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Analysis of entrepreneurs' motivations and role models for growth expectations in the time of coronavirus

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Abstract

The change in life and professional conditions in 2020 has impacted the growth expectations of new firms. Based on a sample of more than 20,000 people coming from the Spanish Global Entrepreneurship Monitor (GEM) for 2019 and 2020, we analyze the effect of entrepreneurs' motivations and social role models on the growth expectations of new firms using a binomial logit model. The results show that, as a consequence of the institutional conditions caused by the COVID-19 pandemic, entrepreneurs only take into consideration the economic projections of the new firm in order to take the risk of hiring employees in the early stage of the firm's creation. However, experienced entrepreneurs involved in the consolidating stage of the entrepreneurial process have more ambitious motivations, and take advantage of their knowledge derived from peer role models in order to face the new opportunities arising during the pandemic. The effect of motivations and role models on firms' growth also differ between men and women.

Keywords Entrepreneurs' motivations · Global Entrepreneurship Monitor (GEM) · COVID-19 · New firms' growth

Introduction

In general terms, firms tend to grow until marginal cost equals price (Mansfield, 1979). However, the decision to recruit new employees to support the firm's growth depends on individual expectations, and the growth expectations of entrepreneurs

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differ according to contextual, firm-level, and personal determinants (Davidsson, 1989). Among the contextual determinants, industry and geographical location are relevant, but formal and informal institutions also influence the decision to increase the number of employees, especially during economic changes (North, 2005; Urbano & Alvarez, 2014). Informal institutions like the belief systems of individuals, culture, and social norms established in a territory often help to reduce the perception of uncertainty of a situation of change (North, 2005), and these institutions interact with the cognitive dimensions of the decision-maker such as confidence, motivation, and opportunity perceptions (Estrin & Mickiewicz, 2012; Hafer & Jones, 2015). In this sense, the founders' decision to create and invest in their firm's growth is often biased by their attitudes and perceptions of the existence of role models that have been successful doing the same (Davidsson, 1995). This evidences that the two institutional approaches (environmental and cognitive) need to be combined to explain the entrepreneurial decision to recruit new employees to support the firm's growth. At the firm level, managers in charge of small firms are more likely to take growth decisions (Davidsson, 1989). However, these findings are inconclusive in new firms as we cannot do any size distinction, given that at the beginning of the entrepreneurial process all firms are small (Kolvereid, 1992). It is clear that starting a new business is a decision based on an entrepreneur's motivations, as is the decision to invest in the firm's growth (Ginn & Sexton, 1989). However, external circumstances like an increase in uncertainty could modify the entrepreneur's beliefs about the future success of the business and change their ambitions, increasing their risk aversion and limiting the growth potential of new firms. According to this approach, entrepreneurs' risk aversion when it comes to recruiting new employees and investing in new capacities often explains the growth limitations of small firms (Cooper et al., 1982; Davidsson, 1991). Traditionally, entrepreneurs have lower levels of risk aversion than the general population, which means that they perceive the same reality as a source of opportunities where others only see threats (Hill et al., 2022).

From an institutional approach, role models' knowledge—that is, the existence of people that can guide the entrepreneur's decision, providing external experience of the potential effects of the decision—is the most used variable to analyze the influence of the belief systems of individuals (Field et al., 2010), and one of the most important factors in promoting entrepreneurship (Urbano et al., 2019). However, we do not yet have evidence of how a radical change of contextual circumstances can affect entrepreneurs, modifying the impact of individual motivations and role models on their growth expectations. Nor do we have any information about how these perceptions evolve along the entrepreneurial process, or whether the perceptions of men and women differ when facing these changes. In order to answer these questions, it is necessary to study the relationship between a radical change of contextual conditions, such as those caused by the COVID-19 pandemic, and the change in entrepreneurs' perceptions regarding the new firm's growth expectations through the different stages of the entrepreneurial process, also considering potential differences between men and women, because women entrepreneurs comprise just one third of the growth-oriented entrepreneurs active

in the world (Hill et al., 2022). The entrepreneurs' aspirations for job creation depend on their personal ambitions and preferences, the type of business, and the institutional conditions of the environment. However, in 2020–2021, less than half of entrepreneurs globally reported high aspirations for recruiting new employees in the next five years, and there were substantial differences between men and women (Elam et al., 2021).

In this analysis, we consider the effect of different entrepreneurial motivations and the effect of the knowledge of other individuals involved in the entrepreneurial process during the crisis time of 2019–2020 on the entrepreneur's expectation of recruiting new employees. The study of the potential differences between men and women is supported in previous contributions that evidence that the different level of entrepreneurial involvement between men and women could be explained by differences in their motivations and their perception of business opportunities (De la Cruz Sanchez-Escobedo et al., 2014; Entrialgo & Iglesias, 2018; Langowitz & Minniti, 2007; Morris et al., 2006; Neira et al., 2013). Most of these studies focus on explaining the entrepreneurial decision. However, despite the previous contribution of Orser and Hogarth-Scott (2002), the effects of different motivations on the growth expectations of the entrepreneur (men and women) remain unexplored. This study analyzes not only the effect of individual motivations but also the knowledge provided by entrepreneurs' role models (reference groups). Other entrepreneurs' knowledge makes it easier to build innovation communities, and new firms are more prone to grow in environments where creating innovation communities with other entrepreneurs looking for complementarities is easier and evolves over time (Van der Borgh et al., 2012).

Connecting the individual motivations and role models with the growth potential of new firms, the research on entrepreneurs' expectations conducted during 2008–2014 provides evidence of how entrepreneurial motivators and drivers of entrepreneurship changed the during financial crisis (Devece et al., 2016; Hundt & Sternberg, 2014; Stefanescu & On, 2012). However, the unexpected uncertainty caused by the COVID-19 virus in 2020 disrupted the previous expectations of entrepreneurs to a greater extent. Many start-ups were aborted, but others sprang up, taking advantage of new technologically based demands. At this time there is not yet enough guidance to allow entrepreneurs to deal with the uncertainty created, and this lack of knowledge reinforces the influence of entrepreneurial perceptions on a firm's growth decision (Agarwal & Audretsch, 2020; Klein & Klein, 2001). In this study, we contribute to filling the research gap and plan to answer the question: How do an entrepreneur's motivations and reference models affect the growth expectations for the new firm during uncertain times? This paper provides empirical evidence of this relationship in 2019 (pre-pandemic) and 2020 (pandemic). Based on a literature review, we propose a conceptual model to support the hypotheses presented in the next section. The econometric analysis is subsequently described, based on a sample of more than 20,000 people per year provided by the Global Entrepreneurship Monitor (GEM) of Spain for 2019 and 2020. The empirical results of the analysis are presented in the fourth section. Finally, in the last two sections, we discuss new lines of research and conclude the study.

Literature review

Institutional factors are potential drivers of entrepreneurial activity in a territory because they can facilitate or hinder the capacity of a society to deal with changes (Urbano et al., 2019). This capacity depends on the relationship of institutional factors with the techno-industrial and network conditions of the territory (Boschma, 2015). Formal institutions can reduce the transaction costs of trade and increase efficiency (Djankov et al., 2002). In this sense, lower levels of bureaucracy to start a business or social reinforcement of entrepreneurship favor the entrepreneurial capacity of a society, but even more important are the informal institutions, which form the entrepreneurs' belief system regarding their capacity and supporting community (social norms and culture) and reinforce the entrepreneurs' individual traits and social capital (high skills, low fear of failure, and good knowledge of other entrepreneurs) (North, 2005; Urbano & Alvarez, 2014). From an institutional approach, entrepreneurship is a social phenomenon, and knowing other entrepreneurs is considered an important support because they can provide advice and act in the role of several stakeholders (suppliers, clients, partners, investors) in their communities (Bosma et al., 2021). From this perspective, social networks are included as informal institutions underlying the entrepreneur's belief system to grow, reinforcing the role of social knowledge in the entrepreneur's expectations.

Following this conceptual approach, researchers have studied the differences among entrepreneurial systems in diverse societies, concluding that the knowledge obtained to stay in a society where others are running new businesses encourages people to become entrepreneurs (Sorenson, 2017). In this sense, the existence of entrepreneurial role models in the civil society of a country or region can increase the desirability of being an entrepreneur, because it raises entrepreneurs' expectations about market opportunities and increases their confidence in running successful businesses in that territory (García-Martínez et al., 2023; Bosma et al., 2012; Sørensen & Sorenson, 2003).

From an institutional perspective, researchers have studied how different societal conditions have different effects on entrepreneurs' expectations of business opportunities (Savrul, 2017), regardless of whether entrepreneurs increase their human capital or attract more qualified entrepreneurs (Barazandeh et al., 2015; Kaufmann & Malul, 2015), or whether they provide better or worse conditions to take advantage of building social capital and innovation (Neira et al., 2017). In a study on collaboration for innovation, Meng (2016) suggests that women are less well positioned in the social networks of commercialization with industry than men, and this reduces their innovation capacity (patenting). There is some evidence of the relationship between social role models and entrepreneurial intentions (Bosma et al., 2012) and of the effect of knowing other entrepreneurs on reducing risk aversion to entrepreneurial behavior (North, 2005), but there is a lack of research studying this relationship when there is a high level of uncertainty such as that caused by the health crisis of 2020.

Regarding the relationships between motivations, role models, and growth expectations, we consider that entrepreneurs behave according to: 1) their perception of the pros and cons of their potential behavior (attitudes); 2) their perception of the

connection between this behavior and that of their social reference group (social perceptions of role models); and 3) their perception of their capacity to perform that behavior (perceived feasibility). Previous evidence has shown the key role of attitudes, social perceptions, and perceived feasibility in explaining entrepreneurial intentions (Guerrero et al., 2016; Krueger et al., 2000), but the effect of these variables on growth expectations remains unexplored.

According to this approach, the proposed model includes two groups of factors to explain the growth expectations of entrepreneurs: motivations and entrepreneurial role models. Motivations are considered personal traits of entrepreneurs, a consequence of their attitudes and perceived feasibility of their abilities. Role models in the form of other entrepreneurs are considered informal institutions coming from the context and embedded in the belief system of entrepreneurs through social learning (Bandura, 1977), by direct experience or by observing the behavior of their reference group. In order to evaluate the effect on growth expectations, this analysis also considers the stage of the entrepreneurial process (early and established stages). Finally, the comparison of the growth expectations of men and women entrepreneurs serves to clarify the relationships between motivations, role models, and growth expectations according to the sex of the entrepreneur, complementing the scarce previous studies of this issue (Bulanova et al., 2016).

Motivations

Since Davidsson (1995) identified the personal conviction (self-efficacy perception), the expected payoffs, and the social contribution of the founder as main factors explaining the entrepreneurial intention, many researchers have focused on studying the effect of the founder's motivations on entrepreneurial decisions. In their study on predicting entrepreneurial success, Carsrud et al. (1989) relate entrepreneurs' motivation, personality characteristics, and need for power and influence with the firm's performance. Ferreira et al. (2019) also evidence that entrepreneurs' personal characteristics are relevant to explain proactive firms' behavior of adopting digital processes to increase the firm's innovation and performance. However, in a critical review of literature, Bosma et al. (2012) conclude that board personality traits are less related to entrepreneurial intention than specific personality traits such as the need for achievement, risk-taking, innovativeness, autonomic locus of control, and self-efficacy. Looking into entrepreneur's motivations, Hessels et al. (2008) distinguish between "pull" and "push" motivations to start a firm. Although pull motivations regarding autonomy, income and wealth, challenge, or social recognition are more connected with firms' growth (Shane et al., 2003; Van Gelderen et al., 2006; Van Gelderen & Jansen, 2006), push motivations regarding family tradition or labor necessity that force unemployed people into self-employment become especially relevant in crisis periods (Neira et al., 2013; Orser & Hogarth-Scott, 2002). Regarding the effect of the entrepreneur's motivation on the firm's growth expectations, entrepreneurs with low-growth preferences (push motivations) value their independence as the main factor of their motivation and perceive employment growth as a factor that negatively affects this independence (Cassar, 2007, 2010).

Regarding pull motivations, Amit et al. (2001) found that economic motivation is less relevant for starting new ventures than other motivators like assuming a new challenge or being innovative. However, Cassar (2007) concluded that financial success is a key factor for entrepreneurs with a high-growth preference, and in a qualitative study based on a survey with Turkish entrepreneurs, Benzing et al. (2009) evidenced that economic motivation is the most important when entrepreneurs are afraid of losing their employment if they work for others in a time of crisis.

Women have been more conservative than men when taking decisions aimed to promote the new firm's growth (Orser & Hogarth-Scott, 2002). The different weight of push over pull motivations compared to men's also explains the lower growth of firms run by women (Langowitz & Minniti, 2007; Morris et al., 2006). In a study conducted by the Global Entrepreneurship Research Association (Elam et al., 2021), women reported slightly higher growth expectations due to the pandemic, and increased their entrepreneurial intention. In contrast, in the same period (2020–2021), women reported 20 percent more business closures than men due to the pandemic. Elam et al. found some differences in motivations, in the sense that women reported the scarcity of jobs as a reason to create a new business more often than men, and mentioned less the desire to generate great wealth, which indicates a lower entrepreneurial ambition.

Finally, if we consider the evolution of the relationship between motivators and a firm's growth expectations, we expect that this relationship will differ according to the stage of the entrepreneurial process. Entrepreneurs often base their decisions not only on motivations but also on their experience and technological and managerial skills. Entrepreneurial passion is related to the perseverance of the founders in terms of investing during the firm's growth stage (Mueller et al., 2008; Murnieks et al., 2014), and the attractiveness for investors is also increased when the entrepreneur combines passion and experience (Murnieks et al., 2016). Literature based on studying the growth ambition of entrepreneurs relates growth intention not only to motivations but also to control and independence (Bosma et al., 2012), which is connected with the institutional approach of this analysis. In this sense, Calogirou et al. (2020) found a positive relationship between the decision to invest in RandD and firms' growth in the midst of the Greek crisis of 2011–2013.

According to previous results, this study assumes that, in periods of uncertainty, entrepreneurs with pull motivators (challenge and economic) will be more prone to assume the risk of investing in hiring new employees than those entrepreneurs moved by push motivations (family, labor necessity), which implies conservative decisions aimed at assuring the firm's survival. It is also assumed that more experienced entrepreneurs will be more pull-motivated to grow than those who are less experienced. Thus, it is stated that:

H1: Pull entrepreneurial motivations are positively related to firms' growth expectations in periods of uncertainty.
H2: Push entrepreneurial motivations are negatively related to firms' growth expectations in periods of uncertainty.

H3: The effect of entrepreneurial motivations is greater in the consolidating phase of the entrepreneurial process than in the initial phase of firm's creation in periods of uncertainty.
H4: The effect of entrepreneurial motivations on firms' growth expectations differs between men and women in periods of uncertainty.

Social role models

Regarding the knowledge coming from entrepreneurs' social role models, this study extends the traditional conception of the parental role model to explain children's entrepreneurial intentions (Chlosta et al., 2012; Geldhof et al., 2014) to social role models coming from the reference group of entrepreneurs, which enable the participation of civil society in the entrepreneurial system. In this sense, the existence of entrepreneurial role models offers a vicarious experience that increases the entrepreneur's perception of self-efficacy (Davidsson, 1995). Following this approach, entrepreneurs use role models to imitate the entrepreneurial behavior of their peers (Bosma et al., 2012; Kacperczyk, 2013). In this sense, knowing other entrepreneurs increases the probability of creating a new firm (Urbano & Alvarez, 2014), and this knowledge reinforces the growth expectations of the entrepreneur (García-Martínez et al., 2023). The existence of entrepreneurial role models can reduce the risk of entrepreneurs' actions in uncertainty periods because they can predict the potential results of their decisions by others' behavior. According to this approach, Wyrwich et al. (2019) evidence that the decision to start a new firm is highly influenced by the effect of social role models on the entrepreneur, in the sense that successful role models reduce the fear of failure, but also work in the opposite way: that is to say, if other entrepreneurs fail, this will have a negative effect on individuals' growth expectations.

Women entrepreneurs have tended to be more influenced by role models than men (Noguera et al., 2013; Orser & Hogarth-Scott, 2002), in the sense of using them to improve their own perception of having the right skills to create a new firm and reducing their fear of failure. Because of this, the absence of similar role models could reduce the effect of civil society on the entrepreneurial behavior of women (Karimi et al., 2014), as happened in previous crises. According to the data gathered by the GEM in 2020–2021, women entrepreneurs reported less knowledge of other entrepreneurs that had started or closed a business due to the pandemic (Elam et al., 2021).

According to previous results, it is assumed that in periods of uncertainty, having social role models will influence the entrepreneur's expectations of the firm's growth, especially in the initial phase of the entrepreneurial process and for women. Thus, it is hypothesized that:

H5: Having role models is positively related to entrepreneurs' expectations of the firm's growth in periods of uncertainty.

H6: The effect of role models is higher in the initial phase of the entrepreneurial process than in the consolidating phase in periods of uncertainty.
H7: The effect of role models on the firm's growth expectations differs between men and women in periods of uncertainty.

Following this approach, this study aims to analyze the effect of entrepreneurs' motivations and social learning coming from role models on the growth expectations for the new firms. Analysis of the periods pre-pandemic (2019) and during the pandemic (2020) will allow us to evaluate if there is any difference in this relationship due to the uncertainty caused by the health crisis in the different stages of the entrepreneurial process. Comparing men and women in both years (2019 and 2020) will also allow analysis of this relationship from a sex-based perspective.

The conceptual model underlying the study is shown in Fig. 1. This model reflects the proposed analysis of the effect of entrepreneurs' pull and push motivations and entrepreneurial role models on the growth expectations for new firms, also considering the differences between men and women and the evolution of these relationships through the entrepreneurial process.

Description of data

We used a representative sample of 20,000 adults provided by the Global Entrepreneurship Monitor of Spain for 2019 and 2020. The selection of variables is aligned with the conceptual framework and supported by the literature review. Table 1 identifies the variables used in the models, with a brief description of the variables for the two reference groups. According to the GEM's model of entrepreneurial process, total early-stage (TEA) entrepreneurs are those who started their activity in the 42 months prior to data collection, while established entrepreneurs are those who have been involved in their business for more than 42 months.

The analysis is supported by a sample of more than 20,000 people of working age (18–64 years) stratified by age range, region, and gender for each year's analysis.

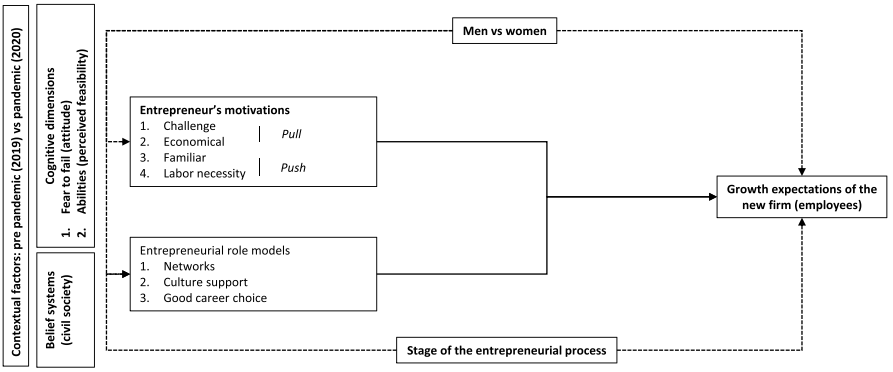

Fig. 1 Conceptual framework, to be inserted here

Table 1 Definition of variables and descriptive statistics

Variable	Unit		Stage of the entrepreneurial process[a]	
			New and nascent business with less than 42 months in 2020	**Business with more than 42 months in 2020**
Dependent variable: Growth expectation	Entrepreneurs that are going to grow in the next 5 years *A dichotomous variable growth/non-growth has been constructed, indicating those that do not grow as zero. Growth: Number of people that the entrepreneur expects to employ in 5 years' time - Employees this year	No (0) Yes (1)	38.00%	17.36%
	Entrepreneur´s motivation			
Challenge: creating a difference in the world	Entrepreneurs that started their business to make a difference in the world	No (0) Yes (1)	30.94%	24.64%
Economic: high income or wealth	Entrepreneurs that started their business to build great wealth	No (0) Yes (1)	36.20%	23.92%
Familiar: Continue a family tradition	Entrepreneurs that started their business to continue a family tradition	No (0) Yes (1)	19.46%	33.13%
Labour necessity: Jobs are scarce	Entrepreneurs that started their business to earn a living because jobs are scarce	No (0) Yes (1)	72.42%	73.66%
	Entrepreneurial role models			
Network: Know entrepreneurs	Entrepreneurs that know an entrepreneur that has started a business in the last 12 months	No (0) Yes (1)	58.09%	46.26%
Network: Stopped activity due to coronavirus pandemic	*Entrepreneurs who have stopped some of their core activities due to coronavirus pandemic*	No (0) Yes (1)	63.45%	65.01%

Table 1 (continued)

Variable	Unit		Stage of the entrepreneurial process[a]	
			New and nascent business with less than 42 months in 2020	**Business with more than 42 months in 2020**
Network: Business openings due to covid	*Entrepreneurs that know personally people who have started owning and managing a business due to coronavirus pandemic*	No (0) Yes (1)	19.29%	17.15%
Network: Business closures due to covid	*Entrepreneurs that know personally people who have stopped owning and managing a business due to coronavirus pandemic*	No (0) Yes (1)	50.32%	54.33%
Culture support	Entrepreneurs that preceive cultural support to entrepreneurship	No (0) Yes (1)	51.07%	55.81%
Good career choice	Entrepreneurs that perceive that most people in the country find that starting a new business is a good career choice	No (0) Yes (1)	50.41%	51.08%
Fear to fail	Entrepreneurs that would not start a business due to fear to fail	No (0) Yes (1)	45.15%	54.75%
	Gender			
Gender	Women	No (0) Yes (1)	46.57%	44.09%
	Other control Variables			
Employees	Average number of employees		2.39	8.85
Business age	Average age of the business		2.54	21.3
Abilities	Entrepreneurs that considers having the necessary skills required to start a new business	No (0) Yes (1)	83.32%	82.57%
Innovation	Entrepreneurs that use new technologies, procedures and services or offer new products	No (0) Yes (1)	32.75%	19.10%
Difficulty growing	Entrepreneurs that consider that this year growing is more difficult	No (0) Yes (1)	55.12%	65.20%

Table 1 (continued)

Variable	Unit		Stage of the entrepreneurial process[a]	
			New and nascent business with less than 42 months in 2020	**Business with more than 42 months in 2020**
MTPS	Entrepreneurs that have more than post-secondary education	No (0) Yes (1)	54.07%	41.05%
New opportunities	Entrepreneurs that consider the coronavirus pandemic has provided new opportunities	No (0) Yes (1)	24.70%	15.32%
Sample	Number of individuals surveyed		1267	1,801

[a]All non-numerical variables (percentage) come from the transformation of Likert scale variables (1-3 and 1-5) into binary variables, taking a value of 1 for the occurrence of a given characteristic, provided that the Likert scale value is greater or equal to 2 (variable ranges from 1-3) of the Likert scale value is greater or equal to 3 (variable ranges from 1-5), taking a value of 0 when the characteristic does not occur. The table shows the percentages of 1 out of the total of the binary variables.

Table 2 shows the distribution of the sample according to sex and age criteria. This sample is obtained through individual questionnaires provided by the Spanish GEM for 2019 and 2020. This database is the world's largest and longest running study of entrepreneurs and entrepreneurial perceptions; it gathers data from 46 countries and allows comparison among them. Due to the nature of hypotheses 3 and 6, it has been necessary to split the sample of companies between new and nascent businesses, operating for less than 42 months, and those operating for more than 42 months, both for 2019 and 2020, as the previous literature points to differentiated behavior motivated by a period of uncertainty.

The proposed estimations come from econometric logic models of limited dependent variables. In this analysis, we have also included the most relevant factors treated in the literature review to explain the growth expectations of entrepreneurs, considering the different stages of the entrepreneurial process and the differences between men and women.

Methods

The estimations proposed in the paper use limited dependent variable models, specifically the binary logit model (Wooldridge, 2002), because it is a regression method that relaxes the assumptions of the linear regression model (linearity, normality, and homoscedasticity) (Verbeek, 2004) and allows us to predict the outcome of a variable that only takes values of 0 or 1, such as our dependent variable, which takes the value 1 if the entrepreneur expects to hire new employees in the next five years, and zero in case of no firm growth or job losses.

$$y = \begin{cases} 1 \text{ with probability } p \\ 0 \text{ with probability } 1-p \end{cases}$$

These models are focused on the determinants of the probability p of the occurrence of an outcome, rather than the alternative outcome of its occurrence with a probability of 1-p. Thus the response probability of interest is:

$$p_i = \Pr(y = 1|\boldsymbol{x}) = \Pr(y = 1|x_1, x_2, \ldots, x_k)$$

where $\boldsymbol{x}$ denotes all the independent variables and p is modeled as a function of the independent variables x_k. The binary response model is specified as follows:

Table 2 Sample composition

Year	Total Sample	Sex		Age				
		Men	Women	18–24	25–34	35–44	45–54	55–64
2020	26,075	12,987	13,088	2,687	4,560	6,507	6,561	5,760
2019	23,307	11,693	11,607	2,364	4,088	5,900	5,863	5,085

$$
\begin{aligned}
p_i &= \Pr(y = 1|\mathrm{x}) \\
&= \mathrm{F}(\beta_0 + \beta_1 x_{\text{gender}} + \beta_2 x_{\text{culture support}} \\
&\quad + \beta_3 x_{\text{abilities}} + \beta_4 x_{\text{MTPS}} \\
&\quad + \beta_5 x_{\text{good career choice}} + \beta_6 x_{\text{make a difference}} \\
&\quad + \beta_7 x_{\text{build great wealth}} + \beta_8 x_{\text{continue a family tradition}} \\
&\quad + \beta_9 x_{\text{jobs are scarce}} + \beta_{10} x_{\text{know entrepreneurs}} \\
&\quad + \beta_{11} x_{\text{business closures}} + \beta_{12} x_{\text{business openings}} \\
&\quad + \beta_{13} x_{\text{innovation}} + \beta_{14} x_{\text{employees}} \\
&\quad + \beta_{15} x_{\text{stopped activity}} + \beta_{16} x_{\text{difficulty to grow}} \\
&\quad + \beta_{17} x_{\text{business age}} + \beta_{18} x_{\text{new opportunities}} + \beta_{19} x_{\text{fear to fail}}) = \mathrm{F}\left(\mathrm{x}_i'\beta\right)
\end{aligned}
$$

where F(.) is a parametric function specific to $\mathrm{x}_i\,'\beta$. The non-linear function ensures that the estimated response probabilities are strictly between zero and one.

The econometric analysis is supported by a binary logit model, where F(.) is specified as the logistic function:

$$
\mathrm{F}\left(\mathrm{x}_i'\beta\right) = \frac{e^{x\prime\beta}}{\left(1 + e^{x\prime\beta}\right)} = \bigwedge\left(\mathrm{x}'\beta\right)
$$

which is the cumulative distribution function (CDF) of the logistic distribution, where $\mathrm{F}(\bullet) \to 0$ as $\left(\mathrm{x}_i\,'\beta\right) \to -\infty$, $\mathrm{F}(\bullet) \to 1$ as $(\mathrm{x}_i\,'\beta) \to +\infty$.

Results

Table 3 presents the results of the estimations for the TEA and established entrepreneurs for 2019 and 2020. There are variables that have no value for the 2019 estimations because they have been included in the questionnaire as a consequence of the COVID-19 pandemic.

Differences between TEA and established entrepreneurs

The results of the analysis evidence that, during the first year of the COVID-19 epidemic in Spain (2020), the effect of entrepreneurs' motivations on firms' growth changed compared to the previous year. In 2019, the pull motivation of creating a difference in the world (challenge motivation) was the most relevant explanation of entrepreneurs' expectation of the growth of firms in the first stage of the process (TEA) in terms of hiring new employees (proactive entrepreneurial behavior). This is consistent with the findings of Amit et al. (2001). As a result of the change in institutional conditions caused by the COVID-19 epidemic in Spain, only those TEA entrepreneurs motivated by high income or wealth (economic motivation)

Table 3 Results of estimations

	Dependent variable: Firm's growth expectations of entrepreneurs			
	TEA entrepreneurs New and nascent business with less than 42 months		Established entrepreneurs Business with more than 42 months	
Variables	**2019**	**2020**	**2019**	**2020**
Entrepreneur´s motivation				
Challenge: creating a difference in the world	0.449 ** (0.225)	0.432 (0.269)	0.248 (0.199)	0.415 ** (0.201)
Economic: high income or wealth	0.354 (0.243)	0.635 ** (0.283)	0.196 (0.189)	0.686 *** (0.192)
Familiar: Continue a family tradition	0.217 (0.299)	0.102 (0.312)	0.106 (0.200)	0.184 (0.194)
Labour necessity: Jobs are scarce	-0.064 (0.228)	-0.150 (0.266)	0.487 *** (0.206)	-0.270 (0.189)
Entrepreneurial role models				
Network: Know entrepreneurs	0.468 ** (0.230)	0.152 (0.254)	0.407 ** (0.182)	0.341 * (0.181)
Network: Stopped activity due to coronavirus pandemic	-	0.255 (0.273)	-	-0.333 * (0.182)
Network: Business closures due to covid	-	0.007 (0.245)	-	0.106 (0.182)
Network: Business openings due to covid	-	0.535 * (0.309)	-	-0.069 (0.232)
Culture support	0.041 (0.278)	0.304 (0.315)	-0.061 (0.225)	0.298 (0.207)
Good career choice	-0.363 (0.273)	-0.261 (0.312)	0.154 (0.223)	0.178 (0.203)
Fear to fail	-0.201 (0.220)	-0.044 (0.252)	-0.584 *** (0.190)	-0.215 (0.175)
Gender	-0.244 (0.207)	-0.105 (0.244)	-0.343 * (0.180)	-0.320 * (0.177)
Employees	0.213 *** (0.041)	0.119 *** (0.034)	0.062 *** (0.017)	0.0005 (0.0004)
Business age	0.021 (0.034)	-0.104 ** (0.041)	-0.018 ** (0.008)	-0.031 *** (0.008)
Abilities	0.079 (0.349)	-0.161 (0.361)	0.730 ** (0.287)	0.371 (0.270)
Innovation	0.452 **(0.225)	-0.434 (0.273)	0.918 *** (0.191)	0.345 * (0.208)
Difficulty to grow	-	-0.295 (0.256)	-	-0.035 (0.187)
MTPS	-0.006 (0.209)	0.224 (0.255)	-0.181 (0.188)	-0.013 (0.177)
New opportunities	-	-0.454 (0.306)	-	0.011 (0.225)

Table 3 (continued)

	Dependent variable: Firm's growth expectations of entrepreneurs			
	TEA entrepreneurs New and nascent business with less than 42 months		Established entrepreneurs Business with more than 42 months	
Variables	**2019**	**2020**	**2019**	**2020**
Constant	-1.214 ** (0.474)	-0.555 (0.534)	-2.308 *** (0.425)	-1.411 *** (0.416)
Observations	460	346	846	1,002
Log Likelihood	-278.69	-209.86	-410.00	-442.28
Akaike Inf. Crit	587.38	459.71	850.00	924.56
Note	*p < 0.1; **p < 0.05; ***p < 0.01			

expected to hire new employees in the short term. In the case of entrepreneurs involved in the consolidating phase of the entrepreneurial process (more than three years paying salaries), those entrepreneurs with pull motivations (challenge and economic motivations) were more likely to hire new employees in the next six months, while those motivated to maintain a familiar business (push motivation) did not expect to grow during the crisis period. This result shows a change of perspective from previous years. Hypothesis 1 (H1: Pull entrepreneurial motivations are positively related to firms' growth expectations in periods of uncertainty) and Hypothesis 3 (H3: The effect of entrepreneurial motivations is higher in the consolidating phase of the entrepreneurial process than in the initial phase of firms' creation in periods of uncertainty) are supported for Spanish entrepreneurs involved in the consolidating phase of the entrepreneurial process. The results are aligned with those of Shane et al. (2003), Van Gelderen et al. (2006), and Van Gelderen and Jansen (2006). However, H1 is only partially supported in the initial (TEA) phase of the entrepreneurial process, where growth expectations are only connected to the economic motivation of the entrepreneur. This result is consistent with Benzing et al. (2009), who evidenced that economic motivation is the main reason for growth decisions in uncertainty periods.

Hypothesis 2 (H2: Push entrepreneurial motivations are negatively related to firms' growth expectations in periods of uncertainty) is not supported in the TEA phase of the entrepreneurial process, with significant evidence. This result can be explained by the characteristics of firms created by entrepreneurs with push motivations—family and micro businesses involved in primary commercial services, which were mostly considered essential for Spanish government (Neira et al., 2021). In this sense, these entrepreneurs were less affected by the shutdown ordered in 2020, so their growth expectations were not significantly related to the situation of uncertainty. Regarding the effect of the knowledge coming from entrepreneurial role models, the results show how having knowledge about other entrepreneurs in their local area reinforced the growth expectations of TEA entrepreneurs in 2019, but not during the coronavirus year (2020). Despite the fact that having social role models is often considered a significant variable to explain new firms' growth, and we expected that knowledge of social role models would allow entrepreneurs to advance their strategy and improve their management skills (Ferreira et al., 2019), it was not found that knowing people who started new firms or closed their business due to the coronavirus epidemic had a significant effect on entrepreneurs' belief that their firms would grow in the future. Meeting other entrepreneurs might have a positive and significant effect in non-COVID years, but in an atypical year such as 2020, it is not a factor that helped entrepreneurs to have a more promising strategy, at least for individuals in the early stage of the entrepreneurial process (for less than 42 months). For the more experienced entrepreneurs involved in the consolidating phase of the process, the knowledge coming from entrepreneurial role models maintained their importance even in the time of crisis. These results are consistent with those of Bosma et al. (2012), Kacperczyk (2013), and Wyrwich et al. (2019). This means that entrepreneurial role models are relevant to explain entrepreneurs' growth expectations, although the effect changes depending on the stage of the entrepreneurial process. The results provide evidence to support Hypothesis 5 (H5: Having

role models is positively related to entrepreneurs' expectations of firm growth in periods of uncertainty), but fail to support Hypothesis 6 (H6: The effect of role models is higher in the initial phase of the entrepreneurial process than in the consolidating phase in periods of uncertainty).These findings evidence that entrepreneurs need time and experience to understand the reasons for the success or failure of their peers in order to be influenced by their behavior, and to build strategic alliances to support their businesses' growth.

Finally, the results show that, regarding control variables, the effect of the age of entrepreneurship was negative. As Evans (1987) pointed out, business age is one of the most relevant factors in determining the dynamics of companies, given that it increases the survival of the business, but decreases its capacity for growth at a diminishing rate. The effect of the number of employees on expected growth for TEA entrepreneurs in 2020 showed a positive significant difference in contrast to the established ones, in line with the results obtained by Cliff (1998), who stated that, after a certain number of employees, entrepreneurs decide to stop growing or to grow at slower pace. While innovation has a positive and significant effect on growth expectations in a non-COVID year (2019), in a crisis year such as 2020 this effect changes. For entrepreneurs involved in the TEA stage of the process, the effect is not significant, while for entrepreneurs involved in the established stage, the effect is significant, but smaller than in a non-COVID year. This result is connected with the findings of Caloghirou et al. (2020) on the growth behavior of innovative firms during the Greek crisis.

Differences between men and women

Table 4 presents the results of the estimations for men and women in the TEA phase of the entrepreneurial process for 2019.

Table 5 shows the results of the estimations for the established initiatives for men and women in 2020.

The results only show a slight difference in the effect of pull motivations (economic and challenge) for TEA entrepreneurs. In 2019, challenge motivations were relevant for women, while in 2020 economic motivation was relevant just for men. Push motivations (familiar, labor necessity) were not significant in explaining the entrepreneurs' growth expectations, regardless of the sex. These results nuance those obtained by Cassar (2007), who found a direct relationship between economic motivation and growth but a negative one between entrepreneurs' preference for independence and their growth expectations.

Going into the differences between men and women, in 2019 (pre-pandemic) and 2020 (pandemic), the novelty is the absence of differences. In these years, women were not distinguished from men in having push instead of pull motivations. These results change the trend of previous years, reflected in the studies by Langowitz and Minniti (2007), Morris et al. (2006), Neira et al. (2013), or Orser and Hogarth-Scott (2002). In this sense, the different weight of push over pull motivations does not explain the differences between men and women, even in times of uncertainty. This finding should be studied in comparison with other countries with different levels

Table 4 Results for men and women in the TEA stage in 2019

	Dependent variable: Growth expectation Entrepreneurs that are going to grow in the next 5 years			
	New and nascent business with less than 42 months in 2019		Business with more than 42 months in 2019	
Variables	**Men**	**Women**	**Men**	**Women**
Entrepreneur´s motivation				
Challenge: creating a difference in the world	0.344 (0.316)	0.649 (0.339) **	0.474 (0.264) *	-0.025 (0.317)
Economic: high income or wealth	0.503 (0.350)	0.113 (0.359)	-0.002 (0.249)	0.426 (0.303)
Familiar: Continue a family tradition	0.671 * (0.407)	-0.323 (0.521)	0.276 (0.258)	-0.168 (0.340)
Labour necessity: Jobs are scarce	-0.012 (0.325)	-0.178 (0.330)	0.582 (0.265) **	0.404 (0.342)
Entrepreneurial role models				
Network: Know entrepreneurs	0.477 (0.341)	0.430 (0.333)	0.015 (0.234)	1.012 (0.310) ***
Culture support	0.228 (0.417)	-0.124 (0.397)	-0.124 (0.302)	0.006 (0.348)
Good career choice	-0.264 (0.407)	-0.572 (0.392)	0.310 (0.299)	-0.054 (0.349)
Fear to fail	-0.331 (0.316)	-0.004 (0.326)	-0.521 (0.255) *	-0.657 (0.301) **
Employees	0.136 (0.045) ***	0.341 (0.070) ***	0.099 (0.027) ***	0.033 (0.024)
Business age	-0.036 (0.045)	0.103 (0.063)	-0.031 (0.011) ***	-0.009 (0.011)
Abilities	-0.303 (0.510)	0.444 (0.522)	0.786 (0.402) *	0.518 (0.423)
Innovation	0.629 (0.318) **	0.009 (0.349)	0.916 (0.250) ***	0.914 (0.312) ***
MTPS	-0.205 (0.294)	0.262 (0.318)	-0.213 (0.247)	-0.129 (0.302)
Constant	-0.845 (0.643)	-1.869 (0.693) ***	-2.162 (0.554) ***	-2.722 (0.657) ***
Observations	225	233	475	369
Log Likelihood	-138.98	-130.98	-239.70	-162.16
Akaike Inf. Crit	305.96	289.96	507.41	352.33
Note	*p < 0.1; **p < 0.05; ***p < 0.01			

Table 5 Results for men and women in the consolidating stage in 2020

	Dependent variable: Growth expectation Entrepreneurs that are going to grow in the next 5 years			
	New and nascent business with less than 42 months in 2019		**Business with more than 42 months in 2019**	
Variables	**Men**	**Women**	**Men**	**Women**
Entrepreneur´s motivation				
Challenge: creating a difference in the world	0.344 (0.316)	0.649 (0.339) **	0.474 (0.264) *	-0.025 (0.317)
Economic: high income or wealth	0.503 (0.350)	0.113 (0.359)	-0.002 (0.249)	0.426 (0.303)
Familiar: Continue a family tradition	0.671 * (0.407)	-0.323 (0.521)	0.276 (0.258)	-0.168 (0.340)
Labour necessity: Jobs are scarce	-0.012 (0.325)	-0.178 (0.330)	0.582 (0.265) **	0.404 (0.342)
Entrepreneurial role models				
Network: Know entrepreneurs	0.477 (0.341)	0.430 (0.333)	0.015 (0.234)	1.012 (0.310) ***
Culture support	0.228 (0.417)	-0.124 (0.397)	-0.124 (0.302)	0.006 (0.348)
Good career choice	-0.264 (0.407)	-0.572 (0.392)	0.310 (0.299)	-0.054 (0.349)
Fear to fail	-0.331 (0.316)	-0.004 (0.326)	-0.521 (0.255) *	-0.657 (0.301) **
Employees	0.136 (0.045) ***	0.341 (0.070) ***	0.099 (0.027) ***	0.033 (0.024)
Business age	-0.036 (0.045)	0.103 (0.063)	-0.031 (0.011) ***	-0.009 (0.011)
Abilities	-0.303 (0.510)	0.444 (0.522)	0.786 (0.402) *	0.518 (0.423)
Innovation	0.629 (0.318) **	0.009 (0.349)	0.916 (0.250) ***	0.914 (0.312) ***
MTPS	-0.205 (0.294)	0.262 (0.318)	-0.213 (0.247)	-0.129 (0.302)
Constant	-0.845 (0.643)	-1.869 (0.693) ***	-2.162 (0.554) ***	-2.722 (0.657) ***
Observations	225	233	475	369
Log Likelihood	-138.98	-130.98	-239.70	-162.16
Akaike Inf. Crit	305.96	289.96	507.41	352.33
Note	*p < 0.1; **p < 0.05; ***p < 0.01			

of income. The results obtained by Elam et al. (2021) evidence that the differences in motivations between men and women change in low-middle income compared to high-income countries.

In contrast, considering the stage of the entrepreneurial process, women involved in the consolidating stage of the entrepreneurial process continue to be more conservative than men in order to develop a growth strategy for their firms, as shown in Table 3. Hypothesis 4 (H4: The effect of entrepreneurial motivations on firms' growth expectations differs between men and women in periods of uncertainty) is only supported for established entrepreneurs. We can explain these results taking into account the sectoral composition of the sample of firms led by men in the established stage of the entrepreneurial process. These firms, more than those led by women, are involved in industries considered essential by the Spanish government during the shutdown, so they were less affected by the uncertainty of the health crisis (Neira et al., 2021).

Regarding the effect of the knowledge coming from role models on firms' growth expectations, knowing other entrepreneurs is only positively related to the growth expectations of women involved in the TEA stage of the process in 2020, in line with the results of Noguera et al. (2013) and Orser and Hogarth-Scott (2002). The existence of entrepreneurial role models helps to explain entrepreneurs' different growth expectations. In the consolidating phase of the entrepreneurial process, role models are positively related to women's growth expectations in 2019 and to men's growth expectations in 2020. The results also show significant differences between men and women in the effect of culture support on growth expectations in years of uncertainty, as can be seen in North (2005), generating a positive feedback loop between the existence of role models, culture support, and expectations of firms' growth (Estrin & Mickiewicz, 2012; Hafer & Jones, 2015). Thus, we find evidence to support Hypothesis 7 (the effect of role models on firms' growth expectations differs between men and women in periods of uncertainty), although further research is necessary to find more conclusive evidence. Certainly, these preliminary results show that something is changing in the effect of civil society on men and women's perspectives.

Discussion

This study provides new evidence of the influence on entrepreneurs' growth strategy for new firms of entrepreneurial motivations and the effect on potential entrepreneurs of their role models, considering the differences between men and women and at different stages of the entrepreneurial process.

As a consequence of the COVID-19 epidemic in Spain, in the early stage of firms' creation entrepreneurs only take into consideration the economic projections of their new firms in order to take the risk of hiring employees, as found by Shane et al. (2003), Van Gelderen et al. (2006), Van Gelderen and Jansen (2006). According to the concept of domain attitudes defined by Davidsson (1995), the entrepreneurial attitude is conditioned by the expected payoffs of the business and by the social contribution of the activity. Uncertainty makes entrepreneurs less idealistic, less ambitious, and more conservative, increasing the perception of how their behavior can

influence the firm's results, reducing their fear of failure (Ajzen, 1991), and pushing the social contribution into the background. However, when new firms are consolidating, the pull motivation of challenge (social contribution) becomes relevant for entrepreneurs. Just for experienced entrepreneurs, uncertainty conditions ambition based on challenge motivations. Moreover, the effect of this motivation on firms' growth expectations could be even higher in uncertainty periods, when new market opportunities arise (Narula, 2020). These results are connected with previous research on ambitious entrepreneurship, reinforcing the effect of the attitude (need for achievement) and the belief in having capacity (perceived feasibility) of established entrepreneurs on their having higher goals for their firms and making greater efforts to achieve them (Bosma et al., 2012). While in the early stage of the entrepreneurial process the lack of experience of entrepreneurs focuses on the need for economic returns (Benzing et al., 2009) to support the survival of such a new business, in the established stage of the process entrepreneurs seem to prioritize the challenge of taking advantage of new opportunities, even at the risk of losing control, by hiring new employees in uncertain times.

The effect on entrepreneurs of the social knowledge coming from civil society (social perception of role models) also changes in periods of uncertainty, results that are consistent with Kacperczyk (2013) and Wyrwich et al. (2019). Only experienced entrepreneurs involved in the consolidating stage of the process continue to trust in peers' behavior to guide entrepreneurial decisions when there is no guide to know how the firm will perform. Because of this, unlike those founders involved in the early stage of the entrepreneurial process, experienced entrepreneurs can distinguish the best practices even in completely new environments such as those caused by the pandemic. In this sense, it is more likely that technological opportunities that arose during 2020 were fulfilled by established entrepreneurs than by new ones.

The perception of a culture supportive to entrepreneurship increases men's growth expectations, although this social factor is not significant in the case of women. The belief in having a supportive context pushes the entrepreneurial ambition of men and leads them to be more proactive in taking advantage of the opportunities arising from a changing environment. Again, women show a more conservative profile than men due to their lower perceptions of the potential support of contextual factors (role models, culture), which undermines the positive feedback loop described by Estrin and Mickiewicz (2012) and Hafer and Jones (2015).

To some extent, uncertainty kills the ambition of unexperienced entrepreneurs, reinforcing the need for immediate economic viability to justify investments in the firm's growth (Bosma et al., 2012). However, uncertainty can be a good opportunity for the growth of experienced entrepreneurs' firms if they are able to maintain pull motivations and take advantage of other role models to learn how to fulfill new market needs with innovative solutions.

Finally, women could lose the growth opportunities arising from the pandemic if they do not manage the trait of fear of failure and trust more in their own capacities and the social knowledge provided by their reference group. In this sense, in line with the findings of Field et al. (2010), the different belief systems may be responsible for the differences between men and women in facing the challenge of a new business environment.

Conclusion and implications

This work helps better to understand entrepreneurial behavior in periods of uncertainty from the approach of institutional theory and reinforces the importance of cognitive factors and belief systems of entrepreneurs.

The change in life and professional conditions of 2020 radically affected entrepreneurs. Although other studies have already evidenced this (Fabeil et al., 2020; Manolova et al., 2020), this work identified a change in the effect of entrepreneurial motivations and the influence of social models on entrepreneurs' expectations for firms' growth in a sample of more than 20,000 people. Only a radical situation of uncertainty could achieve such a change in people's minds.

Motivations are determining factors of growth expectations in terms of increasing the number of employees, which is a long-term engagement of the entrepreneurs with the firm. However, this effect is complex. Push motivations related to family firm continuity or labor necessity are not clearly connected with growth behaviors. Among pull motivations, only economic expectations were considered by early entrepreneurs during 2020. The pandemic context slowed down the ambition of these entrepreneurs, probably reducing their opportunities for survival in the future. In contrast, for established entrepreneurs, the maintenance of pull motivations based on challenge expectations allowed them to take advantage of their social knowledge in order to align their attitudes, social perceptions, and perceived feasibility, and have more opportunities for growth in the future. Researchers should continue to study the changes in motivations and social perceptions in relation to entrepreneurs' expectations in order to confirm whether this is only transitory or a change in the trend of entrepreneurs' strategic actions.

Because most of the sample is formed by firms with fewer than five employees involved in the service industry, which is a good representation of the entrepreneurial profile of Spanish firms, the findings cannot be directly extrapolated to all countries. Future research focusing on collecting new evidence in post-pandemic years and from other economies could help better to understand the behavioral changes produced by drastic changes in the environment. Such new evidence could anticipate the effect of uncertainty on entrepreneurs' expectations and so support new policies to deal with the new opportunities that radical changes provide, taking advantage of social role models in civil society and advancing the change of trend in the differences between men and women.

This analysis shows that inexperienced entrepreneurs and women need more information from environmental institutions (networks, social norms, culture) in order to change their belief systems and be more proactive in their growth strategies. A stable environmental and legal framework that allows them to know the labor, tax, and incentive systems of the industry in which their business are involved is essential for this behavior. The unplanned change of policies in 2020 not only had direct costs related to the shutdown, but also halted the growth decisions of these entrepreneurs. Future research could study the effect of men's and women's motivations and role models in other countries with different levels of incomes, in line with the previous evidence obtained by Elam et al. (2021).

This study is also limited in time (2019–2020) to understand clearly the effect of the institutional change on the entrepreneurs' growth expectations. In the coming years, new data about the consequences of the change for formal and informal institutions will arise, and this will be a good opportunity to research this effect in new firms belonging to different industries (more or less employment intensive) and to understand potential differences between non-family firms and family firms, where previous research has evidenced that motivation is a limiting factor for growth.

This study aims to contribute to the open discussion about entrepreneurial systems that connect entrepreneurial motivations and role models from civil society from an institutional perspective in order to facilitate proactive strategies that allow entrepreneurs to grow in the future.

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