

High-growth firms' behavior in Latam: the case of ICT sector in Ecuador

Ruben Ganchala¹, Andrés Robalino-López^{1}, Zanna Aniscenko²*

Abstract

The work aims to study the High-Growth Companies (HGF) of the ICT sector in Quito-Ecuador and contribute to improve the understanding of the behavior of HGFs in the LATAM region by presenting empirical evidence. A tripod approach is used focusing on the Resource-based view with the test of 7 hypotheses over a case study. In addition, a contextualized survey for the case was carried out to cover both the Institution and the Industrial based view. A multivariate analysis was performed to explore what factors allow us to understand the high-growth behavior. The results show that 4 of the 7 hypotheses were accepted. The correlations between profitability, leverage, liquidity, innovation, and sales growth are relatively “low” but “statistically significant.” An explanation is given according to the theoretical framework built. Otherwise, factors such as solvency, infrastructure (machinery and equipment), exports “did not present statistically significant correlation”.

Keywords: High-growth-Firms, SMEs-behavior, Theoretical-Framework, Tripod perspective LATAM, Ecuador, ICT-sector.

Submitted: September 5th, 2022 / Approved: November 26th, 2022

1. Introduction

Dynamic companies are characterized by a high level of entrepreneurial orientation and strong dynamic capabilities, developed within dynamic ventures, and these translate into High Growth Firms (HGF). This is how, by adopting this modality, in a few years, ventures become sustainable and competitive SMEs in national and international markets based on differentiation and innovation (Kantis, Federico, & Ibarra, 2014; Robalino-López, Ramos, Unda, & Román, 2017b).

The development of the company (evaluated in terms of sales, profits, or number of employees) is related to the use of both internal and external factors to become competitive companies; to measure the growth of the company, the most used indicators in different investigations are sales and employment. For Fischer & Reuber (2003), they represent companies with growth rates in sales of at least 20% per year in periods of 3 to 5 consecutive years, and considering the employment created, they identified that the HGF employed 20 collaborators in the first 5 years from its creation.

Of all the companies created in a year, dynamic ventures represent less than 5% and exhibit certain characteristics, such as: help job growth, impact on a country's income growth, found new industries and develop new products and services (Reynolds, 1987). Therefore, it is important to be able to identify and characterize the dynamics of HGF in developing regions, as is the case in LATAM, where the need to generate local understanding of these processes not only helps the management process, but also contributes to the local economic development (Robalino-López et al. 2017b; Morales, Robalino-López, & Almeida, 2019).

This research focuses on identifying what factors affect new ventures in the Information and Communication Technology (ICT) sector in Quito-Ecuador so that they are considered accelerated growth. In this sense, this work seeks to identify which are the factors that drive the accelerated growth of ICT sector enterprises in Quito, for which the work carried out by de Loi & Khan (2012) and Salas Chuquin & Ushiña Mullo (2018), and partially the research by Leiva Bonilla & Alegre Vidal (2012), Robalino López, Ramos, Unda, & Franco (2017a) and Morales et al. (2019) for the financial factors, and the works of Navarro-García, Rey-Moreno, & Barrera-Barrera (2017) and Melgarejo, Ciro, & Simón Elorz, (2019) for the strategic factors, to determine the relationship with the Accelerated growth.

In addition, taking Lafuente, Solano, Leiva, & Mora-Esquivel (2019) as a reference, the questionnaire applied in the research “Determinants of innovative performance: Exploring the role of organizational learning capabilities in companies” was used as a data collection instrument. knowledge-intensive services (KIBS)”, which was contextualized to the country and sector, later sent to companies that were considered HGF, through which the quantitative analysis of financial and strategic resources was reinforced, since turn to describe and explain the state of accelerated business growth in relation to the variables that have to do with demographic aspects, characteristics and skills of the entrepreneur-director and his work team, company resources and strategies, and the dynamism of the around.

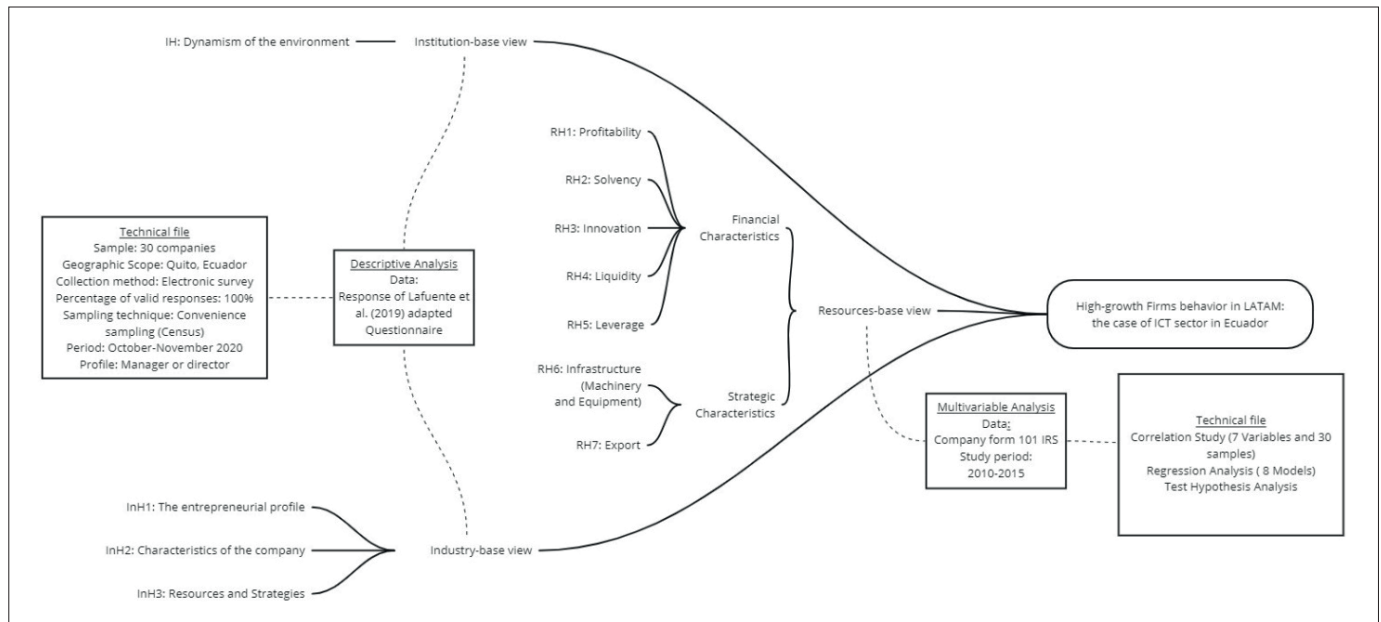
(1) Escuela Politécnica Nacional, Quito, Ecuador.

(2) Universidad San Francisco de Quito, Quito, Ecuador.

Corresponding author: andres.robalino@epn.edu.ec

Theoretical Framework (Background and hypothesis)

Figure 1: Theoretical model



Elaborated by the authors.

In developing countries, the tripod strategy proposed by (Peng, Wang, & Jiang, 2008) is commonly used to generate a frame of reference and understanding of complex dynamics. It is a multilevel approach that integrates institutional theory with a vision based on both organization resources and industry (resources, capabilities, and strategies) that are complementary and relevant to explain strategic behavior, innovative and competitive performance among others. This multilevel approach allows one to investigate interaction effects between factors at various levels, which may exist due to high uncertainty (Tajeddin *et al.*, 2022). Specifically, the strategic tripod approach provides a theoretical framework to include institutional factors (identification and analysis) that influence innovative performance (Heredia, Flores, Geldes, & Heredia, 2017), adapting and competitive process (Tajeddin *et al.*, 2022).

In this study, the tripod approach is applied to the study considering the financial, strategic, and external factors that affect the ventures so that they are considered accelerated growth, thus the theoretical model is proposed as shown in figure 1.

2.1 The institution-based view

The tripod perspective suggests that a point of view based on explaining corporate behavior, particularly in emerging economies (Cervo-Cazurra, Luo, Ramamurti, & HweeAng, 2018). The formal regulatory dimension of the institutional environment is an enforcement mechanism, including rule-making, monitoring, and sanctions, that feeds into business formation, strategic, and international activities. Governments can provide direct and indirect support, which plays a key role in the internationalization process (Finchelstein, 2017).

a. Dynamism of the environment

An important factor that affects the viability of the enterprises is the industrial economic growth, in general, it is measured by the gross domestic product (GDP), the growth of the company's sector will also affect its stability, in the same way the government support is transcendental for business development through the elaboration of laws, policies, regulations or institutional agreements that help promote investment and employment in strategic areas of the new SMEs (Sepúlveda Rivillas & Reina Gutiérrez, 2016).

As for the universities, the bibliographic review confirms that they contribute to the creation of new companies, regional attractiveness, and the qualification of the labor market, on the other hand, it has been shown that ICT improve territorial competitiveness, increasing regional attractiveness; According to Nightingale & Coad (2014), high-tech companies can be important for the development of innovation and economic growth. Achiquen Millán, Santoyo Cortés, Martínez González, & Muñoz Rodríguez (2021) also recognize that the development of entrepreneurial universities is conditioned by external (formal and informal) and internal factors related to resources and capabilities.

Likewise, as Weinberger -Villarán (2019) points out, to promote entrepreneurship based on innovation, it is important for startups, innovative entrepreneurs, academia, investors, and other entrepreneurs who have experience, knowledge, contact networks, skills of investment and this is a pillar for new companies to create an ecosystem that allows the exchange of information, knowledge, and services in conditions of collaboration and ability. Nowadays, technology upgradation, industrial

integration, enhance corporate image, more flexible responses, strategic self-reliance and sustained competitiveness of the firms has become mandatory for development countries (Ahuja, 2011).

Institution hypothesis 1: The dynamism of the sector and the impact of macroeconomic factors influence the dynamic capacities of fast-growing enterprises to achieve higher growth rates.

2.2 The industry-based view

This highlights the importance of industry and strategies for companies to build and maintain a competitive advantage (Su, Peng, & Xie, 2016). Based on previous research (Tajeddin, Farashahi, Moghaddam, & Simba, 2022) and (Heredia, Flores, Geldes, & Heredia, 2017), it has been shown how industry characteristics, resources and strategies, and local available professional profile influence the scope, speed, and progress of firms, which is interpreted as a characteristic of HGF.

a. The entrepreneurial profile for the industry

In this section we note the demographic, labor, motivation, education, contact networks and behavior of business management, factors that have a decisive impact on the creation and success of new companies. It is generally considered that higher education will increase the probability of generating a successful business, it can be considered that the studied entrepreneurs present specialized knowledge to discover and take advantage of opportunities in the market (Alemany & Panellas & Urbano, 2011).

In the same way, financing strategies are considered as a factor of accelerated growth, in several companies it can be explained by the use of external sources of financing, the same ones that can come from establishments such as banks, mutual societies, cooperatives, public organisms, or private and venture capital companies (Messina & Hochsztain, 2015).

Therefore, human capital is one of the interest groups that companies must support and sustain in their professional and personal development, since they are the basis of business growth and market positioning, and they are the best advertisers for the organization. (Salazar, Hidalgo, & Manriquez, 2017)

Industry hypothesis 1: The demographic aspects, the academic training and experience of the entrepreneur-profile and work team are characteristics that show several attributes that positively influence the accelerated growth of the ventures.

b. Company characteristics

Even HGF are considered a phenomenon of economic and not technological growth, the existence of highly innovative young companies should be highlighted, whose particularity lies in their combination of age, size, and R&D profile. Regarding the age of the companies, there are divergent results, but those who associate it with a positive relationship affirm that companies with high growth are generally young and that it has an impact on the growth of employment (Melgarejo, Ciro, & Simón Elorz, 2019). Complementary, the technology external acquisition in the initial stages may be desirable or even necessary in the high technology areas as ICT, but no industry can pros-

per in the long run unless it builds up a self-reliant base for carrying out integration of process, products and technologies (Ahuja, 2011).

On the other hand, Feeser & Willard (1990), in their study with computer companies, managed to establish a positive relationship between the accelerated growth of dynamic enterprises and the volume of exports with more than 30% of their sales in non-domestic markets. Regarding efficiency, dynamic enterprises stand out from their similar ones, being more efficient in terms of total factor productivity. In addition, (García Fernández & Cordero Borjas, 2008) suggest some a positive influence exists of the ICT on organizational development and the new organizational forms.

Industry Hypothesis 2: The characteristics of the company such as size, age, export percentage of sales and efficiency are described as a series of strengths that will lead to higher growth rates in fast-growing ventures.

c. Resources and Strategies

In the studies reviewed (Heredia et. Al 2017) and (Oliveira Malaquias & Fernandes Malaquias, 2022), strategies in fast-growing startups are considered to be more flexible than in large companies, allowing them to be more innovative, proactive and risk-oriented, with the aim of taking advantage of a new untapped opportunity (Choi & Phan, 2014). For dynamic entrepreneurship to reach a significant magnitude and achieve a positive impact on society, human capital is the essential component, since it includes the knowledge, skills and abilities of the entrepreneur or the business team, which are the result educational level and previous experience (Messina & Hochsztain, 2015).

Similarly, the HGF is influenced by factors such as human capital, human resource management, capacity, strategy, and innovation. This type of company gradually formalizes its strategic planning process by adopting a diverse range of products for sale in different markets, thus ensuring stable growth within a globalized market. (Demir, Wennberg, & Mckelvie, 2017). In addition, empirical studies allow us to affirm that most of the performance of a company is determined by how it is led, how it analyzes the environment and makes decisions, how it plans strategically and operationally, how it defines and elaborates the value proposition for its clients, how it develops and engages staff, how it manages information, processes and technology, how it innovates its business model, and how it cares about achieving balanced results for all stakeholders (Marques & Ferreira, 2009; Miles et al., 2018).

Industry hypothesis 3: The financial and non-financial resources, strategies based on innovation and the human capital of fast-growing startups are key variables that exert a positive influence on their growth.

2.3 The resource-based view

A resource-based perspective suggests that companies can use their unique capabilities, skills, and resources to achieve a sustainable competitive advantage in international markets (Andersson, 2016). However, SMEs often lack the resources, capabilities, or market power to accelerate internationalization (Hutchinson, Fleck, & Lloyd-Reason, 2009). Therefore, developing entrepreneurial knowledge and skills as

proprietary resources (such as market intelligence, technology, and business relationships) can create sustainable competitive advantages for start-ups and enhance their organizational capabilities to mobilize resources (Shamsuddoha, Yunus Ali, & Oly Ndubisi, 2009).

a. Cost effectiveness

In the financial analysis, it can be emphasized that HGF has a strong income-generating capacity with its business model, which makes them very competitive. In addition, they achieve a high profit and profitability due to the efficient management of assets, as well as operating and personnel expenses. High returns on capital create room for investment, and good investment can accelerate growth (Loi & Khan, 2012).

In the same way, it was found that with the help of ICT that are implemented in new ventures, they generate a beneficial contribution to profitability since it becomes a competitive advantage strategy for the company, which is a condition important for growth (Guedez, 2019). However, it should be noted that in times of financial crisis, according to Lee (2014), for-profit companies tend to forego growth opportunities and take a short-term view to maintain profitability.

Resource Hypothesis 1: Profitability in the early stages of fast-growing ventures in the ICT sector of the city of Quito have a positive influence.

b. Solvency

Given the changes in the business environment and the scarcity of financial and monetary resources, it is vital that the entrepreneurs who own this type of company properly manage the financial resources they have, mainly those on which their operation depends which are represented by working capital, being its main elements: cash, accounts receivable, inventories and short-term accounts payable.

The analyzed literature confirms that, sometimes, these fast-growing companies have few financial resources in the short or long term, which can generate solvency or liquidity problems, however, it has also been proven that venturing into innovative topics contributes significantly to its growth, which has been observed in highly technical countries, where there is a greater orientation towards investment in R&D (Melgarejo, Ciro, & Simón Elorz, 2019).

Resource Hypothesis 2: Solvency in the early stages of fast-growing ventures in the ICT sector in Quito has a negative influence.

c. Innovation

In today's competitive environment, companies must resort to innovation to achieve or maintain good performance, especially those that compete in markets characterized using technology. Previous studies have argued that companies innovate to respond to a problem or unsatisfied need in the market and that they differ in their approaches to innovation and in the strategies applied. Therefore, innovation is the method to change the functioning of an organization through the commercial application of new ideas to improve the products, processes or services of a company, and its purpose is to take it to the business market, be competitive and sustainable in the market. (Montiel-Campos, 2021).

Dehning & Stratopoulos (2002) through the Dupont analysis of technology companies, points out that having an adequate management of assets will generate a competitive advantage either in profitability, efficiency, or both. Likewise, ICT can improve geographic competitiveness and increase regional attractiveness, which is why high-tech companies are important for the development of innovation and economic growth.

Resource hypothesis 3: Innovation in the early stages of fast-growing ventures in the ICT sector in Quito have a positive influence.

d. Liquidity

Access to financial resources is considered an important condition for growth, which is positively affected by liquidity and negatively by leverage. Similarly, in a volatile competitive environment, the most liquid companies can adapt more quickly to changes, which has a positive impact on their profitability (Melgarejo, Ciro, & Simón Elorz, 2019).

The growth of companies, especially small and young companies, is limited by the amount of internally generated financing available, the ratio can be calculated by dividing total current assets by current liabilities, an increase in the current ratio will strengthen the liquidity position of a company; companies with a lower level of liquidity will be more cash-constrained and will have a harder time paying suppliers (Mateev & Anastasov, 2010).

Resource hypothesis 4: Liquidity in the early stages of fast-growing ventures in the ICT sector in Quito has a positive influence.

e. Leverage

It is logical to think that young companies with low growth and low reputation would obtain external financing, but as the company ages, it gains more experience and shows more growth; then you will gain more confidence in the bank. The company will then raise funds through external debt financing to support its development; ultimately, this will increase the company's leverage (Loi & Khan, 2012).

Compared to the above, younger and smaller companies are less leveraged, which means that they accept investments from other small companies and have less chance of survival, although business failure is reduced after the first three years of the company's existence company, in addition to having a more flexible strategic level in its organizational structure (Melgarejo, Ciro, & Simón Elorz, 2019). However, Honjo and Harada (2006) point out that companies with sufficient growth opportunities can use leverage to expand sales even if they have limited capital. The adoption of digital financial services (DFS) as a digital transformation process is another alternative to be considered by this group of companies (Malaquias & Malaquias, 2022) we test the effect of DFS adoption on the satisfaction with business performance, considering a sample comprised of responses from entrepreneurs that are also mothers (mompreneurs).

Resource Hypothesis 5: Leverage in the early stages of fast-growing ventures in the ICT sector in Quito has a positive influence.

f. Infrastructure (Machinery and Equipment)

Investment in fixed assets are tangible assets that will support the operation of the company, including offices, computer equipment, machinery and equipment, furniture, and fixed installations, which will be used permanently to provide services. Likewise, it is important to point out the positive influence of innovation, since this causes companies to be more efficient in the use of their financial resources, such as the turnover of their total assets, which in turn triggers investment in working capital and purchase of fixed assets, since these will improve the management of sales, administrative and financial expenses of the organization, for this reason it is transcendental that strategic activities within the organization are integrated collaboratively, such as investment in machinery and equipment, based on technology acquisition and transfer, and R&D activities (Suh & Kim, 2012). Also, HGF should use the new ICT to create additional sources of competitive advantage that allow for long-term sustainable growth (Paletta Francisco Carlos, 2008).

However, these innovative strategies are used by the most advanced countries through the purchase and/or contracting of machinery and precision equipment, acquisition of patents and professional services, which in our context is difficult to develop internally due to the high cost that it represents, that is why SMEs invest very little in technology, and when they do, they usually get the wrong equipment, machinery, and software. This is because, to modernize, they must first focus on their core business, and then consider technology acquisition. Therefore, national policies should promote information systems for SMEs (Coad & Rao, 2008).

Resource hypothesis 6: The infrastructure (machinery and equipment) in the early stages of the fast-growing enterprises in the ICT sector in Quito have a negative influence.

g. Export

Through the generation or establishment of new companies, entrepreneurship and exports are the two basic elements of the country's economic growth. Entrepreneurship promotes economic development through the creation and dissemination of knowledge, greater competitiveness, and diversity. Exports are beneficial in the volume

of national foreign exchange reserves and the development of the country's wealth, this favors national industrial development, improves production and work (Hessels & Van Stel, 2011).

In the literature it is found that fast-growing companies start exporting activity in advance, it is regularly evidenced that within the first 6 years of life they seek to incorporate their products in international markets and with an export percentage greater than 20% of sales. totals (Navarro-García, Rey-Moreno, & Barrera-Barrera, 2017).

Export activities can not only bring economic benefits to the company but can also be seen as a process of learning and accumulation of knowledge and technology (Blalock & Gertler, 2004). In this sense, it can be thought that the export activity has emphasized the role of technology and innovation, considering it as an important element that favors entry into international markets, while increasing the export productivity of the company, which triggers in one of the key elements for business success (Rodríguez & García Rodríguez, 2005).

Resource Hypothesis 7: Exports in the early stages of fast-growing ventures in the ICT sector in Quito have a positive influence.

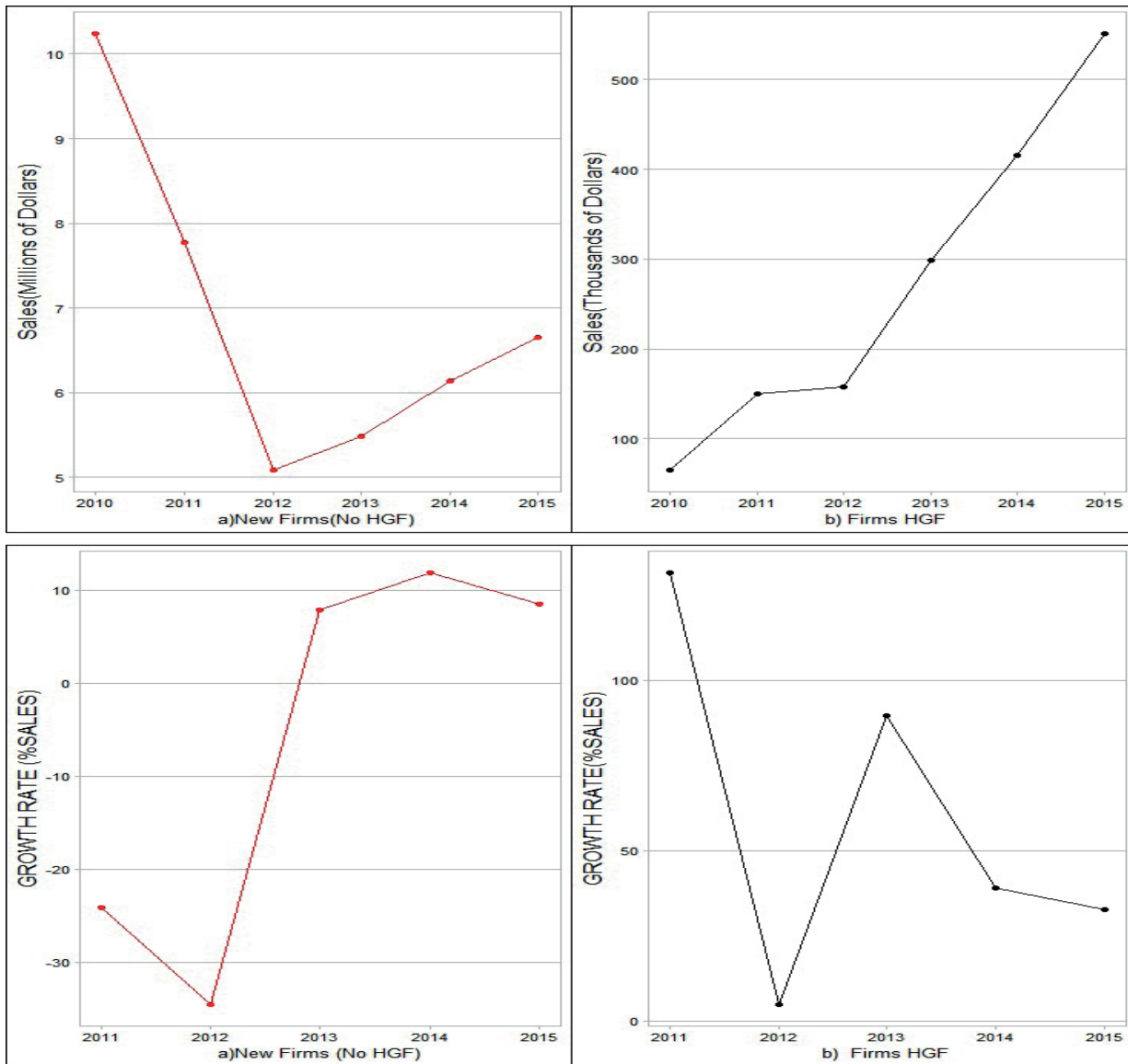
3. Data and Method

3.1 Data and case of study

The database used for this investigation was obtained based on a secondary source provided by the Ecuadorian Internal Revenue Service (IRS), it has financial information of all the organizations of the different industrial sectors of the Quito-Ecuador that declared the tax income (form 101) in the years 2010-2015.

The IRS database as of 2015 has information on 52,004 companies located in the Quito. Of the total, when classifying by sector, 1,045 ICT firms were obtained. Subsequently, the new companies founded in the years 2010-2011-2012 are selected, since, as mentioned in the theory, these high-growth ventures are companies of a young nature, which generally have 3 to 5 years of activity, in addition, it was verified in the portal of the IRS that the companies are active to date and 156 companies in the sector were obtained.

Figure 2. Growth and Average growth rate in sales of New non-HGF and HGF.



Elaborated by the authors. **Notes:** The figure shows a comparison of the evolution of sales volume and Average growth rate between HGF and non-HGF for the period 2010-2015. It is observed that on average the 30 HGFs go from representing less than 1% of the sales of all non-HGFs in 2010 to growing up to 7% by 2015; and an average growth ratio close to 60% while the non-HGF had a negative growth ratio of approximately 38% in the same period.

As of 2015, there are 1,045 companies in Quito that make up the ICT sector according to the base provided by the IRS, of these 881 companies that represent 84.89% are active companies that are not considered fast-growing, 156 are new companies founded in the years 2010, 2011 and 2012 that represent 15.11%, of which 126 new companies are identified that are not accelerated growth and represent 12.67%, and 30 HGF that represent 2.44%. These fast-growing companies are classified mostly in Micro and Small companies with 46.67% respectively, and with 6.67% medium-sized companies.

The 30 HGF have an average sales income of \$291,060.56 in the analysis period (2010-2015), maintaining a growing trend due to the nature of this type of company with its maximum value reached in 2015 with an average amount of \$540,724.17 (see Figure 2), this through the effective use of ICT that leads to greater productivity, better and more innovative processes, and higher quality of products and services, cost reduction and new management procedures (Martin & Omrani, 2015).

HGF have an average growth rate of 38.49% (See Figure 2). This highlights the importance of HGF in the local economy. Although they are only a small part of the economy, their ability to grow rapidly is linked to job creation, which in turn increases production and sales revenue faster than any other business.

3.2 Method and data analysis

Following the tripod strategy proposed by (Peng, Wang, & Jiang, 2008) related accelerated business growth in ICT of Quito, an explo-

ratory and non-experimental research design is adopted. A descriptive analysis has been done through the application of a contextualized questionnaire for the case study, based on Lafuente et al. (2019), to the HGF identified to address both levels of institution and industry based views (see Table 1 and Table 2). A statistical multivariable and hypothesis testing analysis (see Table 3) over an official Database (Ecuadorian IRS 101 Form 2010-2015) is applied to address the Resources-based view related accelerated business growth in ICT of Quito.

Table 1: Questionnaire operationalization

Dimension	Conceptualization	Subcategories	Hypothesis
The enterprising profile	In this section, we note the demographic, employment, motivational, educational, partnership, and behavioral aspects of business management that are conducive to relating to fast-growth companies.	Experience Education Motivation Sociodemographic	Industrial Hypothesis
Company characteristics	One way to distinguish fast-growth companies from others is through certain characteristics of the company, which we can call demographic characteristics and operating characteristics. In this sense, the percentage of sales, the form of management and efficiency, the size and age, as well as the social capital are factors to be considered.	Exports Age Size Social Capital Efficiency	Industrial Hypothesis
Resources and Strategies	This section explains the resources and strategies of accelerated growth ventures, such as financial, non-financial, competitive strategy, R&I and innovation practices, as well as human capital management.	Financial Resources Non-Financial Resources Innovation (R&D) Human Capital	Industrial Hypothesis
Dynamism of the external sector	The behavior and impact of the factors (economic, technological, demographic, social and governmental) that constitute the company's macro environment have a certain predictive capacity, which will largely determine the company's operational opportunities and sources of threats.	Markets Dynamism Perception of the environment Government Support	Institution Hypothesis

Note: Contextualized for Ecuadorian ICT firms from Lafuente et al. (2019).

The criterion used for the selection of the HGF was considering the slope of the resulting function when joining the points of the values corresponding to the sales of the companies in the study period, since from your equation can determine growth (Mandrefi, 2008). In this way, the slope is calculated for the 156 companies and the best quintile is selected (20% ordered from highest to lowest). The result of the calculation established a final sample of 30 HGF in Quito. Then, it is statistically tested to determine if there is a positive or negative correlation between the variables (see Table 2).

The questionnaire was developed in an electronic version based on the Google Forms application. The link was then emailed to the managers or CEOs of the 30 companies that make up the sample. The questionnaire is accompanied by a description of the importance of SMEs, explaining the purpose of the research and requiring their collaboration. Table 2 shows the summary of the field work.

Table 2: Field work technical sheet

Sample	30 companies
Geographic Scope	Local (Quito)
Information collection method	electronic survey
Percentage of valid responses	100%
Sampling technique	Sampling for convenience
Field work time	October-November 2020
Respondent Profile	manager or director

Note: Elaborated by the authors

Subsequently, focusing on the Resource-based view the 7 hypotheses proposed were operationalized with measurement variable to comply with the objectives of the study, and to establish which factors are those that favor these enterprises to be of interest Accelerated growth (see Table 2).

Table 3: Hypothesis and measurement variable

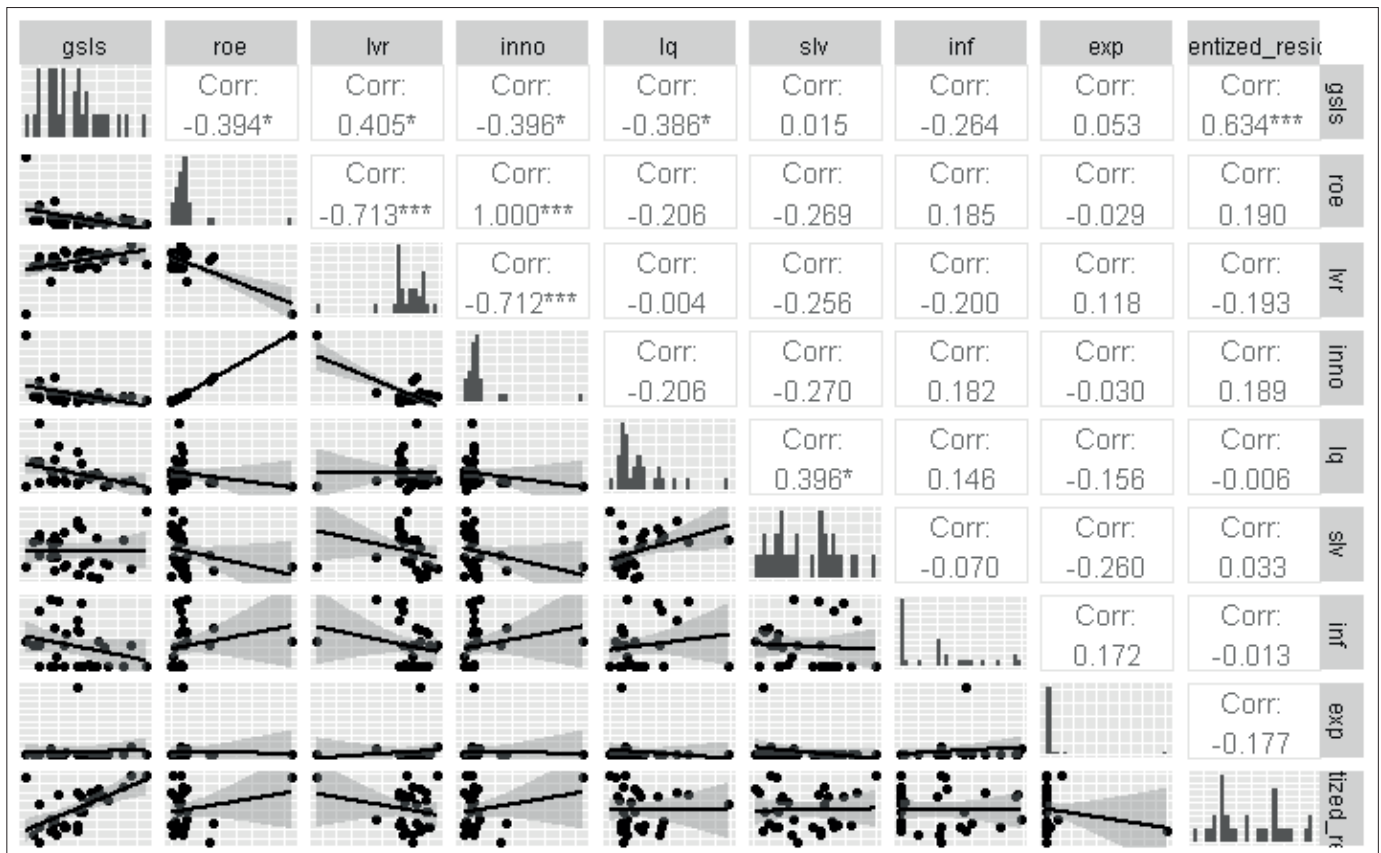
Hypothesis	Measurement variable
RH 1: Profitability has a positive effect on the accelerated growth of Technology and Information enterprises in the city of Quito.	Roe
RH 2: Solvency has a negative effect on the accelerated growth of Technology and Information enterprises in the city of Quito.	Solvency
RH 3: Innovation has a positive effect on the accelerated growth of Technology and Information enterprises in the city of Quito.	Dupont
RH 4: Liquidity has a positive effect on the accelerated growth of Technology and Information enterprises in the city of Quito.	Liquidity
RH 5: The impact of leverage has a positive effect on the accelerated growth of Technology and Information enterprises in the city of Quito.	Leverage
RH 6: The investment in infraestructura (machinery and equipment) has a negative impact on the accelerated growth enterprises of Information Technology in the city of Quito.	Infraestructura (machinery and equipment)
RH 7: The export activity has a positive impact on the accelerated growth enterprises of Information Technology in the city of Quito.	Export

Note: Elaborated by the authors

Using the research hypotheses, the degree of correlation is determined, where the degree of association of the independent variables is established, profitability (roe), solvency (slv), innovation (inno), liquidity (lq), leverage (lvr), infrastructure (machinery and equipment) (inf), exports (exp), towards the dependent variable growth in sales (gsls), applying Pearson test, the results are shown in Table 4. For

this, the Pearson correlation coefficient technique was used, which indicates whether there is a strong association between two variables in an interval or ratio dimension. It is represented by the letter “r”, usually called “Pearson’s r” and “product-moment correlation coefficient”. Their values can oscillate between ±1.00 (inclusive). When the correlation coefficient indicates -1.00 or +1.00 it means that there is a perfect correlation (Lind, Marchal, & Wathen, 2012).

Table 4: Correlation matrix (Pearson test)



Notes: The table shows the results of the application of the Pearson test on the 30 observations in the period 2010-2015 for the 7 independent variables considered: profitability (roe), solvency (slv), innovation (inno), liquidity (lq), leverage (lvr), infrastructure (machinery and equipment) (inf), export (exp), and the dependent variable growth in sales (gsls).

*. The correlation is significant at the 0.05 level (bilateral).

**. The correlation is significant at the 0.01 level (bilateral).

To examine the effect of the hypotheses proposed in the theoretical framework built with the HGF behavior in the case study (see Table 5), a base model (Model 1) is proposed where we consider the hypothesis RH1 (Profitability) with *roe* variable as a base predictor (R2= 0.155). In Model 2, the hypothesis RH5 (Leverage) is incorporated with *lvr* variable, which improves all the statistics considered (R2=0.186). Model 3 adds the hypothesis RH3 (Innovation) with *inno* variable improving the behavior a little more (R2=0.210). Model 4

adds the hypothesis RH4 (Liquidity) with *lq* variable, which results in a considerable improvement of the statistic (R2=0.413). With Model 5, the hypothesis RH2 (Solvency) is incorporated with *slv* variable, which also improves behavior (R2=0.441). Model 6 adds the hypothesis RH6 (Infrastructure) with *inf* variable improving the statistic a little more (R2=0.452). With Model 7, hypothesis RH7 (Exports) is incorporated, which has no influence on the considered statistic (R2=0.452).

Table 5: Regression results (Hypotheses H1 through H7 – Resource Base View)

Variables	Model1	Model2	Model3	Model4	Model5	Model6	Model7	Model8	Model8	
	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.	CI	VIF
roe	-2.909 * (1.283)	-1.582 (1.828)	72.756 (83.321)	71.979 (73.271)	71.464 (72.967)	82.431 (75.487)	82.462 (77.241)			
lvr		1.072 (1.052)	1.061 (1.061)	0.549 (0.955)	1.419 (1.238)	1.286 (1.266)	1.285 (1.295)	1.227 (1.298)	-1.458 3.912	3.724
inno			-74.359 (83.324)	-75.055 (73.273)	-73.057 (72.991)	-84.070 (75.525)	-84.104 (77.290)	-1.6625 (2.251)	-6.281 3.031	3.699
lq				-3.379 ** (1.151)	-3.771 ** (1.200)	-3.577 ** (1.246)	-3.578 * (4.581)	-3.644 ** (1.284)	-6.302 -0.987	1.280
slv					13.622 (12.385)	11.967 (12.753)	11.939 (13.285)	12.685 (13.307)	-14.842 40.213	2.263
inf						-3.028 (4.405)	-3.019 (4.581)	-2.038 (4.501)	-11.350 7.274	1.158
exp							-0.296 (27.821)	0.846 (0.846)	-56.837 58.530	1.138
R2	0.155	0.186	0.210	0.413	0.441	0.452	0.452	0.424		
R2 (adjusted)	0.125	0.126	0.119	0.319	0.324	0.309	0.278	0.273		
F-statistic	5.145	3.095	2.313	4.399	3.791	3.168	2.598	2.823		
p-Value	0.031	0.061	0.099	0.007	0.011	0.020	0.040	0.032		

Notes: The table summarizes the models that had been built to carry out the 7 hypotheses from theoretical framework
 Signif. Codes: 0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘.’ 1
 CI: 2.5 – 97.5 % (Intercept: 40.894 84.002)

Once all the hypotheses were introduced (Model 7), it was verified that the conditions for a regression model were not adequately met, given that in the data set of the case study there is a very strong correlation between *roe* and *inno* (see Table 4). With which non-adequate VIF values were reported for these variables (*roe*= 4396.901, *inno*= 4388.128), therefore, Model 8 was built removing the *roe* variable and assuming that its effect can be included in the *inno* variable given that this is based on Dupont analysis.

Results and Discussion

4.1 Resources-based view related to HGF in ICT of Quito

To contrast the hypotheses, the “student” t-test (see table 5) is performed to reinforce the results of the two-tailed quantitative analysis, in order to examine whether the values between the independent variables (X) and the dependent variable (Y) They are not the result of chance, and indeed there is a relationship that can be positive or negative, which makes it possible to determine if the research hypotheses are a reasonable statement.

A significance level of 0.05 ($p < 0.05$) is assumed, which shows that the researcher is 95% confident in generalizing, with only 5% error. In terms of probabilities, they are 0.95 and 0.05, which sum to 1. This le-

vel is an a priori certainty value established by the researcher in terms of not making mistakes.

Table 5. Summary of the contrast of research hypotheses

Alternative hypothesis	Relationship	Magnitude of Influence	Hypothesis testing (Student's t)		Results
			t calculated	Critical Value	
RH1	Profitability in the early stages of accelerated growth ventures in the ICT sector in Quito have a positive influence.	Significant (*)	2.26	2.04	ACCEPTED
RH2	Solvency in the early stages of accelerated growth ventures in the ICT sector in Quito has a negative influence.	Not significant	0.08	2.04	REJECTED
RH3	Innovation in the early stages of accelerated growth ventures in the ICT sector in Quito have a positive influence.	Significant (*)	2.21	2.04	ACCEPTED
RH4	The liquidity in the early stages of fast-growing ventures in the ICT in Quito has a positive influence.	Significant (*)	2.28	2.04	ACCEPTED
RH5	Leverage in the early stages of accelerated growth ventures in the ICT sector in Quito has a positive influence.	Significant (*)	2.34	2.04	ACCEPTED
RH6	Infrastructure (machinery and equipment) in the early stages of accelerated growth ventures in the ICT sector in Quito have a negative influence.	Not significant	1.44	2.04	REJECTED
RH7	Exports in the early stages of accelerated growth ventures in the ICT sector in Quito have a positive influence.	Not significant	0.28	2.04	REJECTED

Notes: The table summarizes the results of the verification of the 7 proposed hypotheses. The Magnitude of Influence, the t-values are presented, and it is detailed if the hypothesis is accepted or rejected. It is important to note that 4 of the 7 hypotheses are accepted for the HGF sample studied.

* The correlation is significant at the 0.05 level (bilateral).

Note: If $|t| \text{ calculated} \leq VC$ (Table T "student"). Alternative Hypothesis Rejected.

If $|t| \text{ calculated} > VC$ (Table T «student»). Alternative Hypothesis Accepted.

In Table 4 the correlation between profitability and sales growth is relatively low with a value of -0.394* and Sig. (2 tails) of 0.031. This could be explained by the fact that companies fully manage their economic resources so that they can create an adequate investment environment and thus achieve rapid growth (Daza Izquierdo, 2016).

The results of the T-Student test show that profitability and accelerated growth measured by sales are linearly correlated, so HR1 is accepted, this is supported because the profitability variable allows measuring the level of performance that results from the development of several productive activities, which could trigger an increase in utility and naturally a business growth over time (Daza Izquierdo, 2016).

On the other hand, the results show that solvency and accelerated growth measured by sales are not linearly correlated, therefore HR2 is rejected. Therefore, a positive impact of solvency and accelerated growth measured by sales could be assumed. sales because the HGFs have the financial capacity to generate the goods and/or resources necessary to comply with their obligations contracted with third parties (Cuervo & Rivero, 1986).

On the other hand, the correlation between innovative capacity and sales growth is also relatively low, at -0.396** and Sig. (2 tails) at 0.030.

This could indicate that the capacity for innovation within enterprises is a key tool to improve competitiveness, increase profitability and use technological changes to stay close to customers and boost satisfaction levels, the results of the t-Student Test show that they are linearly correlated, therefore the RH3 is accepted.

Similarly, a low correlation between liquidity and sales growth is observed with a value of -0.386 Sig. (2 tails) of 0.035 (see Table 4). This could be explained because these companies have the financial capacity to pay their most immediate obligations (short term), by transforming current assets into cash, this makes the company more productive and efficient, similarly, the results of the t-student test support the acceptance of the HR4.

Likewise, there is a low correlation between leverage and sales growth with a value of 0.405* and Sig. (2 tails) of 0.026. This could explain why this factor is considered a tool that can increase productivity, make technological advances, and have greater possibilities of survival in the commercial market (Angelini & Generale, 2008), the results of the t-Student Test show that they are linearly correlated, therefore the RH5 is accepted.

On the other hand, with respect to strategic factors, the results indicate that the relationship between investment in infrastructure (ma-

chinery and equipment) with the accelerated growth measured by sales are not linearly correlated, therefore RH 6 is rejected (see Table 5), this makes it possible to verify that the resources (hardware) are accessible so that organizations can systematize all their information and do a better job. The relationship of the export activity and the accelerated growth measured by sales indicate that they are not linearly correlated, therefore research hypothesis 7 is rejected. This could be explained because, in the enterprises, there is a large gap between the knowledge of the international market and the financial needs associated with such projects.

This indicates that SMEs are making significant efforts to introduce innovation tools, technology, machinery, and equipment in the production process. This use of new technology is related to innovation processes, knowledge, and technology can increase its productivity. As for factors such as solvency, machinery and equipment, exports, they did not present a statistically significant correlation with respect to sales growth, that is, they do not provide evidence of the growth of enterprises in the ICT sector of Quito.

Subsequently, for Model 8, Table 5 shows the values of the confidence intervals (CI), in addition, the conditions for multiple linear regression were validated, such as: i) the linear relationship between the numerical predictors and the response variable through scatterplots between the dependent variable (*gs/s*) and each of the predictors (see Table 4), ii) the normal distribution of the residuals using the Shapiro test ($W = 0.95358$, $p\text{-value} = 0.2106$), iii) homoscedasticity with the Breusch -Pagan test ($BP = 9.8142$, $df = 6$, $p\text{-value} = 0.1327$), iv) No multicollinearity through the Correlation Matrix between predictors (see Table 4), v) Inflation Analysis of Variance (VIF) where it is verified that there are no predictors that show a very high linear correlation or variance inflation (see Table 6).

Model 8 can explain 42.4% of the variability observed in HGF dynamics ($R^2: 0.424$, $R^2\text{-adjusted}: 0.273$). The F test shows that it is significant ($p\text{-value}: 0.032$). No evidence of autocorrelation is presented ($\text{lag}=1$ $\text{Autocorrelation}=-0.048$, $D\text{-}W=1.959$, $p\text{-value}=0.69$). All the conditions for this type of multiple regression are satisfied. Two observations, position 1 ($\text{CookD}=3.697$) and 2 ($\text{CookD}=11.241$) could be significantly influencing the model.

4.2 Institution and industry based views related to HGF in ICT of Quito

In order to introduce both, institution and industry based views considered in the model as context factors for the case study, it proceed to present the results obtained by applying the questionnaire based on Lafuente et al. (2019).

Depending on the first section A (Identification), the demographic results obtained show that the average age of the entrepreneur is 40 years, in addition, a predominance of the male gender was found with 85% compared to 15% of the female gender. In relation to their academic training, it was found that 45% have a Master's or Doctorate, and 55% have completed university studies, in the same way the time they have been in the position in the company is more than 5 years in 52.4%.

For this reason, all respondents have previous experience, mostly with more than 8 years (52.4%), and the experience is largely linked to national companies in the same sector with 85%, to a lesser extent in entrepreneurship (SMEs). with 20%, in national companies different from the sector, 10% and barely 5% in multinationals, which is related to what Mengistae (2006) mentions, who states that the growth of a company is related to the academic training of the entrepreneur. and the experience obtained in other jobs or businesses considering the sector to which it belongs.

Similarly, the subsector in which most companies are found is "Activities for the design of the structure and content of operating system programs, computer consulting, databases and web pages." with 45 % and the subsector that presented the least number of companies with only 5% is "Motion picture, video and television program production activities including sound recording and music publishing activities". Regarding section B (Linkages and export), results were obtained that are in line with the results of the quantitative model, since 75% of the companies surveyed mentioned that they do not carry out any export activity, 20% that they still do not export, but expect to carry out export activities in the coming years and only 5% export occasionally without it being part of their formal strategy.

For its part, section C (Strategic Orientation) 75% of the companies mentioned that they act in a product-market environment, that is, they seek to periodically satisfy consumer demands. In turn, they take advantage of market opportunities and compete to be the first, even though they are not successful in all the areas they penetrate. On the other hand, 25% of the companies have a slightly more conservative strategy, seeking to offer customers quality products or services, but with low prices, they tend to improve their work in specific areas and ignore changes that they do not have a direct impact or influence on them.

In relation to the resources that companies consider important for their strategy and operation, 80% of respondents state that having fixed assets (physical infrastructure, machinery, and equipment) is very important in their organization, in the same way 90% indicate that the use of technologies (Software, CRM, etc.) is very important. In relation to section D (Organizational learning capacity), 90% of those surveyed consider that it is very important to support and encourage workers when they present new ideas, for the same reason they have the initiative to contribute with more ideas.

Section E (Entrepreneurial Orientation) results show that 75% of entrepreneurs highly value entrepreneurial behavior within their organization, they also indicated that 85% of employees are very dynamic people, 80% indicate that innovation is emphasizes, above all, 95% of workers are willing to take on high-risk projects and 90% of employers express that people are eager to be a leader in the market they work for.

Regarding section F (Innovative Performance), the results of the companies surveyed indicate that compared to the competition, 35% are much better in terms of replacing products that are already

considered to have little mobility or out of date, similarly close to 50% of the entrepreneurs consider that it is somewhat better with respect to the expansion of new or improved products/services. In turn, 60% consider that it is much better than the competition in the development of new products, most of which (85%) are respectful of the environment.

Regarding section G (Financing), it can be pointed out that 90% of the companies surveyed obtain financing from banks and finance companies, followed by 65% by self-financing (own resources), 30% by other entities. (Cooperatives, associations, public institutions, etc.), 10% by risk investors and barely 5% by credits abroad.

With regard to the current profitability of the company, 60% of those surveyed indicated that it generates profits in line with those expected, while 40% stated that they obtained profits higher than those expected. Regarding the dynamism of the environment, the results show that 95% of those surveyed consider government policy very important in relation to encouraging innovation and entrepreneurship, 90% consider very important the support measures received from public or private entities, from Likewise, 95% of those surveyed indicate that legislation on business development is very important.

These types of companies are generally located with a growth in sales between 51%-100% in the year 2017, and in the following years between 0%-50%, this in part due to the economic and political situation that the country went through in that period, where specialists mention that a new law should be backed to promote business growth in the coming years. Finally, the number of employees of the companies in the last three years is analyzed and the results obtained show that on average in 2017 the companies surveyed had 21 employees, for the year 2018 and average of 22 employees and for the year 2019 with 24 employees on average, with a growth rate of 14.28%.

5. Conclusions, research implications and limitations

5.1 Conclusions and research implications

The literature shows that, in general, a high-growing startup can become a small and medium-sized company even in the first year of operation, with an annual growth rate in sales of more than 20% or 30% and hire more employees than ordinary companies.

Based on the case study results, fast-growing companies are mostly made up of micro and small companies (93.34%) and represent 2.44% of the total, being a low percentage but contributing significantly to sales and job creation. The growth of the enterprises measured through the sales variable, presented a positive influence between profitability and accelerated growth, this indicates that companies in a certain way adequately manage their economic resources.

Regarding the financial factors, a positive influence was determined with the accelerated growth of solvency, liquidity, innovation, leverage, and profitability, this could explain that the HGF have the capacity to meet their short and long-term financial obligations. In the same way, it is explained that one of the reasons why this group of companies is that they take advantage of the leverage that makes the debt

profitable because of the return on assets in these companies being much higher than the cost of money.

Another important reason to understand the accelerated growth is that Ecuadorian companies are currently making great efforts to incorporate innovation processes into their operations, which causes a greater probability of promoting growth. However, the establishment of innovation-based companies is still limited because Ecuadorian entrepreneurs do not understand the true concept of innovation, making it difficult to implement.

On the other hand, the relationship of investment in infrastructure (machinery and equipment) results allow establishing a positive influence with accelerated growth, since companies in this sector consider the acquisition of fixed assets, especially equipment (hardware), essential for its optimal functioning. Finally, the export factor presented a negative influence with the accelerated growth, this can be explained by several reasons, one of them is the lack of managerial skills on the part of the entrepreneurs since, without a defined strategic vision on their part, the expansion international is very complicated. In relation to the factors associated with the HGF, it is concluded that they are companies with a skillful strategic direction to find expanding segments and that are based on success factors such as innovation, quality, human resources, internationalization, and commercial policy. In the same way, it is agreed that a very important key factor for accelerated growth lies in the figure of the businessman or entrepreneur, in his aptitudes and attitudes, experience, education and ability to make decisions. The environmental factor such as government support by public policies that seek to promote the development of enterprises and grant all the facilities to access financing is important to achieve growth.

Companies must have the capacity to meet their short and long-term financial obligations, to have better results in terms of solvency, which is why strategies must be used with the help of ICTs to reduce unnecessary costs, which will allow them to work more efficiently with the available resources and generate greater profitability.

The financial sector must prioritize the elaboration of credit policies so that companies improve their sales capacities and job creation, since most Ecuadorian SMEs are financed through bank loans. In addition, those micro and small companies that have innovative products and need working capital and/or purchase of assets must obtain the support of the financial sector because they can become fast-growing companies.

The national government must emphasize the creation of a dynamic environment and seek the joint work of academia, the public and private sectors, to strengthen ties and establish a network of institutional support. In this way, the entrepreneur will be able to have a space where he finds all the facilities for solving problems, whether these are for his academic training or access to financial or non-financial resources (technology, information, research, etc.), which will allow have entrepreneurs trained and oriented to the creation of fast-growing companies.

5.2 Limitations

HGF behavior is complex and little studied in Latin America, therefore, this type of study tries to contribute to its understanding with theoretical construction efforts and contrast with empirical evidence. Therefore, exploratory studies like this one have obvious limitations; however, this does not detract from the contribution that their results give to the field.

Some limitations in our study are related with that secondary sources (dataset) used have a bias and temporal limitations that condition the results obtained. On the other hand, the primary sources (information from the questionnaire) that were used to expose the context factors introduce a vision limited to the perception of the sample used, which in no case could be generalized. This study has focused on the Resources-based view, future efforts should further develop institution and industry based.

Acknowledgment

The authors gratefully acknowledge the institutional-financial support provided by Escuela Politécnica Nacional (EPN) and Corporación Ecuatoriana para el Desarrollo de la Investigación y la Academia (CEDIA) for the development of research projects PIS-19-05 and CEPRA XVI-2022-03.

References

- Ahuja, I. P. S. (2011). Managing research and development for core competence building in an organization. *Journal of Technology Management and Innovation*, 6(1), 58–65. <https://doi.org/10.4067/S0718-27242011000100006>
- Achiquen Millán, J., Santoyo Cortés, V., Martínez González, E., & Muñoz Rodríguez, M. (2021). El Ecosistema Emprendedor en las Principales Instituciones de Enseñanza e Investigación Agrícola de México. *Journal of technology management & innovation*, 21-34.
- Aleman, A., & Panellas & Urbano. (2011). *Libro blanco de la cultura emprendedora en España*. Fundación Príncipe de Girona. Barcelona: ESADE.
- Andersson, S. (2016). The Internationalization of the Firm from an Entrepreneurial Perspective. *International Studies of Management & Organization*, 63-92.
- Angelini, P., & Generale, A. (2008). On the evolution of firm size distributions. *American Economic Review*, 426-438.
- Blalock, G., & Gertler, P. (2004). Learning from exporting revisited in a less developed setting. *Journal of Development Economics*, 397-416.
- Bonilla, J. C. (2010). *Las empresas de crecimiento acelerado: ¿Cómo se definen, por qué estudiarlas y que las distingue en Costa Rica?* Costa Rica.
- Choi, Y., & Phan, P. (2014). Exploration, exploitation, and growth through new product development: The moderating effects of firm age and environmental adversity. *IEEE Transactions on Engineering Management*, 428-437.
- Cuervo-Cazurra, A., Luo, Y., Ramamurti, R., & HweeAng, S. (2018). The Impact of the home country on internationalization. *Journal of World Business*, 593-604.
- Daza Izquierdo, J. (2016). Crecimiento y rentabilidad empresarial en el sector industrial brasileño. *Contaduría y administración*, 266-282.
- Demir, R., Wennberg, K., & Mckelvie, A. (2017). The strategic management of high-growth firms: A review and theoretical conceptualization. *Long range planning*, 431-456.
- Finchelstein, D. (2017). The role of the State in the internationalization of Latin American firms. *Journal of World Business*, 578-590.
- García Fernández, F., & Cordero Borjas, A. E. (2008). The Relationship between Information and Communication Technologies and New Organizational Forms: Reference of the manufacturing industry in the area of Carabobo, Venezuela. *Journal of Technology Management & Innovation*, 3(4), 152–165. <https://doi.org/10.4067/s0718-27242008000200012>
- Guedez, M. (2019). Influencia de las PYMES para la adopción del comercio electrónico. *Heurística: revista digital de historia de la educación*, 68-79.
- Heredia, J., Flores, A., Geldes, C., & Heredia, W. (2017). Effects of informal competition on innovation performance: the case of Pacific Alliance. *Journal of technology management & innovation*, 22-28.
- Hutchinson, K., Fleck, E., & Lloyd-Reason, L. (2009). An investigation into the initial barriers to internationalization: Evidence from small UK retailers. *Journal of Small Business and Enterprise Development*.
- Lafuente, E., Solano, A., Leiva, J., & Mora-Esquivel, R. (2019). Determinants of innovation performance: Exploring the role of organizational learning capability in knowledge-intensive business services (KIBS) firms. *Academia Revista Latinoamericana de Administración*.
- Lee, S. (2014). The relationship between growth and profit: evidence from firm-level panel data. *Structural Change and Economic Dynamics*, 1-11.
- Leiva Bonilla, J., & Alegre Vidal, J. (2012). Empresas gacelas: definición y caracterización. *Revista Latinoamericana de Administración*, 31-43.
- Lind, D., Marchal, W., & Wathen, S. (2012). *Estadística aplicada a los negocios y la economía*. México: McGraw-Hill/Interamericana Editores.
- Loi, T., & Khan, A. (2012). *Determinants of firm growth: evidence from Belgian companies [Tesis de Maestría, Universidad Gent]*. Repositorio institucional. Obtenido de <http://www.ethesis.net/Determinants/Determinants%20of%20firm%20growth%20Evidence%20from%20Belgian%20companies.pdf>.

- Malaquias, F. F. de O., & Malaquias, R. F. (2022). The Use of Digital Financial Services and Business Performance Satisfaction in the Context of Female Entrepreneurship. *Journal of Technology Management and Innovation*, 17(3), 3–11.
- Mandrefi, V. (2008). *La realidad de la función de las funciones línea*. Buenos Aires.
- Marques, C. S., & Ferreira, J. (2009). SME innovative capacity, competitive advantage and performance in a “traditional” industrial region of Portugal. *Journal of Technology Management and Innovation*, 4(4), 53–68. <https://doi.org/10.4067/S0718-27242009000400005>
- Martin, L., & Omrani, N. (2015). An assessment of trends in technology use, innovative work practices and employees’ attitudes in Europe. *Applied Economics*, 623-638.
- Mateev, M., & Anastasov, Y. (2010). Determinants of small and medium sized fast growing enterprises in central and eastern Europe: a panel data analysis. *Financial theory and practice*, 269-295.
- Melgarejo, Z., Ciro, D., & Simón Elorz, K. (2019). Determinantes clave en el debate teórico sobre crecimiento empresarial. *Criterio Libre*, 275-296.
- Messina, M., & Hochsztain, E. (2015). Factores de éxito de un emprendimiento: Un estudio exploratorio con base en técnicas de Data Minig. *Tec Empresarial*, 31-40.
- Miles, J., González, A., & Mandirola, N. (2018). Gestión de alto desempeño y su impacto en los resultados de la empresa: El caso de Uruguay y Argentina. *Journal of Technology Management & Innovation*, 13(2), 57–68. <https://doi.org/10.4067/s0718-27242018000200057>
- Montiel-Campos, H. (2021). Entrepreneurial Alertness, Innovation Modes, And Business Models in Small-And Medium-Sized Enterprises: An Exploratory Quantitative Study. *Journal of technology management & innovation*, 23-30.
- Morales, V., Robalino-López, A., & Almeida, C. (2019). Propuesta metodológica para la medición del potencial de innovación en las organizaciones ecuatorianas. *Debates sobre innovación*, 1-14.
- Navarro-García, A., Rey-Moreno, M., & Barrera-Barrera, R. (2017). Compromiso, recursos, emprendimiento exportador e resultados empresariales. *Revista de Administração de Empresas*, 135-147.
- Nightingale, P., & Coad, A. (2014). Muppets and gazelles: political and methodological biases in entrepreneurship research. *Industrial and Corporate Change*, 113-143.
- Oliveira Malaquias, F., & Fernandes Malaquias, R. (2022). The Use of Digital Financial Services and Business Performance Satisfaction in the Context of Female Entrepreneurship. *Journal of Technology Management & Innovation*, 3-11.
- Paletta Francisco Carlos, V. J. N. D. (2008). Information Technology and Communication and BestPractices in It Lifecycle Management. *Journal of Technology Management and Innovation*, 3(4), 306–323.
- Peng, M., Wang, D., & Jiang, Y. (2008). An institution-based view of international business strategy: a focus on emerging economies. *Journal of International Business Studies*, 920-936.
- Penrose, E. (1959). *The Theory of the Growth of the Firm*. New York: Wiley.
- Reynolds, P. (1987). New firms: Societal contribution versus survival potential. *Journal of Business Venturing*, 231-246.
- Robalino López, A., Ramos, V., Unda, X., & Franco, A. (2017a). University’s contribution to industries in the creation of a tool to diagnose innovation management processes. *INTED 2017 Proceedings*, 2351-2360.
- Robalino-López, A., Ramos, V., Unda, X., & Román, J. (2017b). Gestión empresarial y análisis de ventajas competitivas. Portafolio de negocio de las telefónicas en Ecuador. *CienciAmérica*, 17-22.
- Rodríguez, J., & García Rodríguez, R. (2005). Technology and export behaviour: A resource-based view approach. *International Business Review*, 539-557.
- Salas Chuquin, M., & Ushiña Mullo, D. (2018). *VALIDACIÓN DE LA TEORÍA DE LOS RECURSOS EN EMPRESAS DE ALTO CRECIMIENTO (HGF), SECTOR MANUFACTURERO DEL ECUADOR*. [Tesis de Grado, Universidad ESPE]. Repositorio Institucional. Obtenido de <http://repositorio.espe.edu.ec/bitstream/21000/15056/1/T-ESPE-040425.pdf>
- Salazar, A., Hidalgo, J., & Manríquez, M. (2017). La responsabilidad social empresarial desde la percepción del capital humano. Estudio de un caso: The corporate social responsibility from the perception of human capital. A case study. *Revista de Contabilidad-Spanish Accounting Review*, 36-46.
- Sepúlveda Rivillas, C., & Reina Gutiérrez, W. (2016). Sostenibilidad de los emprendimientos: Un análisis de los factores determinantes. *Revista Venezolana de Gerencia*, 33-49.
- Shamsuddoha, A., Yunus Ali, M., & Oly Ndubisi, N. (2009). Impact of government export assistance on internationalization of SMEs from developing nations. *Journal of Enterprise Information Management*.
- Su, Z., Peng, M., & Xie, E. (2016). A Strategy Tripod Perspective on Knowledge Creation Capability. *British Journal of Management*, 58-76.
- Suh, Y., & Kim, M.-S. (2012). Effects of SME collaboration on R&D in the service sector in open innovation. *Innovation*, 349-362.
- Tajeddin, M., Farashahi, M., Moghaddam, K., & Simba, A. (2022). Internationalization of Emerging Economy SMEs: A Tripod Approach. *Journal of International Management*.

