers should pay attention to the growth expectations of socially and environmentally motivated entrepreneurs which are often overlooked. More generally, this research highlights the importance of understanding the diverse motivations of entrepreneurs because these affect their economic strategies during crises.

Keywords Growth expectations · Social entrepreneurship · Environmental entrepreneurship · Entrepreneurial motivation · Crisis · Adversity · Opportunity · Competition · Global Entrepreneurship Monitor

JEL Classifications L21 · L26 · L31

1 Introduction

Research on social and environmental entrepreneurship is growing rapidly, as reviewed by Gast et al. (2017), Saebi et al. (2019), and Vedula et al. (2022). Considering grand societal challenges, such as poverty, inequality, and climate change, researchers are increasingly attentive to entrepreneurship that seeks to address social and environmental issues (Dacin et al., 2011). However, one of the ways that all entrepreneurs can positively contribute to society, regardless of their motivations, is by providing employment for others through growing their own ventures (Rawhouser et al., 2019; Van Praag & Versloot, 2008). For social and environmentally motivated entrepreneurs, growing their own ventures is one way of amplifying their impact (for example, alongside advocacy, Mair & Rathert, 2025). Yet intriguingly, we know little theoretically and empirically about the growth expectations of socially and environmentally motivated entrepreneurs.

Growth expectations reflect entrepreneurs' willingness to expand their businesses, typically by expanding sales and hiring more employees (Cassar, 2006; Delmar & Wiklund, 2008). These expectations are a necessary condition for firm growth, as entrepreneurs

without growth expectations are unlikely to devote the resources, time, and effort required to realize expansion (Ajzen, 1991). Thus, while growth expectations are distinct from realized growth, they represent entrepreneurs' forward-looking strategic intent which is essential for how entrepreneurs interpret their environment and plan future action, consistent with Strategic Entrepreneurship Theory (Hitt et al., 2011; Ireland et al., 2003). Growth expectations are not a sufficient condition for realized growth because entrepreneurs cannot fully control growth which is also shaped by shifting environmental and market conditions (Ajzen, 1991).

There is a large body of research on growth (Demir et al., 2017; Nason & Wiklund, 2018) and the growth expectations (Stam et al., 2012) of economically motivated entrepreneurs. By comparison, the literature is underdeveloped and inconclusive regarding the growth expectations of socially and environmentally motivated entrepreneurs and in which contexts they seek to grow their enterprises. Some scholars have suggested that socially/environmentally motivated entrepreneurs may be risk-averse and thus may have low growth expectations (Lumpkin et al., 2013; Weerawardena & Mort, 2006). Growth may increase tensions between social/environmental and economic motivations and lead to mission drift (André & Pache, 2016; Battilana & Dorado, 2010). In anticipation of such tensions, socially and environmentally motivated entrepreneurs may restrain their growth expectations. However, other scholars have posited that socially and environmentally motivated entrepreneurs may be willing to bear the risks associated with growth, intending to scale up their social/environmental impact and taking advantage of the abundance of opportunities related to addressing social/environmental needs (Dees et al., 2004; Zahra et al., 2008). For instance, Bosma et al. (2016) note descriptively that social entrepreneurs tend to be optimistic about growth, but simple mean differences and frequencies may mask the impact of confounding variables. Thus, existing work offers conflicting theorizing and little systematic evidence on the growth expectations of socially and environmentally motivated entrepreneurs.

We have even less understanding of how socially and environmentally motivated entrepreneurs aspire to grow in adverse macroeconomic conditions such as economic crises (Bacq & Lumpkin, 2021; Barki

et al., 2020; DesJardine et al., 2019). It is important to address this gap because crises are becoming more frequent again, including poly-crises (Batjargal et al., 2023; Klyver & McMullen, 2025; Newman et al., 2022). These adversities aggravate social and environmental problems, which socially and environmentally motivated entrepreneurs are well placed to address. Thus, a period of crisis is a theoretically meaningful setting for studying how entrepreneurs' social, environmental, and economic motivations impact their growth expectations. Consistent with this, we examine growth expectations in the context of the 2008/09 Global Financial Crisis (GFC). The crisis literature documents retrenchment, risk aversion, liquidity constraints, and the scaling back of innovation and strategic initiatives across firms during such economic downturns (Cowling et al., 2012a, b; DesJardine et al., 2019; Klapper & Love, 2011; Lee et al., 2015). Economic crises suppress the growth expectations of economically motivated entrepreneurs (Cowling et al., 2014). Likewise, the literature on sustainability suggests that while economically motivated entrepreneurs and firms may pursue broader societal goals when profitable, they are likely to retract from these when the path to profitability becomes uncertain during crises (Bansal et al., 2015; Panwar et al., 2015). During macroeconomic crises, firms commonly prioritize short-term survival, reduce investment horizons, and narrow their strategic objectives (Flammer, 2013; Panwar et al., 2015).

At the same time, crises can exacerbate social and environmental problems (Quelch & Jocz, 2009; Ruel et al., 2010a, b), heightening unmet social and environmental needs. Socially and environmentally motivated entrepreneurs may thus view a crisis as increasing the relevance of their mission and expanding problem spaces relevant to their motivation (Barki et al., 2020; Quelch & Jocz, 2009; Verick et al., 2021). Thus, heightened social and environmental needs and changed competitive dynamics due to retrenchment of competitors (i.e., economically motivated entrepreneurs, as discussed above) may open up new opportunities for socially and environmentally motivated entrepreneurs. In fact, socially and environmentally motivated entrepreneurship may be well suited to grow in times of adversity. Social and environmental practices enhance the crisis resilience of firms (DesJardine et al., 2019; Flammer, 2013) and social enterprises have been found to respond quickly

to immediate social needs during crises (Haugh & Talwar, 2016; Ibrahim & El Ebrashi, 2017), including during the COVID-19 pandemic, when social enterprises mobilized resources rapidly to address urgent needs (Barki et al., 2020; Batjargal et al., 2023; Farhoud et al., 2021).

Together, these crisis-specific shifts in opportunities and competitive conditions suggest that entrepreneurs with different motivations may interpret adverse environments in systematically different ways. Yet empirical evidence on whether social and environmental motivations shape entrepreneurs' growth expectations during crises remains lacking, and thus a potential source of job creation during crises remains poorly understood. In response, our research seeks to enhance the understanding of the link between motivational heterogeneity in entrepreneurship (social/environmental vs economic motivation) and growth expectations, in the theoretically meaningful context of adversity (specifically the Global Financial Crisis). Furthermore, we seek to unpack the individual-level mechanisms (opportunity perceptions and perceived market competition)—i.e., the “how”—through which motivational heterogeneity relates to growth expectations in the context of adversity. We propose that socially and environmentally motivated (as opposed to economically motivated) entrepreneurs perceive more growth-relevant opportunities (due to heightened societal and environmental needs) and reduced market competition (due to commercial ventures' retrenchment) during crises. We test our hypotheses about the relationship of entrepreneurs' motivations with their growth expectations, and about mediating effects (via perceived opportunities and competition), in a sample of 5605 owner-managers of young businesses in 48 countries during the 2008/2009 Global Financial Crisis, applying multi-level modelling.

This paper makes the following contributions. First, we bridge the largely separate literatures on social and environmental entrepreneurship and on entrepreneurs' growth expectations. By theorizing and documenting how entrepreneurs' motivational heterogeneity relates to growth expectations, we offer new insights that are relevant to both bodies of literature. We advance the literature on growth expectations (e.g., Davidsson & Wiklund, 2013; Nason & Wiklund, 2018; Stam et al., 2012) by introducing differences in entrepreneurs' motivations as an important hitherto overlooked source

of differences in growth expectations. Existing work on ambitious or high-growth entrepreneurship assumes that entrepreneurs' growth aspirations are driven by economic motivation. Our findings help shift this view by suggesting that social and environmental motivations can also drive growth expectations, and even more strongly than economic motivation. Our findings also help to advance the nascent conceptual debate in the social and environmental entrepreneurship literature about the growth expectations of these entrepreneurs (André & Pache, 2016; Battilana & Dorado, 2010; Dees et al., 2004; Lumpkin et al., 2013; Zahra et al., 2008).

Second, our study contributes to entrepreneurship research on adversity and crises (e.g., Batjargal et al., 2023; Newman et al., 2022; Stephan et al., 2023) by pointing to social and environmental entrepreneurship as a hitherto overlooked "engine of growth" in times of adversity when growth is needed most, as well as by unpacking the individual- or micro-level mechanisms (the "how") that link entrepreneurs' motivations (social and environmental vs. economic motivations) with growth expectations in times of crises. These are important insights as crises and adversity are commonplace (Batjargal et al., 2023; Klyver & McMullen, 2025). Specifically, our study builds on the extant insights on the importance of perceptions of opportunity and of competition (e.g., Bhawe, 1994; Kirzner, 1973; Shane & Venkataraman, 2000) to highlight how these micro-level mechanisms link entrepreneurs' heterogeneous motivations with their growth expectations. We find that in the context of crisis, socially and environmentally (vs. economically) motivated entrepreneurs exhibit higher growth expectations, which is explained by their perceptions of diminished competition and increased opportunity. This nuances the dominant perspective of crises as threats to entrepreneurial activities (e.g., Batjargal et al., 2023; Bullough & Renko, 2013; Terjesen et al., 2016b) to suggest that crises can catalyze growth expectations in social and environmental entrepreneurs. Thus, our study newly foregrounds motivational heterogeneity and micro-level mechanisms as relevant for understanding how entrepreneurs respond during crises.

2 Theoretical framework and hypotheses development

2.1 Motivational heterogeneity: social, environmental, and economically motivated entrepreneurs

Entrepreneurship research used to assume that entrepreneurial activity is solely driven by economic motivation, that is, by seeking financial gains for entrepreneurs and investors (Schumpeter, 1934; Carsrud & Brännback, 2011). Yet, there is increasing acknowledgement that entrepreneurs pursue diverse motivations that often coexist while varying in importance (Schaefer et al., 2015; Wach et al., 2016; Welter et al., 2017). Social and environmental entrepreneurship is an example of motivational heterogeneity, whereby entrepreneurs have social/environmental motivations alongside economic motivations, aiming to create desirable outcomes for stakeholders, society, and the environment (Elkington, 2013; Vedula et al., 2022).

Social motivation reflects entrepreneurs' desire to direct their organizations' activities towards the creation of social value, i.e. value for others (Stephan et al., 2025). Socially motivated entrepreneurs care for the alleviation of social needs such as poor living conditions, inequality, social exclusion, and public health issues (Mair & Marti, 2006; Short et al., 2009; Zahra et al., 2009) by, for example, providing goods to marginalized and disadvantaged groups, or innovating to address deprived market segments. In turn, environmental motivation reflects entrepreneurs' desire to direct their organizations' activities towards the preservation and regeneration of the natural environment (Dean & McMullen, 2007; Schaltegger, 2002; York & Venkataraman, 2010). Environmentally motivated entrepreneurs seek to address these issues through, for example, providing eco-friendly products/services, preventing pollution, recycling, producing clean energy, or building environmental management systems.

In this study, we conceptualize motivational heterogeneity as systematic differences between entrepreneurs in their motivations, captured through their relative prioritization of economic, social, and environmental value creation goals. This conceptualization

builds on the entrepreneurial motivation literature, which emphasizes that motivations shape how entrepreneurs attend to, interpret, and act upon their environments (Murnieks et al., 2020). Motivations are entrepreneurs' stable priorities that guide their attention, interpretation of opportunities, and energize their actions.¹ Thus, motivations influence what entrepreneurs perceive as salient needs, opportunities, and constraints in their environment. Under conditions of economic adversity, such as macroeconomic crises, these motivational differences may become particularly salient, as heightened uncertainty requires entrepreneurs to interpret rapidly changing environments. Motivations may therefore shape how entrepreneurs make sense of adverse conditions and form expectations about future growth.

2.2 Growth expectations

Growth expectations² reflect entrepreneurs' willingness to expand their businesses (Cassar, 2006; Delmar & Davidsson, 2006; Stam et al., 2012, for a review). Conceptually, growth expectations capture entrepreneurs' forward-looking growth aspirations or intentions, that is, their anticipated commitment to pursue expansion rather than a record of realized outcomes. This emphasis on future-oriented commitment is consistent with intention-based reasoning in entrepreneurship, where intentions precede and shape later behavior (Ajzen, 1991). While prior research shows that growth expectations are positively associated with later business expansion (Cassar, 2006; Delmar & Wiklund, 2008), growth expectations capture forward-looking assessments of growth potential

rather than realized growth outcomes and may not always translate into realized high-impact entrepreneurship (Levie & Autio, 2013).

More specifically, building on Strategic Entrepreneurship Theory (Hitt et al., 2011; Ireland et al., 2003) underpinned by the theory of planned behavior (Ajzen, 1991), we conceptualize growth expectations as part of the entrepreneur's strategic intent to mobilize resources, invest in capabilities, and prepare for future value creation (Davidsson & Wiklund, 2013; Kuratko & Audretsch, 2009). Accordingly, expectations serve as indicators of strategic intent. They represent a necessary but not sufficient condition for growth, since the pursuit and realization of growth often unfold over time and can be derailed by changing environmental circumstances. This is aligned with the psychological mechanisms outlined in the theory of planned behavior (Ajzen, 1991) and well-documented for different domains (e.g., Feil et al., 2023): intentions are good but not perfect predictors of realized behavior because individuals do not always have sufficient control over their environment to implement their behavior.

Realized growth typically materializes with considerable time lags, meaning that expectations formed in the present cannot be assumed to predict contemporary outcomes. This underscores the need to conceptually separate expectations from realized growth while recognizing the relevance of expectations as expressions of entrepreneurs' strategic intent.

From a policy perspective, growth *expectations* are relevant because early-stage ventures typically lack observable performance outcomes. Policymakers and ecosystem analysts use growth expectations as lead indicators of entrepreneurial dynamism and anticipated job creation, particularly in crisis periods when these issues become particularly salient (GEM, 2016; OECD, 2017). Expectations therefore act as anticipatory signals of whether entrepreneurs perceive it as viable to pursue expansion under heightened uncertainty.

There are various aspects of growth, the two most prominent being sales/revenue and employment growth (Davidsson et al., 2010; Nason & Wiklund, 2018), which are often closely aligned (Chandler et al., 2009; Davidsson et al., 2010). We focus on employment growth, which can also be seen as a way to generate social impact, especially in the context of

¹ This focus on individual-level motivation is distinct from frameworks examining the degree of hybridity in social ventures, which at the level of the organization is concerned with balancing social and economic logics (e.g., Shepherd et al., 2019).

² The terms "growth aspirations" and "growth expectations" are sometimes used interchangeably in the literature (e.g., Jayawarna et al., 2013; Levie & Autio, 2013; Levie & Hart, 2012). We refer to "growth expectations" consistent with our operationalization (see Sect. 3.2) and research setting. Ambitions can be seen to reflect primarily the values and traits of the individual, whereas expectations can be seen to be shaped by environmental constraints and opportunities *alongside* the individual's internal values and traits.

a crisis that leads to unemployment due to the retraction or closure of many businesses.

2.3 Motivational heterogeneity and growth expectations during economic crises

While some scholars propose that socially and environmentally motivated entrepreneurs have weak growth expectations due to risk aversion, resource constraints, or concerns about mission drift (André & Pache, 2016; Lumpkin et al., 2013; Weerawardena & Mort, 2006), others contend that growth is essential for scaling social impact, and that socially and environmentally motivated entrepreneurs may actually have stronger growth expectations than their economically driven counterparts (Dees et al., 2004; Zahra et al., 2008). However, empirical evidence on how socially and environmentally motivated entrepreneurs form growth expectations—particularly in the context of economic adversity—is missing.

What we know about growth expectations during crises comes from research on economically motivated entrepreneurs. Specifically, economic downturns, such as the 2008/2009 Global Financial Crisis, negatively impacted entrepreneurial activities due to reduced demand for products and services (Koos et al., 2017; Shane, 2011), limited access to financing (Cowling et al., 2012a, b; Newman et al., 2022), and decreased investments in innovation (Lee et al., 2015). While there is also some evidence that in crises, economically motivated entrepreneurs express growth expectations (Giotopoulos et al., 2017), these tend to be more muted (Cowling et al., 2014). More generally, economic recession is negatively associated with entrepreneurs' growth expectations (Fuentelsaz et al., 2023).

Emerging research on how social enterprises respond to crises suggests that they step in where traditional businesses and government institutions fall short. For instance, case studies during the COVID-19 pandemic and disaster-prone areas documented the resilience of social enterprises, driven by adaptability and quick resource mobilization (Batjargal et al., 2023; Farhoud et al., 2021; Wukich, 2019). Related, Anokhin et al. (2023) find higher rates of new social enterprises in areas (counties) with more pronounced market and government failures following the dot-com crisis.

The literature highlights specific strategies that social enterprises employ to navigate crises. For

instance, anchored reflectiveness, a process of continuously evaluating operations against core mission goals, enables them to adapt and sustain their impact during adversity (Muñoz et al., 2019). Similarly, proactive community engagement has been found to be critical for maintaining momentum and achieving social goals during crises (Perrini et al., 2010). These studies suggest that social and environmentally motivated entrepreneurs may interpret and respond to crises differently from economically motivated entrepreneurs.

Unlike economically motivated entrepreneurs, socially and environmentally motivated entrepreneurs may perceive crises not only as threats but also as opportunities to scale their impact, driven by heightened societal needs (Desa, 2012; Zahra et al., 2008). Indeed, crises increase unemployment, deepen social precarity, reveal previously hidden vulnerabilities and more generally exacerbate unsolved social and environmental problems or create new ones (Barki et al., 2020; Quelch & Jocz, 2009; Ruel et al., 2010a, 2010b; Verick et al., 2021). For instance, the Global Financial Crisis undermined global progress in reducing poverty (ILO, 2015) and was associated with a slowdown in pro-environmental policies and commercial innovation and investments in environmental issues according to the United Nations Environment Programme (Barbier, 2020). These dynamics deepen social and environmental needs and thereby can expand demand for socially oriented products and services, amplifying the opportunity space for social and environmentally motivated entrepreneurs. Thus, socially and environmentally motivated entrepreneurs may leverage growing social/environmental needs as a pathway for expansion, seeing crises as opportunities for growth and increased impact rather than mere obstacles (Schneider & Schreyögg, 2023; LiñaresZegarra & Wilson, 2023).

During crises, socially and environmentally motivated (vs. economically motivated) entrepreneurs may also face lower competition. Social and environmental issues are often complex, defying existing solutions (Ferraro et al., 2015). Hence, social and environmental (vs economic) ventures are riskier and require more time and effort (Renko, 2013), while results often only materialize in the long term (Stephan et al., 2016). These factors jointly may explain why socially and environmentally motivated entrepreneurship is generally less common than economically

motivated entrepreneurship (e.g., Bosma et al., 2016). Put differently, socially and environmentally motivated entrepreneurs face less competition than their economically driven counterparts. Crisis research indicates that incumbents often retrench or exit markets during downturns (Choudhry et al., 2012; Moscarini & Postel-Vinay, 2012; Pavlínek & Ženka, 2010), which may further widen the competitive space for mission-driven entrepreneurs. Thus, in the context of a crisis, socially and environmentally (vs. economically) motivated entrepreneurs may expect to grow more due to the decreased competition.

The simultaneous expansion of societal needs and contraction of incumbent activity and competition create conditions conducive to higher growth expectations among socially and environmentally (vs. economically) motivated entrepreneurs. Based on these arguments, we propose the following hypothesis:

Hypothesis 1: Growth expectations of socially (H1a) and environmentally (H1b) motivated entrepreneurs are higher than those of economically motivated entrepreneurs during an economic crisis.

2.4 Crisis-specific cognitive mechanisms

Entrepreneurial Cognition Theory explains how entrepreneurs interpret uncertain environments through cognitive structures such as scripts, heuristics, and interpretive schemas (Baron, 1998; Mitchell et al., 2002, 2007). These cognitive structures shape what entrepreneurs notice, how they frame environmental cues, and how they form expectations about future action (Grégoire et al., 2011; Krueger, 2003). Under conditions of heightened uncertainty, such as economic crises, entrepreneurs rely even more heavily on these mechanisms to reduce ambiguity and make rapid sense of shifting conditions (Alvarez & Barney, 2020; Cornelissen & Clarke, 2010; McMullen & Shepherd, 2006).

This perspective also highlights how motivations guide selective attention (to issues aligned with motivations) and the evaluative criteria entrepreneurs apply when judging environmental information (Grégoire & Shepherd, 2012; Mitchell et al., 2000). In crisis settings, this means that compared to economically motivated entrepreneurs, socially and environmentally motivated entrepreneurs may attend to different needs, gaps, and threats by prioritizing cues

aligned with social or environmental value creation that become more salient during adversity. Building on this logic, we conceptualize both opportunity perception and perceived competition as individual-level, crisis-specific cognitive mechanisms through which motivation shapes entrepreneurs' growth expectations in the context of an economic crisis.

2.4.1 Opportunity perception during the economic crisis

Opportunity perception is considered a critical element of entrepreneurship (Bhave, 1994; Shane & Venkataraman, 2000), but especially of ambitious, high-growth entrepreneurship (Hermans et al., 2015; Stam et al., 2009). Entrepreneurs explore market opportunities and exploit them via mobilizing resources to realize their growth expectations. Moreover, opportunities continue to be identified or constructed during the entrepreneurial process (Alvarez & Barney, 2007, 2020).

Building on Entrepreneurial Cognition Theory, we posit that opportunity perception during an economic crisis reflects how entrepreneurs selectively attend to and interpret signals of unmet needs, gaps, and emerging problem spaces. Entrepreneur's motivation matters because it focuses attention on cues related to what the entrepreneur values. Accordingly, socially and environmentally motivated entrepreneurs are cognitively predisposed to notice crisis-related needs that may remain less salient to economically motivated entrepreneurs.

Thus, socially motivated entrepreneurs are likely more attuned to cues and opportunities related to these crisis-driven increases in needs due to how their motivations guide their attention. They are also more likely to be exposed to these cues because their ventures are typically embedded in their communities. This means they can more quickly identify emerging local social and environmental needs (Grube & Storr, 2018; Linnenluecke & McKnight, 2017) which crises amplify. In turn, they leverage these needs as opportunities for expansion, including by adapting offerings and scaling activity (Andre & Pache, 2016; Bauwens et al., 2020). This explanation aligns with crisis research showing that mission-oriented organizations recognize opportunity in adversity by addressing unmet societal needs (DesJardine et al., 2019; Linnenluecke & McKnight, 2017; Wukich, 2019).

Likewise, during crises, environmental objectives are often deprioritized by governments and incumbent firms as economic recovery becomes the focus (Barbier, 2020; Guellec & Wunsch-Vincent, 2009). This crisis-driven deprioritization can create new environmental issues and weaken oversight, making cues about degraded ecosystems, reduced monitoring, or lapses in environmental protection more salient to environmentally motivated entrepreneurs. Their motivation-aligned interpretive schemas can therefore support construing such gaps as opportunities rather than constraints. Crisis research similarly notes that environmental degradation and regulatory slack during downturns can open new domains for entrepreneurial action (Linnenluecke, 2015).

Taken together, the crisis context amplifies differences in motivation-driven cognitive attention, leading socially and environmentally motivated entrepreneurs to perceive more opportunities than their economically motivated counterparts. We therefore posit:

Hypothesis 2: Compared with economically motivated entrepreneurs, socially (H2a) and environmentally (H2b) motivated entrepreneurs perceive more opportunities during an economic crisis, which in turn strengthens their growth expectations.

2.4.2 Perceived competition during the economic crisis

“Entrepreneurship and competition are two sides of the same coin: that entrepreneurial activity is always competitive, and that competitive activity is always entrepreneurial” (Kirzner, 1973, p. 94). Competition affects entrepreneurs’ ability to position their ventures, attract customers, and grow (Kohli & Jaworski, 1990; Rahmandad, 2012). From an entrepreneurial cognition perspective, entrepreneurs’ expectations are directly shaped by their subjective assessment of competitive intensity and market structure. This *perceived* competition informs entrepreneurs’ beliefs about available market space, threat levels, and the feasibility of expansion, and thus can shape growth expectations. When competitive intensity is perceived as high, entrepreneurs may anticipate limited room to capture demand and scale and reduce their growth expectations.

Conversely, when competition is perceived as low, growth appears more attainable.

Despite the importance of perceived competition for entrepreneurial activities in general and for venture growth specifically, research on the topic is surprisingly scarce (Auh & Menguc, 2005; Martin & Javalgi, 2016; Mazzucato & Parris, 2015), and no studies investigate the link between perceived competition and growth expectations. This gap is even more pronounced in the social and environmental entrepreneurship literature.

Socially and environmentally motivated entrepreneurs may perceive competitive pressure differently from economically motivated entrepreneurs, especially under crisis conditions, for two reasons. First, for socially and environmentally motivated entrepreneurs, addressing social and environmental issues and scaling social impact (Perrini et al., 2010) requires association with multiple stakeholders (Stephan et al., 2016). That implies engaging in both cooperative and competitive-motivated actions simultaneously (Arenas et al., 2021; Planko et al., 2019; Volschenk et al., 2016). They are even willing to forge alliances with competitors to create social and environmental benefits (Herbst, 2019). Thus, existing research in social and environmental entrepreneurship focuses on the role of collaboration (e.g., de Bruin et al., 2017; Di Domenico et al., 2009) or coopetition (combination of cooperation and competition) (e.g., Arenas et al., 2021; Volschenk et al., 2016) and deemphasizes competition. This cooperative orientation means that for socially and environmentally (vs for economically) motivated entrepreneurs competitive threats are less salient and less constraining.

Second, socially and environmentally motivated entrepreneurs often encounter less competition than economically motivated entrepreneurs, because they enter the market within a niche or even create a new niche outside the current market, where they satisfy the unmet social or environmental needs of specific (local) customers (Schaltegger & Wagner, 2011). In contrast, economically motivated entrepreneurs are likely to “neglect these niches either because they do not recognize them, because they do not consider them to be attractive enough or because they are not able to fulfil these specific customer preferences well enough” (Schaltegger & Wagner, 2011, p. 229).

These effects are likely to be amplified during an economic crisis. Economically motivated enterprises focus more on their core (economic) activities and

less on deploying social activities and environmentally friendly practices as they seek to cut costs and survive (Bansal et al., 2015; Panwar et al., 2015). This can reduce rivalry in domains aligned with social and environmental needs, widening the competitive space for social and environmentally motivated entrepreneurs and increasing the likelihood that they perceive their market environment as less competitively intense. Thus, socially and environmentally motivated entrepreneurs may be less likely than economically motivated entrepreneurs to perceive strong competitive pressure during a crisis. Therefore, they may perceive competition intensity in the market to be lower, reinforcing their willingness to grow when others retrench. Thus:

Hypothesis 3: Compared with economically motivated entrepreneurs, socially (H3a) and environmentally (H3b) motivated entrepreneurs perceive lower competition during an economic crisis, which in turn strengthens their growth expectations.

Figure 1 below summarizes the theoretical model and the hypotheses.

3 Methodology

3.1 Sample and data description

The context of our study is the 2008/09 Global Financial Crisis (GFC), which is considered a critical event in modern socio-economic history (Riaz et al., 2011). The GFC was at that point the most severe economic crisis since the Great Depression, which negatively impacted most countries across the world (IMF, 2013).³ Also, unlike the subsequent 2020 COVID-19 pandemic crisis, government did not offer massive welfare and business support during the GFC. The Global Entrepreneurship Monitor (GEM) collected data during 2009, at the height of

the GFC. These data are based on more than 180,000 interviews with population-representative samples in 54 countries, which constitute GEM's Adult Population Survey. Importantly, the 2009 GEM included two special topics: (1) the impact of the 2008/09 GFC on entrepreneurial activities and (2) social/environmental entrepreneurship (Bosma & Levie, 2010; Terjesen et al., 2012). Not all countries collected data on the special topics, reducing the number of countries to 48. As we explore the growth expectations of new ventures, we follow the literature (Capelleras et al., 2019; Estrin et al., 2013a) and focus on entrepreneurs running young businesses, i.e., entrepreneurs currently operating new businesses that have been generating revenues for at least three months but have been operating for less than 42 months. We exclude nascent entrepreneurs who are in the process of setting up a business and who have not yet generated revenues, because their growth expectations are less reliable. The final dataset for our main analyses comprises 5,605 entrepreneurs running young businesses in 48 countries.

3.2 Dependent variable: short-term growth expectations

The commonly used indicators for growth expectations based on the GEM data are predictions of hiring employees in the next *five* years (Capelleras et al., 2019; Estrin et al., 2013a; Terjesen et al., 2016a). These are less suitable to answer our research question, as they are affected not only by the crisis but also by the expectations about the uncertain speed of crisis recovery. In line with our theoretical framing, we focus on short-term growth expectations for the current year because they more accurately capture entrepreneurs' immediate anticipatory assessments and strategic intent under heightened uncertainty. Short-term growth expectations are operationalized as the growth expectation that an entrepreneur currently has for his/her business, compared to one year ago. The survey question was: "Compared to one year ago, your expectations for growth are now?". Answer categories were 1, "Lower"; 2, "Somewhat lower"; 3, "About the same"; 4, "Somewhat higher"; and 5, "Higher". This measure of short-term growth expectations more directly reflects the immediate impact of the economic crisis compared to longer-term growth expectations. Cross-country harmonized realized

³ It began in December 2007, due to excessive risk-taking in the bank system along with the bursting of the housing bubble (Williams, 2010) and lasted until June 2009. According to the report from World Economic Situation and Prospects of the United Nation, world gross product declined by 2.2% in 2009, the first contraction since 1945. The number of unemployed increased notably in most economies in 2009. For example, in the USA, the unemployment rate more than doubled from 4.9% in late 2007 to 10.1% in October 2009.

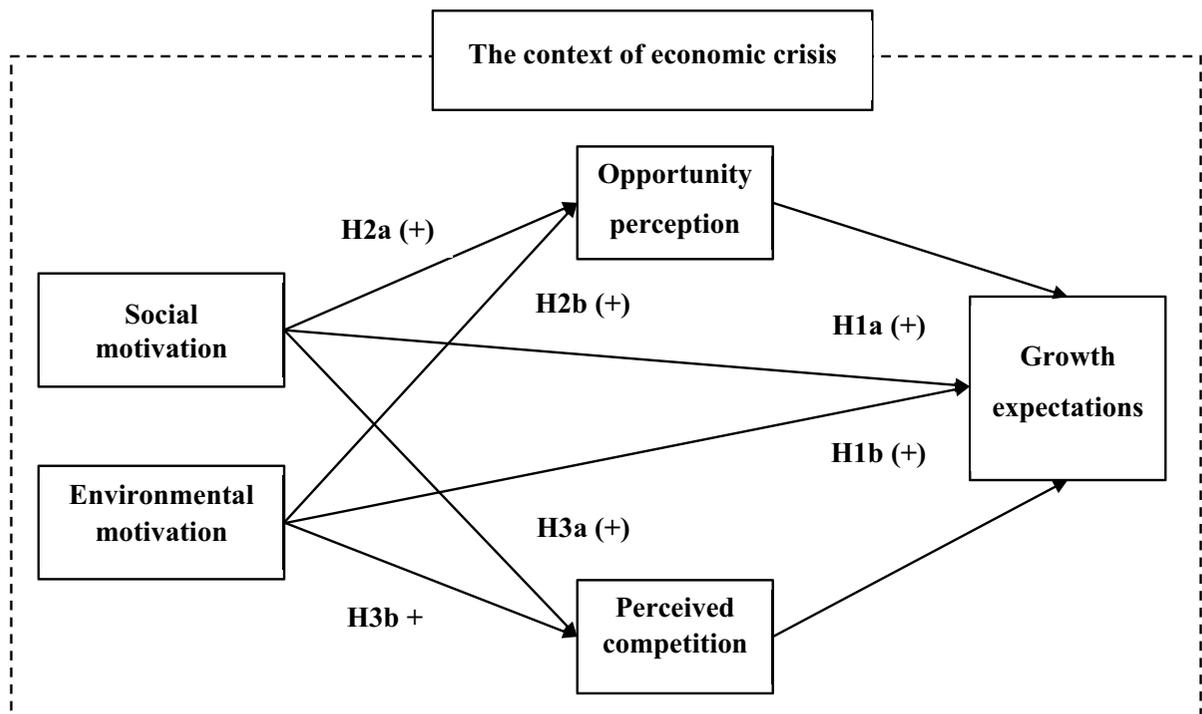


Fig. 1 Research model. *Note:* Social and environmental motivations are measured and tested relative to economic motivations. Motivations are measured by distributing 100 points

across three organizational goals (social, environmental, and economic); see method section

growth performance data for individual entrepreneurs and firms is not available from GEM for 2009.

3.3 Independent variables

The GEM survey asked entrepreneurs: “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 it pertains to your [venture’s] goals. How many points for economic value? How many points for societal value? How many points for environmental value?” Respondents divided 100 points across the three categories of value creation goals. Consistent with our theoretical framework, we use the points allocated for societal value as the first independent variable (“social motivation”), with higher scores indicating a stronger social motivational orientation. We use the points that entrepreneurs allocated to environmental value as the second individual-level independent variable (“environmental motivation”), whereby a higher score indicates a stronger

environmental motivational orientation. Since a total of 100 points is allocated across the three value creation goals (economic, societal, and environmental goals), this means that lower scores for social and environmental motivations combined automatically imply a stronger economic motivation. Others have used this measure (e.g., Hoogendoorn et al., 2020, 2024; also Brieger et al., 2021; Hechevarria et al., 2017). We interpret these allocations as capturing the extent to which entrepreneurs are socially or environmentally (vs. economically) motivated.

Both this measure and the measure of growth expectations discussed in the previous section are unique to the 2009 GEM survey. These questions were not repeated in the 2015 special theme on social entrepreneurship (Bosma et al., 2016), which is why we do not use the latter.

3.4 Mediators

Opportunity perception during the economic crisis is captured by the following GEM item: “What impact

has the global economic slowdown had on the business opportunities for this start-up?”. Answer categories were 1, More business opportunities; 2, Somewhat more business opportunities; 3, No impact; 4, Somewhat few business opportunities; and 5, Fewer business opportunities. We treat the ordinal response categories as a continuous variable, and reverse the order, so that the higher value implies more opportunities.

Perceived competition during the economic crisis is operationalized as follows: “Right now, are there many, few, or no other businesses offering the same products or services to your potential customers?” Answer categories were 1, Many business competitors; 2, Few business competitors; and 3, No business competitors. As the data was collected during the 2009 financial crisis, this answer reflects the entrepreneurs’ assessment of competition intensity in the context of the economic crisis. We treat the ordinal response categories as a continuous variable, and reverse the order, so that higher values reflect higher perceived competition.

3.5 Control variables

At the individual level, we include eight control variables: *Age*, *Age squared*, *Informal investor in the past 3 years*, *Gender*, *Education*, *Established business*, *Discontinued business* and *Firm start year*. Previous research finds that age of the entrepreneur affects growth expectations (Capelleras et al., 2019; Estrin et al., 2013a, b) and is systematically related to social/environmental entrepreneurship in a U-shaped manner (Brieger et al., 2021; Hoogendoorn et al., 2024). We control for individuals’ *age* (in years) and *age squared* to capture curvilinear effects. We control for *Informal investor in the past 3 years* (a dummy, coded 0 = no, 1 = yes), which is a proxy for the availability of financial resources, and which was found to be related to growth expectations in past research on high-growth aspirations (Estrin et al., 2013a). Gender differences in both economic, social, and environmental entrepreneurship and growth expectations are well documented (Estrin et al., 2013a, b; Hoogendoorn et al., 2024; Hörisch et al., 2017); hence, we control for gender (*Female* = 1, *Male* = 0). Higher educational attainment positively affects both growth expectations and social entrepreneurship (Estrin et al., 2013a, b). Thus, we control for *Tertiary education level*

(dummy coded 0 = no, 1 = yes). We also control for whether the entrepreneur owns and manages an *Established business* (dummy coded 0 = no, 1 = yes) alongside the young business that is the focus of the study. Being the owner of an established business is associated with learning effects (Mickiewicz et al., 2017), which can strengthen growth expectations and engagement in social entrepreneurship (Estrin et al., 2013a, b). Lastly, experience from a previously closed business can also be associated with learning and affects growth expectations positively (Fuentelsaz et al., 2023). Hence, we control for *Discontinued business*. We coded entrepreneurs as having discontinued a business (coded 1, or not coded 0) if they indicated that (a) they have sold, shut down, discontinued, or quit the business in the past 12 months that they owned and managed, and (b) that this business continued to exist after the respondent departed from it. Finally, we control for *Firm start year*. The specific timing of business entry relative to the economic crisis may impact growth expectations. Thus, we include dummy variables indicating whether the firm was established in 2007, 2008, or 2009.

We also include country-level controls. The literature shows that economic development is linked to entrepreneurial activity of all types (Estrin et al., 2019). Thus, we use the 2008 *GDP per capita* (gross domestic product in purchasing power parity, constant USD), obtained from the World Bank. A growing economy entails more opportunities and greater demand for entrepreneurs’ goods/services (Wennekers et al., 2005). We use the change in GDP growth (Δ *GDP growth*) before (2006–2007) relative to during the economic crisis (2008–2009). This is calculated as the difference between the average GDP growth in 2008–2009 and the average GDP growth in 2006–2007, as reported by the World Bank. Following Estrin et al. (2013a), we also control for the *Rule of law* (in 2008) using the Polity IV indicator of the effective constraints on the arbitrary power of the executive branch of the government, which we use in logarithmic form to improve distribution.

3.6 Data analysis

We test our hypotheses by using a series of multi-level models, as our data contains individual-level

observations grouped by country, resulting in a hierarchical and clustered dataset. Even though our hypotheses reside at the individual level, applying multilevel analysis allows us to avoid statistical biases arising in single-level regressions and to control for alternative explanations at the country level (Hox et al., 2017; Peterson et al., 2012). The variance inflation factor (VIF) scores are below 5.0, suggesting that no high multicollinearity is present among our country-level variables (Hair et al., 1998). We specifically apply a parallel multiple-mediator model using the generalized MSEM (Multilevel structural equation modelling) in Stata to test our hypotheses (H1–H3). The results of these analyses are provided in Tables 5 and 6, which stepwise include a model with individual and country-level control variables, the two individual-level independent variables which are social and environmental motivation scores, and finally the two individual-level hypothesized mediators: opportunity perception and perceived competition.

4 Results

Tables 1, 2, 3, and 4 report the mean, standard deviation, and correlations for variables at the individual and country levels, respectively. Table A1 in the

Table 1 Descriptive statistics (individual level)

		Mean	SD	Min	Max
1	Short-term Growth expectations	2.855	1.370	1	5
2	Social motivation	21.362	18.655	0	100
3	Environmental motivation	13.462	14.545	0	100
4	Opportunity perception	2.400	1.189	1	5
5	Perceived competition	2.521	0.632	1	3
6	Age	37.758	11.472	18	82
7	Informal investor in last 3 years	0.116	0.320	0	1
8	Female entrepreneurs	0.404	0.491	0	1
9	Tertiary education	0.353	0.478	0	1
10	Established business	0.011	0.104	0	1
11	Discontinued business	0.045	0.208	0	1
12	Firm start year (2009)	0.222	0.416	0	1
13	Firm start year (2008)	0.275	0.447	0	1
14	Firm start year (2007)	0.230	0.421	0	1

$N=5605$ observations. *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, + $p < 0.1$

Online Appendix shows descriptive statistics by country. Tables 5 and 6 show the results of tests for indirect effects on short-term growth expectations among entrepreneurs.

4.1 Main results

Model 3.1.1 in Table 5 shows that entrepreneurs' social motivations ($\beta=0.005$, $p < 0.001$) and environmental motivations ($\beta=0.002$, $p < .10$) are positively related to their short-term growth expectations. This supports H1a and weakly supports H1b.

We proposed an indirect effect of social and environmental motivations on growth expectations via opportunity perception and perceived competition. We check two preconditions for indirect (mediating) effects: (1) predictors (social and environmental motivations) are related to mediators (opportunity perception and perceived competition) and (2) mediators are related to the dependent variable (short-term growth expectations).

Regarding the first mediator—*opportunity perception* (H2a/b)—Model 1.2 in Table 5 shows that social motivations ($\beta=0.002$, $p < .10$) and environmental motivations ($\beta=0.003$, $p < .05$) are positively related to opportunity perception. Model 2.1 in Table 5 shows that opportunity perception ($\beta=0.334$, $p < .001$) has positive effects on short-term growth expectations. In turn, Table 6 shows that the estimate for the indirect effect of entrepreneurs' social motivation on short-term growth expectations via opportunity perception has a confidence interval that includes zero. Thus, H2a is not supported. In contrast, Table 6 shows that entrepreneurs' environmental motivation has a positive indirect effect on short-term growth expectations via opportunity perception during the economic crisis. The estimate for the indirect effect is 0.00086, and its 95% confidence interval does not include zero (0.00008; 0.00164), hence the effect is significant, and H2b is supported. Specifically, environmentally (vs. economically) motivated entrepreneurs perceive more opportunities for growth during the economic crisis, which increases their short-term growth expectations.

Regarding the second mediator—*perceived competition* (H3a/b)—Model 1.3 shows that entrepreneurs' social ($\beta = -0.002$, $p < .001$) and environmental motivations ($\beta = -0.002$, $p < .01$) are negatively

Table 2 Correlations (individual level)

	1	2	3	4	5	6	7
1 Short-term Growth expectations							
2 Social motivation	0.05***						
3 Environmental motivation	-0.01	0.20***					
4 Opportunity perception	0.31***	0.04**	0.04**				
5 Perceived competition	-0.09***	-0.07***	-0.07***	-0.09***			
6 Age	-0.09***	0.02	0.07***	-0.06***	-0.04**		
7 Informal investor in last 3 years	0.01	0.04**	0.03*	0.04**	-0.04**	-0.01	
	8	9	10	11	12	13	14
8 Female entrepreneurs							
9 Tertiary education	-0.06***						
10 Established business	-0.04**	0.02					
11 Discontinued business	-0.04**	-0.02	0.03*				
12 Firm start year (2009)	0.01	-0.01	0.02	0.03*			
13 Firm start year (2008)	0.04***	0.01	0.03*	0.00	-0.33***		
14 Firm start year (2007)	-0.02+	0.01	-0.05***	-0.03*	-0.29***	-0.34***	

N = 5605 observations. *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, + $p < 0.1$

Table 3 Descriptive Statistics on the country level (including country means of individual-level variables)

	Mean	SD	Min	Max
1 Short-term Growth expectations	2.852	0.501	1.640	4.143
2 Social motivation	21.815	7.298	2.714	35.842
3 Environmental motivation	14.402	5.844	0.469	26.667
4 Opportunity perception	2.469	0.352	1.813	3.361
5 Perceived competition	2.517	0.116	2.286	2.857
6 Age	37.929	3.702	29.542	46.822
7 Informal investor in last 3 years	0.114	0.060	0	0.232
8 Female entrepreneurs	0.377	0.122	0.024	0.647
9 Tertiary education	0.391	0.217	0	0.914
10 Established business	0.012	0.019	0	0.111
11 Discontinued business	0.047	0.033	0	0.143
12 Firm start year (2009)	0.206	0.088	0	0.381
13 Firm start year (2008)	0.285	0.116	0.111	0.958
14 Firm start year (2007)	0.224	0.063	0.042	0.429
15 Change in GDP growth	4.526	3.542	-4.130	19.742
16 GDP per capita	25,118.760	16,644.500	1497.379	69,351.020
17 Rule of law (log)	1.661	0.451	0.000	1.946

$n = 48$ countries.
 *** $p < 0.001$, ** $p < 0.01$,
 * $p < 0.05$, + $p < 0.1$

related to perceived competition. Model 2.1 shows that perceived competition ($\beta = -0.139$, $p < .001$) has a significant negative effect on short-term growth expectations. Table 6 shows that the pursuit of both social and environmental motivations has positive indirect effects on short-term growth expectations

via perceived competition. The estimate for the indirect effect of social motivation is 0.00024, and its 95% confidence interval does not include zero (0.00008; 0.00040), hence the effect is significant. Similarly, environmental motivation has a positive indirect effect on short-term growth expectations via

Table 4 Correlations on the country level (including country means of individual-level variables)

	1	2	3	4	5	6	7	8
1 Short-term Growth expectations	0.07							
2 Social motivations	0.00	0.58***						
3 Environmental motivations	0.46**	0.32*	0.22					
4 Opportunity perception	-0.23	-0.44**	-0.50***	-0.34*				
5 Perceived competition	-0.16	0.16	0.27+	0.15	-0.23			
6 Age	-0.05	0.17	0.26+	0.11	-0.29*	-0.08		
7 Informal investor in last 3 years	-0.04	-0.22	0.02	-0.24+	0.05	0.05	-0.15	
8 Female entrepreneurs								
9 Tertiary education	0.11							
10 Established business	0.28+	-0.16						
11 Discontinued business	-0.08	0.00	0.35*					
12 Firm start year (2009)	-0.14	-0.09	-0.19	-0.47***				
13 Firm start year (2008)	0.07	-0.06	-0.03	-0.08	-0.53***			
14 Firm start year (2007)	0.29*	0.00	-0.12	-0.23	0.04	-0.08		
15 Change in GDP growth	0.63***	0.17	0.08	-0.08	0.07	0.21		
16 GDP per capita	0.18	-0.00	-0.08	-0.02	-0.01	0.29*	0.19	
17 Rule of law (log)								

$n = 48$ countries. *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, + $p < 0.1$

Table 5 Multilevel estimations on Short-term growth expectations

		Model 1: Adding individual level Predictors			
Model 1.1 (H1a/b)		Model 1.2 (H2a/b)		Model 1.3 (H3a/b)	
Dependent variable: short-term growth expectations		Mediator 1: opportunity perception		Mediator 2: perceived competition	
Coeff	SE	Coeff	SE	Coeff	SE
Constant	2.884*** (0.199)	2.871*** (0.178)	2.847*** (0.091)		
Individual level predictors					
Social motivations	0.005*** (0.001)	0.002+ (0.001)	-0.002*** (0.000)		
Environmental motivations	0.002+ (0.001)	0.003* (0.001)	-0.002*** (0.001)		
Individual level mediators					
Opportunity perception					
Perceived competition					
Individual level controls					
Age	-0.014 (0.010)	-0.026** (0.009)	-0.008+ (0.005)		
Age squared	0.000 (0.000)	0.000* (0.000)	0.000 (0.000)		
Informal investor in last 3 years	0.027 (0.056)	0.131* (0.051)	-0.064* (0.027)		
Female entrepreneurs	-0.034 (0.037)	0.001 (0.033)	-0.037* (0.017)		
Tertiary education	0.275*** (0.041)	0.084* (0.036)	-0.044* (0.019)		
Established business	0.126 (0.171)	0.342* (0.154)	-0.133 (0.081)		
Discontinued business	-0.064 (0.086)	-0.023 (0.076)	0.035 (0.041)		
Firm start year (2009)	0.258*** (0.052)	0.063 (0.046)	-0.065** (0.024)		
Firm start year (2008)	0.229*** (0.048)	0.058 (0.043)	-0.071** (0.023)		
Firm start year (2007)	0.092+ (0.050)	0.048 (0.045)	-0.020 (0.024)		
Country level variables					
Δ GDP growth	-0.030* (0.012)	0.001 (0.004)	-0.062*** (0.016)		
GDPPC	0.000*** (0.000)	-0.000 (0.000)	-0.000 (0.000)		
Rule of law (log)	-0.037 (0.098)	-0.061+ (0.032)	-0.146 (0.132)		
Model fit	45,552				
Akaike Information Criterion					
Deviance	-22,722				

Table 5 (continued)

Model 2: Adding individual level Mediators					
Model 2.1 (H2a/b-3a/b)		Model 2.2		Model 2.3	
Dependent variable: short-term growth expectations		Mediator 1: opportunity perception		Mediator 2: perceived competition	
Coeff	SE	Coeff	SE	Coeff	SE
Constant	2.394***	2.871***	(0.178)	2.847***	(0.091)
Individual level predictors					
Social motivations	0.005***	0.002 +	(0.001)	-0.002***	(0.000)
Environmental motivations	0.002	0.003*	(0.001)	-0.002***	(0.001)
Individual level mediators					
Opportunity perception	0.334***				
Perceived competition	-0.139***				
Individual level controls					
Age	-0.010	-0.026**	(0.009)	-0.008 +	(0.005)
Age squared	0.000	0.000*	(0.000)	0.000	(0.000)
Informal investor in last 3 years	-0.051	0.131*	(0.055)	-0.064*	(0.027)
Female entrepreneurs	-0.042	0.001	(0.036)	-0.037*	(0.017)
Tertiary education	0.254***	0.084*	(0.039)	-0.044*	(0.019)
Established business	0.015	0.342*	(0.164)	-0.133	(0.081)
Discontinued business	-0.061	-0.023	(0.083)	0.035	(0.041)
Firm start year (2009)	0.202***	0.063	(0.050)	-0.065**	(0.024)
Firm start year (2008)	0.199***	0.058	(0.047)	-0.071**	(0.023)
Firm start year (2007)	0.048	0.048	(0.049)	-0.020	(0.024)
Country level variables					
Δ GDP growth	-0.030*	0.001	(0.012)	-0.052***	(0.016)
GDPPC	0.000***	-0.000	(0.000)	-0.000	(0.000)
Rule of law (log)	-0.037	-0.061 +	(0.098)	-0.146	(0.129)
Model fit	43.832				
Akaike Information Criterion					
Deviance	-21.860				

N = 5605 observations, n = 48 countries; ***p < 0.001, **p < 0.01, *p < 0.05, + p < 0.10

Table 6 Indirect effects of social/environmental motivations on short-term growth expectations via opportunity perception and perceived competition during the economic crisis

	Social motivations				Environmental motivations			
	Coefficient	SE	<i>p</i> -value	95% CI	Coefficient	SE	<i>p</i> -value	95% CI
Mediator 1: Opportunity perception (H2a/b)	0.00050	0.00031	0.101	[-0.00010; 0.00110]	0.00086	0.00040	0.030	[0.00008; 0.00164]
Mediator 2: Perceived competition (H3a/b)	0.00024	0.00008	0.003	[0.00008; 0.00040]	0.00025	0.00010	0.011	[0.00006; 0.00045]

N = 5605 observations, *n* = 48 countries

perceived competition (0.00025, confidence interval: 0.00006; 0.00045). In sum, these results support H3a and H3b. Compared to economically motivated entrepreneurs, socially and environmentally motivated entrepreneurs perceive less competition in the economic crisis, which in turn increases their short-term growth expectations.

4.2 Robustness checks

In the main analysis, we did not apply group mean centering for individual-level variables. We test the robustness of our results by centering individual-level variables at country means (except the dummy variables). Compared to the main results, our hypothesized direct and indirect effects become weaker but still support H1a/b, H2b and H3a/b. The results are shown in Tables A2–A3 in the Online Appendix.

We conducted an additional robustness check by including necessity motivation as an individual-level control variable to address a potential confound within the comparison group of economically motivated entrepreneurs. The results show that the direct effects of social and environmental motivations on short-term growth expectations (H1a/b) remain significant, indicating that the main effects are robust to this specification. For the mediation pathways, the indirect effect of social motivation via perceived competition remains significant, continuing to support H3a. Likewise, the indirect effects via opportunity perception remain non-significant for social motivations (H2a) and significant for environmental motivation, consistent with the main results for H2b. The indirect effect of environmental motivation via perceived competition becomes non-significant, meaning that H3b is not supported when accounting for necessity motivation. Overall,

the pattern of effects is broadly aligned with the main results, although a few indirect effects become attenuated. In further analysis, we establish that the main reason for this is *not* the inclusion of necessity motivation, but the reduced sample size in this test (we lose about 15% of the total sample). Thus, the main reason for the change in results is lower statistical power resulting from the reduced sample. Statistical power matters especially for analyzing social and environmental motivations which are less common than economic motivations among entrepreneurs. Tables A4–A5 in the Online Appendix show results of our robustness tests controlling for necessity entrepreneurship and Tables A6–A7 the sample sensitivity analysis.

4.3 Supplementary analysis: long-term employment growth expectations

We extend our analyses to investigate long-term employment growth expectations.⁴ As discussed previously, such long-term growth expectations may be less reliable in the context of a crisis as they require the prediction over a 5-year time frame, which is difficult to make in the middle of a significant economic crisis with an uncertain recovery trajectory.

⁴ Long-term growth expectations are calculated by the logarithmic difference between the expected levels of employment in five years from the time of the interview and the current level of employment at the time of the interview. This follows Estrin et al., (2013a). We combine the number of owner-managers reported by entrepreneurs with the number of employees to measure the amount of employment. This is an improvement over Estrin et al., (2013a, b), who just added one for an owner; here we follow Fuentelsaz et al. (2023).

Compared to our main results on short-term growth expectations, for long-term growth expectations we find similar direct and indirect effects but with different emphases. First, we find environmental motivations are positively associated with long-term employment growth expectations (Table A8 in the Online Appendix). However, unlike the main results, this effect is positively mediated only by reduced competition, but not also by opportunity perception (Table A9). We replicate the positive indirect effect of social motivation via reduced perceived competition on long-term growth expectations (Table A9) similar to effects in the main results. However, we do not find a direct effect of social motivation on growth expectations (Table A8).

5 Discussion

In a study of 5605 young entrepreneurs from 48 countries during the Global Financial Crisis, we find that more socially (vs more economically) motivated entrepreneurs have higher growth expectations during the crisis. There is a similarly positive but weaker relationship between entrepreneurs' environmental motivations and their growth expectations. Mediation analyses suggest that entrepreneurs' social and environmental motivations are related to higher growth expectations because of perceived lower competition and, specifically for environmentally motivated entrepreneurs, also due to higher opportunity perception. In supplementary analyses, we find that environmentally (vs economically) motivated entrepreneurs have higher long-term expectations to create jobs and this effect is mediated by lower perceived competition (but not opportunity perception). We also find evidence that social motivation indirectly enhances entrepreneurs' long-term employment growth expectations via reduced perceived competition.

5.1 Linking social, environmental, and economic motivation with growth expectations

Our study contributes to entrepreneurship research by linking two hitherto separate literatures: (i) that on growth expectations, closely related to the literature on strategic entrepreneurship, high-value creating entrepreneurship and ambitious entrepreneurship (e.g., Ireland et al., 2023; Nason & Wiklund, 2018;

Stam et al., 2012), and (ii) the rapidly growing literature on social and environmental entrepreneurship (e.g., Vedula et al., 2022). By bridging both literatures, our study contributes to both strands of literature as we explain next.

First, our study introduces motivational heterogeneity of entrepreneurs as a new driver of growth expectations to the literature concerned with strategic, value-creating, and ambitious entrepreneurship (e.g., Nason & Wiklund, 2018). While the research on growth aspirations explores various drivers of growth expectations (e.g., Fuentelsaz et al., 2023; Stam et al., 2012), it has yet to consider motivational heterogeneity. Specifically, by drawing attention to growth expectations of social and environmental entrepreneurs, we shift the implied consensus in the literature on growth expectations that entrepreneurs grow to realize economic goals. We find that during the Global Financial Crisis, socially and environmentally (vs. economically) motivated entrepreneurs report stronger short-term growth expectations, with similar but weaker effects observed for long-term growth expectations. These patterns concern expectations rather than realized outcomes and therefore reflect entrepreneurs' forward-looking strategic assessments of feasibility and aspirations. We hope future longitudinal research can build on our study to link entrepreneurs' heterogeneous motivations and growth expectations to subsequently realized growth outcomes over time.

Second, we contribute to the social and environmental entrepreneurship literature by linking social and environmental motivations to growth expectations and thereby starting an important scholarly conversation about the economic performance of social and environmental entrepreneurs. Growth expectations and, more broadly, the economic performance of social and environmental enterprises have received hardly any theoretical or empirical attention in the social and environmental entrepreneurship literature to date (e.g., see reviews by Saebi et al., 2019; Stephan et al., 2025, and Vedula et al., 2022). Recall that the few existing theoretical arguments offer diverging views (e.g., André & Pache, 2016; Zahra et al., 2008), while empirical research is absent. Furthermore, our work is conceptually distinct from research examining motivations, competition, and growth, including the scaling of social impact (Lee et al., 2021; Shepherd & Patzelt, 2022). Those studies focus on

realized scaling of social enterprises, while we consider a general sample of *all* entrepreneurs to explain how heterogeneous motivations shape entrepreneurs' expectations about employment growth in the context of adversity. Importantly, our theorizing and findings contribute new insight and evidence to the diverging views on the growth expectations of social/environmental entrepreneurs. Specifically, we find support for the view that social and environmental motivations can enhance growth expectations (Dees et al., 2004; Zahra et al., 2008), especially during crises, while discounting the perspective that depicts social/environmental entrepreneurs as risk-averse or worried about mission drifts (André & Pache, 2016; Battilana & Dorado, 2010; Lumpkin et al., 2013; Weerawardena & Mort, 2006). We hope to inspire future research on the economic contributions of social and environmental entrepreneurship.

Relatedly, our findings also suggest differences between social and environmental entrepreneurs and thereby help to sharpen our understanding of the differences and commonalities between both (as for instance called for by Vedula et al., 2022). Specifically, we find that entrepreneurs' social motivations are more strongly associated with short-term growth expectations, while entrepreneurs' environmental motivations are more strongly associated with long-term employment growth expectations. It may be that socially motivated entrepreneurs are relatively more responsive to the crisis and emerging social needs (Zahra et al., 2008). This is consistent with evidence that to address social needs, socially motivated entrepreneurs often focus on bricolage (Desa, 2012; Pache & Santos, 2013)—“making do by applying combinations of resources at hand to new problems and opportunities” (Baker & Nelson, 2005, p. 33) because they are resource-constrained. Such resource constraints may impair their ability to invest in longer-term employment growth. By contrast, environmentally motivated entrepreneurship typically requires greater up-front investments and thus strategic planning, which is likely to support longer-term growth expectations. To achieve environmental goals, environmentally motivated entrepreneurs often exploit technological advances and innovation (Schaltegger & Wagner, 2011) that can be aligned with profit-making (Vedula et al., 2022). Specifically during crises, environmentally motivated entrepreneurs may be able to emphasize cost-efficiency, as environmentally

friendly solutions are often cost-saving.⁵ This may create resources to scale and realize employment growth in the longer term.

5.2 Implications for entrepreneurship research on crises and adversity

We contribute to entrepreneurship research on crises and adversity by elaborating theory on the cognitive mechanisms that link entrepreneurs' motivation and growth expectations during crises. Unpacking mechanisms is an important element of theory elaboration (Fisher & Aguinis, 2017), which we contribute by documenting how opportunity perception and perceived competition—key mechanisms underpinning growth in the general entrepreneurship literature (Davidsson, 2015; Martin & Javalgi, 2016; Mazzucato & Parris, 2015)—mediate the association between entrepreneurs' motivational heterogeneity and growth expectations.

Considering extensive debates on opportunities (Alvarez & Barney, 2020; Davidsson, 2015), it may be surprising that we only find limited evidence for the mediating role of perceived opportunities. This suggests that, during periods of crisis, entrepreneurs, independent of their motivations, perceive similar opportunities. This may reflect the strong negative effects that crises have on opportunity recognition, which recent research also documents in the context of the COVID-19 pandemic (Stephan et al., 2023). While opportunity perception offers limited explanatory power in our study, perceived competition emerges as the more robust cognitive channel linking motivations to growth expectations during crisis. This is consistent with the view that socially and environmentally motivated entrepreneurs often operate in niche markets and introduce novel solutions (e.g., Renko, 2013). Critically, it is also consistent with the retrenchment of economically motivated entrepreneurs from social and environmental issues during crises (e.g., Bansal et al., 2015). We encourage future research on perceptions (such as opportunity recognition and perceived competition) to deepen our understanding of the mechanisms why and how

⁵ This was again exemplified in 2022—in Europe, during the adjustment to the energy crisis that resulted from the Russian aggression on Ukraine.

different entrepreneurs' growth expectations vary. By highlighting these individual-level mechanisms, our study enriches our understanding of social and environmental entrepreneurship in the context of adversity, especially economic crisis.

Our findings fit with the view that social and environmental entrepreneurs might be an overlooked "engine" of growth in adverse macroeconomic conditions. This aligns with research on crises and social entrepreneurship specifically, which suggests that social enterprises may act as stabilizing forces in times of crisis by addressing urgent needs and providing services that are otherwise unmet (Anokhin et al., 2023; He & Harris, 2020; Schneider & Schreyögg, 2023) and that social enterprises may be uniquely capable of navigating crises due to their combination of mission-driven and financially sustainable approaches (Bacq & Lumpkin, 2021; Haugh & Talwar, 2016). While past research on crisis and adversity has highlighted resource endowments, resilience, or entrepreneurs' agility as explanations for their different ways of navigating crises (e.g., Anwar et al., 2021; Stephan et al., 2023), the understanding of how entrepreneurs with diverse motivations differ in their reactions towards crises is still underdeveloped (Doern et al., 2019; Newman et al., 2022).

Finally, seeing economic crises as enhancing social and environmental entrepreneurship nuances the dominant view of economic crises as suppressing all entrepreneurial activity (e.g., Bullough & Renko, 2013; Egan & Tosanguan, 2009; Terjesen et al., 2016b). These insights are particularly important during the current poly-crises (Klyver & McMullen, 2025), where economic, social, and environmental challenges intersect (Batjargal et al., 2023). Our findings suggest theoretically important divergence: while many (commercial) firms narrow their objectives in a downturn to focus on economic motivations, for socially and environmentally motivated entrepreneurs, adversity is a context that appears to reinforce their entrepreneurial motivations driving them to seek to grow their organization. Thus, motivational heterogeneity may matter for understanding resilient entrepreneurial responses in the contemporary global economy.

5.3 Practical implications

Our work offers a new perspective to scholars and policymakers interested in supporting job creation

and growth and calls for future research to attend to motivational heterogeneity. Specifically, our study suggests that social and environmental entrepreneurs might be a hitherto overlooked "engine" of growth. To date, these entrepreneurs are valued for their social and environmental impacts, but their economic impacts have been rarely considered and are largely overlooked (Stephan et al., 2025; Terjesen et al., 2016a) by scholars of firm growth (Demir et al., 2017), as well as by policymakers seeking to stimulate growth who emphasize economic motivations instead (Terjesen et al., 2016a).

Policymakers should be aware of the motivations that entrepreneurs are pursuing. Our findings suggest that policymakers may need to reconsider how they view socially and environmentally motivated entrepreneurs and see them as potential sources of economic growth. Policymakers could consider how they can support these entrepreneurs to help them realize their growth expectations and thus leverage the economic contribution of these businesses, including job creation, especially during the crises. Policymakers could consider providing socially and environmentally motivated entrepreneurs with both tangible (grants and subsidies) and intangible resources (social networks, efficient procedures, or frameworks for accessing potential markets), as part of their crisis-response policies.

Our findings also suggest a positive view of socially and environmentally motivated entrepreneurs' role during periods of adversity. Compared to economically motivated entrepreneurs, they more often aspire to grow because they perceive decreased competition. Thus, during the economic crisis, instead of applying uniform support for all businesses, governments might consider making the allocation of resources (e.g., funds, incentives) more selective and therefore effective. Socially and environmentally motivated entrepreneurs play not only a critical role in addressing social and environmental issues during crises, but they are also a potential source of economic growth and job creation during that time.

5.4 Limitations and directions for future research

First, we distinguish between economic, social, and environmental motivations. Yet, the literature provides empirical evidence for motivational multiplicity (Stephan et al., 2019) understood as pursuing multiple

motivations simultaneously. Thus, future research may replicate our study by investigating the interplay and potential synergies between different motivations in their effect on growth expectations. There could be some particularly positive effects of ventures for which different types of motivations are evenly balanced.

Second, there are various ways and methods that socially and environmentally motivated entrepreneurs may use to scale their business and to increase their contribution to society and the environment (André & Pache, 2016; Bloom & Chatterji, 2009; Islam, 2022). We focus only on growing their own organizations. We propose that future work considers exploring other high-impact trajectories of social and environmental entrepreneurship. Future research might also benefit from designing more nuanced measures of how differently motivated entrepreneurs grow. For instance, recent qualitative research suggests important nuances (Kim & Kim, 2022) that we were unable to capture through the data that we used.

Third, our theoretical arguments are crisis-specific, and the data for our dependent variable, independent variables, and one mediator were available only in the GEM 2009 special topic module. As a result, we were unable to conduct a direct comparison between crisis and non-crisis periods or examine within-country changes over time. We therefore frame our findings as crisis-consistent rather than crisis-causal, and future studies using harmonized multi-year or panel data are needed to test whether the observed differences uniquely arise under adverse macroeconomic conditions.

Fourth, although our multilevel models incorporate random intercepts by country and country-level controls, including GDP per capita and the change in GDP growth from the pre-crisis (2006–2007) to the crisis period (2008–2009), the Global Financial Crisis affected countries with varying timing and severity. This heterogeneity places limits on the precision with which we can isolate crisis exposure. Future research could incorporate higher-frequency indicators of macroeconomic shocks to better capture cross-country variation in the onset and intensity of the crisis.

Fifth, several constructs rely on self-reports (motivation, opportunity perception, perceived competition, and growth expectations), which raise concerns about common method variance and perceptual bias. Future research could triangulate these measures

with external indicators (e.g., local entry rates, objective measures of competitive density, sector-level contraction of value-added measures) or combine survey measures with administrative outcomes to test whether motivational heterogeneity predicts subsequent realized growth and job creation, and under which conditions expectations translate into action.

Sixth, our dependent variable was growth expectations rather than realized growth. Our theorizing explains how growth expectations are necessary but not sufficient conditions for subsequent growth to occur. Therefore, we encourage future longitudinal research that traces individual entrepreneurs, their motivations, growth expectations, and subsequent realized growth over time. Nevertheless, we believe our findings shed important light on the individual cognitive origins of growth-oriented entrepreneurship. Expectations remain an important determinant of subsequent growth.

Finally, our focus was on linking motivations, mechanisms, and growth expectations in the context of crisis. We theorize that the crisis context *amplifies* the mechanisms through which motivational heterogeneity relates to growth expectations—particularly by heightening the salience of expanding societal needs and contracting incumbent activity (competition). We hope future research can link motivation, mechanisms, and growth expectations in non-crisis contexts to complement our findings.

6 Conclusion

This study investigates how—through individual-level perceptual mechanisms—motivational heterogeneity influences entrepreneurs' growth expectations in the context of the Global Financial Crisis. We find that entrepreneurs who prioritize social and environmental motivations hold higher growth expectations than those who emphasize economic motivation. This relationship operates primarily through a crisis-specific cognitive mechanism: lower perceived competition. Our findings refine the literature on entrepreneurial growth expectations by newly demonstrating that entrepreneurs' motivations shape how entrepreneurs interpret crisis environments and their growth expectations. Rather than viewing social and environmental motivations as limiting growth expectations, our results

show that crises can activate cognitive processes that reinforce growth expectations among these mission-driven entrepreneurs. Our study extends existing perspectives on strategic entrepreneurship and growth expectations, social and environmental entrepreneurship and offers new insight to entrepreneurship research on crises and adversity. Taken together, our findings position socially and environmentally motivated entrepreneurs as an overlooked source of growth-oriented strategies during crises with relevance for theory and policy.

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Data availability All data are secondary data and stem from publicly available sources.

Declarations

Competing interests The authors have no relevant financial or non-financial interests to disclose.

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