

# Entrepreneur's values and knowledge: How can influence new technology-ventures' growth?

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## Abstract

*This study provides a theoretical reflection about how entrepreneur's values and knowledge can influence growth expectations in new technology-ventures. This research offers a discussion about the fact that entrepreneur's knowledge is not the only individual factor that helps to differentiate the level of growth expectations in this specific sector. The argument is that there are certain specific values present in those new ventures with a higher growth expectations, mainly independence and wealth. However, there are other values that are not so related to growth like exploitation or security, but they are typically present in technical entrepreneurs. Finally, a model is presented to understand the relationship between entrepreneur's values and knowledge and their impact on new technology venture growth. As a result of this reflection, the paper states on one hand nine propositions explaining the influence of technological entrepreneurs' knowledge and values on growth expectations for their firms, on the other hand the paper provides a model of this influence.*

**Key words:** *knowledge, values, new-technology ventures, growth expectations, entrepreneur*

## 1. INTRODUCTION

New technology-based firms (NTBFs) play a key role on development and competitiveness of regions [1, 2]. This reason has led scholars to be interested in studying the main factors behind growth and success of this type of companies; in fact one of the most studied drivers of growth in academic literature is the role of the entrepreneur. Although growth is generally accepted as a good indicator of success and one of the aims of every firm, not all the new ventures choose to grow [3, 4].

In this sector, companies are created by a particular type of entrepreneurs, usually with very high levels of technical knowledge and skills. Sometimes it is even scholars and researchers who create spin-off companies [5]. In this line, Oakey [6] argued that technical entrepreneurs need a correct combination between technical and managerial skills in order to be able to exploit such expertise. When the company starts growing it is crucial that the founder has a support in finance, marketing and personnel areas [6]. But, is really the managerial knowledge what make the difference between the entrepreneurs that are willing to grow and those that prefers just maintain their position? In addition to entrepreneur's knowledge it is considered that values are very relevant indirect determinants of

the entrepreneurial activity in technological industries. Usually, entrepreneurs in this sector possess high-technical training; in many cases come from university environments and they have been researchers for many years. For example, in Spain, many research centers and universities provide funding to researchers in order to turn the patents and innovations they are working on, into real business projects. It is not unusual that these researchers had never thought about founding a company but sometimes they find this option the only way to continue developing their professional career.

Elizur and Sagie [7] highlighted the importance of the compatibility between life and work values. Under these circumstances, the objective of this research is to reflect on how entrepreneur's values and knowledge can influence growth expectations in new technology-ventures. Accordingly, this relationship will affect the way in which individuals manage their new technology-ventures and how knowledge and values influence the intention of growing.

The objectives of this paper are first, to set-up a theoretical frame of the influence of technological entrepreneurs' knowledge and values on their expectations of growth on the business they own and run; second, to propose a model that summarizes and explains the influence previously mentioned and third,

to raise relevant under-explored research topics in the fields of entrepreneurship and management.

Following this introduction, the next section presents the theoretical framework and the model. The first theoretical chapter reflects on the role of entrepreneur's knowledge in the context of new technology ventures and in the next one, the role of entrepreneur's values is developed from a theoretical point of view. The study concludes with a summary of the main ideas and implications from a theoretical and practical point of view.

**2. ENTREPRENEUR'S KNOWLEDGE IN THE CONTEXT OF NEW TECHNOLOGY-VENTURES**

Firms are considered by a great number of researchers, sets of resources systematically exploited and inter-related for producing and trading goods or services. For more than two decades now, scholars have explored firms and organizations' phenomena basing their researches on the analysis of resources [8, 9, 10, 11].

From the wide variety of resources and capabilities that give birth to a firm, knowledge is undoubtedly, one of the most explored assets in academic literature. In the last years knowledge has been strongly related to the study of business creation and performance in several ways and nowadays there exist as much academic papers about this issue, as topics relating human beings and entrepreneurship.

Knowledge related topics in entrepreneurship have been studied at different levels; the entrepreneurs' knowledge at the individual level [12, 13, 14], the group of entrepreneurs' knowledge level [15, 16, 17, 18], the knowledge within the organization -organization level- [19, 20, 21, 22, 23, 24] and the inter-organization level referring to the knowledge flowing and being constructed amongst groups of organizations [25, 26, 27]. Particularly, the study of the entrepreneur's knowledge –at the individual level- is the dominant topic in academic literature of the field during the last decade. Individual level as the name implies, will refer to the creation or exploitation of all kinds of knowledge or sources of knowledge performed by an individual.

Undoubtedly, entrepreneur's knowledge has been a reference topic for researchers when measuring variables related to the performance and growth of nascent business. Most of the times factors of success and growth of new businesses have been strongly related to the possession, acquisition, development and implementation of entrepreneur's knowledge indicators such as skills, information, foreign languages domain and the most common knowledge indicators, education and experience [28, 29, 30, 31, 32, 33].

As mentioned, education and experience have been the most commonly used entrepreneur's knowledge indicators for measuring their impact on new businesses development. Constantly these two indicators are found together as demographical variables affecting some other dependent variable of

the firm (see table 1). As stated, knowledge plays a critical role on business creation, existence and prevalence in the market; actually there are certain sectors where specialized knowledge determines the length and width in the life cycle of a new venture. Technology-based businesses require by nature greater and more specialized amounts of knowledge to be created and to be managed. In fact, there has been a debate in academic literature about the real need for technological entrepreneurs of acquiring or not business management skills and if so, to what extent.

**Table 1.** Dependent variables measured taking education and experience as knowledge indicators

Author	Dependent Variable
Lin et al (2000); Arenius and Minniti(2005); De Clerq and Arenius (2006); Mueller (2006); Kim et al (2006); Vinogradov and Kolvereid (2007); Thomas (2009); Thompson (2010)	self-employment and entrepreneurial activity
Honig (2001); Changati and Greene, (2002); Watson et al. (2003); Williams (2004); Lee and Osteryoung (2004); Peña (2004); Van Gelderen and Bosma (2005); Åstebro and Bernhardt (2005); Dimov and Shepherd (2005); Van Gelderen et al (2005); Zarutskie (2010)	profitability, success, income and performance
Johnson (2000); Cowling and Taylor (2001); Ferrante (2005); Kollinger and Minniti (2006); Ucbasaran et al (2008); Hyttinen and Ilmakunnas (2007); MacDonald et al (2007); Backes and Werner (2007); Seawright et al (2008)	ability and attitudes to create jobs, opportunity identification and aspirations
Nziramanga and Lee (2001); Peña (2004); Marvel and Lumpkin (2007);	duration of business, innovation, economic growth
Hindle and Cutting (2002); Van Praag (2003); Chrisman and McMullan (2004)	job satisfaction, risks and hazards, probability of survival

Source: [34]

In this sense, Oakey [6] argues that it is not the best choice that scientists entrepreneurs with strong technical expertise and that have succeed in the market so far, refuse to acquire management training in order to grow the business. This author considers important for entrepreneurs either to acquire these knowledge or even better, to hire or associate to someone who holds specialized business management skills, especially if financial assistance becomes an unavoidable need.

**3. ENTREPRENEURS' VALUES AND NEW TECHNOLOGY-VENTURES GROWTH**

There has been substantial investigation related to why individuals create a business [35]. The motive that drives founders to develop business projects can either mean added value for the firm or have a negative effect on it. Various authors have studied the influence of motivations on the subsequent success of the firm and on organisational processes [36, 37, 38, 39, 40]. Most

of those authors draw the conclusion that the fact the owner is driven by intrinsic motivation -putting a personal idea into practice, or by the need to be his/her own boss is an asset for the firm, which will have greater chances of surviving and obtaining future utilities than if he/she is driven by the impossibility of finding a job.

The characteristics of the market in which high technology firms operate may influence the specific motivational tendencies [6]. Oakey [6] found that there were three major motives for beginning a new technology business: independence, wealth and exploitation; the desire for independence is divided into two, freedom and control. In this sense, the frequently noted strong desire for control among many founders may negatively influence the capacity of growing or even lead firms to death. This necessity can be higher in this sector in which knowledge properties are enormously important and where many competitive advantages are based on technical specific knowledge. Cassar [35] found that the need of independence of the entrepreneurs was not a motivation that helps firms to grow; but does this value influence the growth expectation of founders?

The other group of motivations is the one based on wealth. Cassar [34] found that financial success motivation was a key determinant for new venture's growth. This results neglect the ones in some other studies that suggest that non-economic concerns were more important than financial outcomes in determining some entrepreneurs' attitudes and expectations of growth [41, 42], after all in this sector, the necessity of exploitation is one of the founders' values commonly identified. Most of the entrepreneurs in this sector have very high levels of technical knowledge and discover new ways of doing and improving their environments. Due to the characteristics of the products or services, the need to exploit opportunities and communicate to society these technological advances moves many of these individuals in a higher rate than in other sectors.

There are many theories that have tried to explain the motivational process. Theories focused on expectancy for success, theories focused on task value or theories that integrate expectancies and values [43]. In the last group of theories it is found a modern expectancy value theory which both these components - expectancy and value- are more related to social/cultural determinants and positively related to each other [44, 45]. Feather's work on values is an extended version of Atkinson's original expectancy-value model in important ways by broadening the conceptualization of value. He argued that values are one class of motives that lead individuals to perform acts they think should be done [45]. This author assumes that values function like needs to influence goal directed behaviour and can influence the choices that are made between alternative activities and the way situations are constructed.

Trying to shed some light on this issue this article focuses on a topic that has been usually related to work in academic business research: values. Rokeach [46]

defines values as "an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence". García and Dolan [47] assume that value is a "strategic learning relatively stable about a way of acting is better than the opposite to obtain our goals or to make the things go well". Depending on the depth of analysis, different levels of values can be found such as [48] country, group, and individual. Cultural values represent the implicitly or explicitly shared abstract ideas about what is good, right, and desirable in a society [49]. Although culture values will influence individual values, this research will focus on the individual level, specifically in the figure of the entrepreneur.

Previously to the analysis of values, it is important to understand the precedence of these values and how they influence in behaviors. Beliefs are structures of thinking, developed through a learning process that helps individuals to explain the reality. Attitudes are consequences of the values and are tendencies to evaluate, positively or negatively, a person, thing or fact. Attitudes predict our tendency to act in a specific way [47]. In this sense, to modify behaviors it is necessary to change beliefs and values more than only the attitudes -see figure 1- [47].

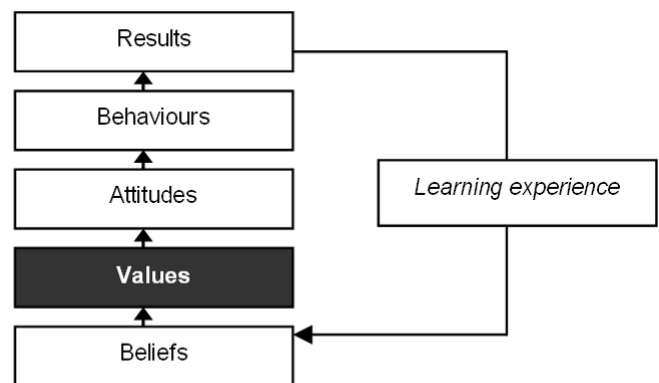


Figure 1. Sequence between believes and results, Source: [47]

Rokeach [46] divided into two sets of values: terminal and instrumental. Terminal values are existential objectives, which are end states of existence or ultimate modes of living what has been idealized as "good life". Instrumental values are those values that represent the way of acting necessary to get the existential values.

There are some personal values that it is quite clear to what kind of behaviors or situations they are relevant (e.g. money or good friends) but there are other values a little more diffuse such as meaningful life or work [7]. Traditionally, general life values and work values have been investigated independently [7, 48] but most researchers seem to assume that work values do somehow derive from general values even though they are not very explicit about the causal nature of this process. In some cultures, work values could be a source from which general values arise, for example multinational corporations can play a role in the

transmission of values but this is an approach with little empirical evidence [50].

This article focuses on those values that can influence in new ventures' growth expectations –see figure 2-. First referring to terminal values, the importance and significance of work in a person's life will be crucial for the entrepreneurs' and for new venture management as well as for the growth expectations. Since most of the times the initial stage of the firm lacks of stability, routines and processes are not formally established and it is necessary for the entrepreneur to be completely involved to overcome that deficiency. A high level of personal commitment by the entrepreneur contributes added value to the firm and may mark the difference between some entrepreneurial initiatives and others [51]. In that respect, authors such as Cooper et al. [52] state that greater commitment from the entrepreneur has a decisive influence on the survival of the firm. Other authors like Peña [39] and Collins-Dood et al. [40] state that there is a positive relation between the level of founder's dedication to the business and the level of success of the business and those founders with higher expectations of growth will present higher levels of commitment to the company. Therefore, hard work as well as strong commitment has been highlighted as important elements for the smooth running of newly-created firms [53]. Schwartz [50] compares the importance of work relative to four other life areas – leisure, community, religion and family. This paper proposes that a greater importance the individual gives to work lead to greater expectations of growth and greater opportunities to devote his efforts to be successful.

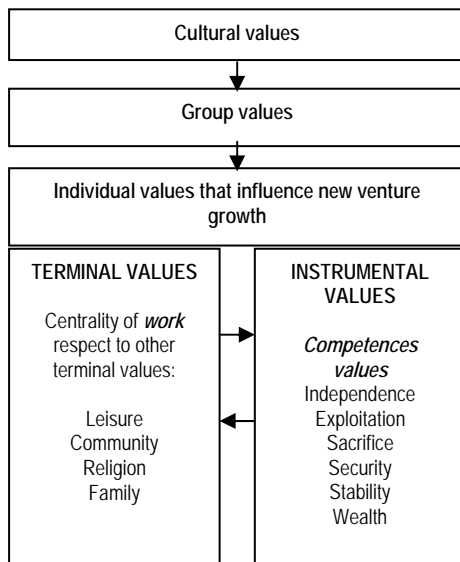


Figure 2- Entrepreneur's values that influence new venture growth Source: Own elaboration

Instrumental values are divided into moral and competences values and competence values [46]. Moral values have two particular characteristics: they are related to other people and when there are no-connection between values and behavior they cause feelings of guilt and shame [47]. The competence

values are more individualistic and they have no direct relation to culpability and moral feelings. For example, honesty implies a feeling of acting morally while creativity implies acting according to a competence. This paper focuses on these values –competences values- that can influence the growth expectations of new ventures -independence, exploitation, sacrifice, security, stability and wealth-.

4. THEORETICAL MODEL

Based on previous assumptions, the following model that summarizes the theoretical relationships between components exposed –see figure 3-.

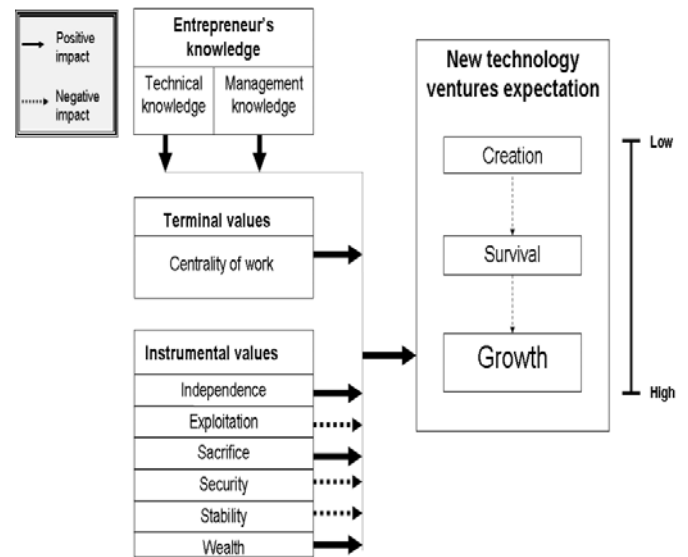


Figure 3. Influence of entrepreneurs' knowledge and values on growth, Source: Own elaboration

4.1. Entrepreneurs' knowledge

In this sector most of the entrepreneurs hold technical graduate degrees at least in one field related to the main company's core business, there are some of them that also have completed some business-related graduate program, some others just have attended certain management courses or hold on to experience as the only source of management knowledge. This knowledge will positively influence the likelihood of new venture's growth expectations.

**Proposition 1a:** The presence of high levels of technical knowledge implies high growth expectations in new technology ventures.

**Proposition 1b:** The presence of high levels of management knowledge implies high growth expectations in new technology ventures.

However, entrepreneur's knowledge at the beginning of company's life is not enough to arouse the desire to grow in the entrepreneurial team.

#### 4.2. Entrepreneur's values

Individual values affect entrepreneurial activity, specially the way entrepreneurs manage their companies and the intention of growing.

Regarding terminal values, the fact that founders who positioned work as the main priority in their spending-time-in list will foster the desire of growing. Many of them committed their life to work and have renounced many aspects of their life.

**Proposition 2:** *The presence of entrepreneur's terminal value "centrality of work" impacts positively the expectations of growth and is related to high levels of growth expectations in new technology ventures.*

Regarding instrumental values, they were divided into two groups: positive impact and negative impact. The first set of values will have a positive influence on the desire for entrepreneurial growth and therefore will impact positively on it:

**Proposition 3a:** *The presence of entrepreneur's instrumental value "independence" impacts positively and is related to high levels of growth expectations in new technology ventures.*

**Proposition 3b:** *The presence of entrepreneur's instrumental value "wealth" impacts positively and is related to high levels of growth expectations in new technology ventures.*

**Proposition 3c:** *The presence of entrepreneur's instrumental value "sacrifice" impacts positively and is related to high levels of growth expectations in new technology ventures.*

The other three values will have a negative influence in the desire of growing:

**Proposition 3d:** *The presence of entrepreneur's instrumental value "stability" impacts negatively and is not related to high levels of growth expectations in new technology ventures.*

**Proposition 3e:** *The presence of entrepreneur's instrumental value "exploitation" impacts negatively and is not related to high levels of growth expectations in new technology ventures.*

**Proposition 3f:** *The presence of entrepreneur's instrumental value "security" impacts negatively and is not related to high levels of growth expectations in new technology ventures.*

#### 5. CONCLUSION

This theoretical proposal is an attempt to highlight the importance of entrepreneur's values on new venture creation process, especially in those sectors with a certain characteristics. In this sense, technological

sector is an industry where knowledge has a key role. Both managerial and technical high levels of knowledge are related to higher growth expectations of the new ventures. However, the entrepreneur's values are often underestimated and they have an important role in entrepreneurs' growth expectations.

Implications of this work contribute to further understanding the relationship between entrepreneurs' knowledge and their values in the growth expectations of companies in a sector with a key role in regional economic development. In addition, it is really important to understand the way the entrepreneurs' personal values influence in new ventures management practices and performance.

Moreover, these insights lead us to some recommendations for policy-makers. Nowadays, a lot of efforts and public budget is invested on new technology companies and, especially oriented to turn research funding at universities into real businesses. Besides the product and the market, it is important to look at the individual behind this new venture and to know if this person really wants to create a company or this is just a good way of continuing developing their technical tasks. The understanding of individuals' values will help institutions to understand why some of them have a very fast growth and others are stagnated even if they have the same level of technical and managerial knowledge.

This paper has limitations due to its theoretical nature, the model proposed still needs to be tested using quantitative tools. Another barrier to sort was the lack of literature regarding the topic of personal values related to entrepreneurship. Future lines of research imply the application of quantitative techniques to measure and test the model proposed as well as the exploration of the impact of knowledge and values in the actual performance of firms.

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