

## ARTÍCULO 4

### ENTREPRENEURIAL CONSTRAINTS ON WOMEN IN CHILE: AN EMPIRICAL APPROACH<sup>1</sup>

CONSTRUCCIONES EMPRESARIALES SOBRE MUJERES EN CHILE: UN ENFOQUE EMPÍRICO

CONTRAÇÕES EMPRESARIALES SOBRE MULHERES NO CHILE: UMA ABORDAGEM EMPÍRICA

Cristóbal Fernández Robin<sup>2</sup>

Paulina Santander Astorga<sup>3</sup>

Diego Yáñez Martínez<sup>4</sup>

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#### RESUMEN

Este artículo de investigación científica examina factores condicionantes que afectan el emprendimiento femenino en Chile a través de un estudio de las limitaciones formales e informales de la teoría económica institucional y de las diferencias en las experiencias de las mujeres emprendedoras en comparación con las de sus pares masculinos. Se seleccionó una muestra de encuestados chilenos y se utilizaron los datos de la Encuesta de Población Adulta de GEM para el período 2011-2015. Los resultados indican la influencia de los factores informales en ambos sexos, como percepción de las capacidades empresariales y la creación de redes. Además, se evidenció que ser estudiante tenía un efecto negativo en ambos sexos, mientras que el papel de la familia tiene un efecto negativo en la probabilidad de que las mujeres emprendan.

Keywords: Gender division of labor, Women and work, Women and development, Family responsibilities, Female labor-force participation, Entrepreneurship.

#### ABSTRACT

This Article of scientific and technological research examines conditioning factors that affect female entrepreneurship in Chile through a study of the formal and informal constraints of institutional economic theory and of differences in women's experiences with entrepreneurship compared to those of male entrepreneurs. A sample of respondents from Chile was selected, and GEM Adult Population Survey data for the period 2011-2015 were utilized. The results highlight the influence of informal factors on male and female entrepreneur as perceptions of entrepreneurial capabilities and networking. Additionally, being a student was found to have a negative effect on both genders, while family role has a negative effect on the probability for women to undertake.

Palabras Clave: División de género del trabajo, Mujeres y trabajo, Mujeres y desarrollo, Responsabilidades familiares, Participación femenina en la fuerza laboral, Emprendimiento.

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2 Doctor en Ingeniería Industrial, Magister en Ciencias de la Ingeniería Industrial, Ingeniero Civil Industrial. Docente investigador del Departamento de Industrias de la Universidad Técnica Federico Santa María, Valparaíso. Correo: [crisobal.fernandez@usm.cl](mailto:crisobal.fernandez@usm.cl)

3 Doctora en Psicología, Pontificia Universidad Católica de Valparaíso, Chile. Magíster en Educación y Comunicación, Universidad Autónoma de Barcelona. Psicóloga, Universidad de Valparaíso. Profesora del Departamento de Industrias de la Universidad Técnica Federico Santa María, Valparaíso. Correo: [paulina.santander@usm.cl](mailto:paulina.santander@usm.cl)

4 Ingeniero Comercial, Universidad Técnica Federico Santa María. Profesor del Departamento de Industrias de la Universidad Técnica Federico Santa María, Valparaíso. Correo: [diego.yanez@usm.cl](mailto:diego.yanez@usm.cl)

## **RESUMO**

Este artigo da pesquisa científica e tecnológica examina os fatores condicionantes que afetam o empreendedorismo feminino no Chile através de um estudo das restrições formais e informais da teoria econômica institucional e das diferenças nas experiências das mulheres com o empreendedorismo em comparação com os empresários do sexo masculino. Uma amostra de entrevistados do Chile foi selecionada, e os dados do GEM Adult Population Survey para o período 2011-2015 foram utilizados. Os resultados destacam a influência de fatores informais sobre empresários do sexo masculino e feminino como percepção de capacidades empresariais e redes. Além disso, verificou-se que um estudante teve um efeito negativo em ambos os sexos, enquanto o papel familiar tem um efeito negativo na probabilidade de as mulheres assumirem.

Palabras Clave: Divisão de gênero do trabalho, Mulheres e trabalho, Mujeres e desenvolvimento, Responsabilidades familiares, Empreendimento.

## INTRODUCTION

The importance of entrepreneurship is widely acknowledged. Entrepreneurship is understood to involve different phases, from the initial conception of a business, to the startup phases, to the administration of newly established business operations, to the maintenance of a stable business model and the possible discontinuation of the business itself (Global Entrepreneurship Monitor, 2012). The importance of this process lies in its influence on the development of economic and job creation processes and in its role as an initiator of innovation and social welfare (García & Sánchez, 2010). Indeed, several studies have found positive correlations between entrepreneurship and the economic performance of a country, such as higher growth and innovation (Van Praag & Versloot 2007; Oosterbeek, Van Praag & Ijsselstein 2010; Kabeer 2016).

At an international level, the Global Entrepreneurship Monitor (GEM) (2015), shows that entrepreneurship activity in its initial phase is developed mostly by men, however, there would not be any differences in the opportunities and capacities perceived by both genders. According to studies realized by GEM (2015), the differences appear when motivations of entrepreneurial activity in its initial phase are compared: women that start their entrepreneurship because of necessity are more than men. In this sense, there is a group of countries (United Kingdom, India, Iran and Italy) that show the opposite, there are relatively more men that start their entrepreneurship out of need. There are other countries (Australia, Austria, Denmark, Kazakhstan, Luxembourg, Netherlands, Singapore, South Africa and Thailand), where the rates are balanced between both genders. It is worth mentioning the case of Croatia, where a balanced but high level of entrepreneurs out of necessity are shown, there are 46,3% of men and 47,2% of women that started their businesses because of need. On the other hand, there are some countries that have the highest differences regarding gender, i.e. Burkina Faso, with 32,9% of women starting businesses due to their necessity, opposed to a 12,7% of man.

In Chile, there are a total of 1.753.595 entrepreneurs out of which 62% are men, and 38% women. In spite of the lower rate of female participation, it is possible to identify that women are who possess a more powerful impact on annual increases in employment and workforce. It is them that have achieved higher expansion rhythms, mostly due to a previous work inactivity (Ministry of Economy, Development y Tourism, 2014).

Specifically, in Chile, although it still prevails a bigger proportion of male entrepreneurs, there is an increase of female participation mostly towards established entrepreneurs, which could be explained because women tend to see entrepreneurship as a possibility of professional development compatible with family life (Maes, Leroy and Sels 2014). In this sense, some authors suggest that the goal of women entrepreneurs assumes that women contribute more to the welfare of their families than men (Altan-Olcay 2014).

Nonetheless, even as women have accessed the workforce in large numbers, their participation rates continue to be low relative to those of men. In this respect, entrepreneurial intention, and particularly that of female entrepreneurship, is shaped by many variables. In fact, women's attitudes towards entrepreneurship are subject to more constraints than those of men (Fernández & Quero 2013).

Despite this situation, recent decades have seen a proliferation of studies that address the motivational elements of female entrepreneurship (Aramand 2014; Allen & Curington 2014; Okafor & Amalu, 2010), paying less attention to the problems that hinder or lead to failure for entrepreneurs.

Therefore, it is necessary to focus on the circumstances that affect female entrepreneurship in today's business world, as these factors act as barriers, obstacles and limitations to female entrepreneurs who are starting and running new businesses. In this sense, North (1990), one of the most prominent researchers of barriers to entrepreneurship,

using institutional economic theory, defines institutions as constraints devised by individuals who rule the framework of human interaction.

As mentioned above, the objective of this research is to specify the conditioning factors of female entrepreneurship in Chile and to compare these with factors that affect male entrepreneurs, considering formal and informal constraints proposed by North (1993) via institutional economic theory.

With this research, we intend to also generate a theoretical and empirical contribution to the literature, considering that while there is enough evidence about the conditions under the dependent employment of women and their insecurity, it is scarce evidence regarding freelancing, and above all, little has been developed regarding the barriers to their work status as entrepreneurs. Distinguish the problems of female entrepreneurship will allow elucidating some associated issues, such as where should be greater efforts in terms of government policy and the design of more successful programs. A better understanding of the difficulties that women entrepreneurs face, help to increase their market share and hence its contribution to the national economy.

## **LITERATURE REVIEW**

### **Women and Entrepreneurship in Latin America and Chile.**

Over the last twenty years, there has been an expansion of the field of entrepreneurship worldwide (Kelley, Singer and Herrington 2012). In addition to this, gender diversity is one of the most important topics that modern businesses must confront (Carter et al., 2007). It has been recently perceived as a matter of interest not only in literature but also the diversity in politics and other general social situations (Kang et al. 2007).

To describe the situation of women's entrepreneurship is not an easy task, since it is difficult to determine the number of women entrepreneurs in different countries. However, the number of women entrepreneurs is always lower than that of men, and while it is true that change or increase depending on the level of development of the country, no research is shown as superior. Specifically, with regard to the cases of Chile and Latin America, women have been taking position in the economy. Indeed, the percentage of women entrepreneurs between 2007 and 2013 has increased in countries such as Argentina, Brazil, Mexico and Chile (Elizundia 2015). Particularly in the local case, a 2013 survey on micro entrepreneurship shows that those taking part in the development of entrepreneurial activities in Chile are predominantly men (Ministry for the Economy, Development and Tourism, 2014). Thus, 25.5% of economically active women call themselves entrepreneurs entrepreneurs, of which 19% is recognized as an entrepreneur in early stages, and 6.5% as an established entrepreneur (Amorós, Kuschel y Pizarro, 2014).

In this sense, according to a report published by the Economist Intelligence Unit, the most favorable latinamerica country for the rise of female entrepreneurship in Latin American country is Chile, with a score of 64.8. Peru, meanwhile, ranks second in the standings with a score of 62.4, while Colombia ranks third with 61.8, above nations like Mexico (60.2), Uruguay (60), Costa Rica (56.8), Argentina (54.6), among others. In addition, while there has been an increase in female labor participation in Chile, there has been a slight decrease in self-employment rates and an increase in female employers (Ministry for the Economy, Development and Tourism, 2014). This implies that women not only run their own businesses but also generate new jobs for the rest of the population.

Numerous research studies strive to understand gender-related differences not only in terms of business participation but also in terms of performance. These studies focus on preferences (often determined by social roles

assigned to women), including those rooted in female positions within family structures, and on restrictions, and mainly those concerning access to financing (Acs et. al. 2011).

Accordingly, numerous researchers have studied barriers and constraints to entrepreneurial activities. Acs et al. (2011) note that female entrepreneurs face more restrictions than men due to legal, institutional and cultural factors, including asymmetries in property rights, family laws, and inheritance practices, among others. Household responsibilities are another important issue to consider. Parker (2009) argues that a major reason behind differences between male and female entrepreneurs lies in the fact that women tend to dedicate more time to raising children and maintaining the household. Finally, women may face discrimination from financial institutions that allocate credit.

Several authors in this field have stressed the relevance of institutional economic theory to the study of entrepreneurial constraints, particularly given its utility for examining socio-cultural environments as an entrepreneurship determinant (Aidis, Estrin & Mickiewicz 2008; Bruton & Ahlstrom 2003; Bruton, Ahlstrom & Li 2010; Stephen, Urbano & Van Hemmen 2009; Thornton, Ribeiro & Urbano 2011; Urbano 2006; Veciana & Urbano 2008; Welter 2005). Researchers have categorized these observable barriers as shown in the following section.

### **Institutional economic theory**

North (1990) states that human behaviors are determined by institutional environments, which can be either formal or informal. These institutions, according to North, may inhibit or encourage decisions made by a subject, and particularly those regarding the creation of a new business (Álvarez, Noguera & Urbano, 2012).

Therefore, institutions form social norms and constraints that govern societies. These constraints determine and regulate the framework within which individuals interact (Pulido et al., 2007). According to North (1993), these constraints may be formal or informal.

### **Formal Constraints**

Formal constraints, given the increasingly complex nature of societies, can improve the performance and applicability of rules when explicitly specified. Rather, these factors refer to established standards that are enshrined in domestic laws in the form of constitutions, laws, contracts, codes of conduct, and manuals of coexistence, among others. In the case of entrepreneurship, three major factors constrain the establishment of a company: age, educational background and socioeconomic status (North 1993).

### **Women and entrepreneurship personal constrains**

#### **Age**

Implications related to the age factor involve two implicit variables: access to financing and legislative restrictions. With respect to funding, credibility acts as a major barrier to women when engaging with financial institutions (Álvarez et al., 2012). Additionally, banks consider it risky to allocate loans to elderly individuals, and specifically to retired women, given their meager income.

Authors such as Brush (1992), Carter and Rosa (1998), Hisrich and Brush (1987) and Morris et al. (2006) suggest that female entrepreneurs may face more difficulties in obtaining financing due to the reduced size of their

companies, which prevents them from providing adequate guaranties. Other studies show that even when financial institutions apply the same evaluation criteria to men and women, factors that affect the negotiation stage can lead to differential female entrepreneur debt levels or financing access (Alsos, Isaksen & Ljunggren 2006; Carter et al. 2007; Gatewood et al. 2009; Kim 2006; & Marlow & Patton 2005).

Regarding legislative restrictions, support for entrepreneurial activity development and maintenance from various organizations may inhibit or encourage the work of female entrepreneurs. Such support may include the provision of information during initial stages of business establishment, business development monitoring or business plan advising (Álvarez, Noguera & Urbano 2012).

H1: Age positively impacts on the probability of underaking in women.

### **Educational background**

Several studies call attention to the positive correlation between an individual's level of formal education and his or her decision to start a business (Storey & Cressy 1996; Reynolds & White 1997). This implies that those with higher levels of education are more prone to succeed not only while implementing new businesses but also when undergoing early, and critical, stages of business establishment (Gennero & Liseras 2001).

In their study, Wilson, Kickul & Marlino (2007) find positive relationships between women with levels of high education and access to executive-level positions and between education and female entrepreneurship. Similarly, Fairlie and Robb (2009) find positive relationships between educational levels, entrepreneurship and economic results. On a smaller scale, the completion of secondary education has consistently large positive associations with women's empowerment, underscoring the importance of going beyond primary education (Hanmer & Klugman 2016).

Female entrepreneur educational levels directly affect degrees of business sophistication, opportunities for innovation and potential business venture growth. A weakness of the Chilean educational system, and of educational systems in many OECD countries, is education programs that promote entrepreneurship at an early age (Poblete & Amorós, 2013). This challenge relates to the creation of dynamic educational models that promote the development and implementation of creative responses to various situations (Global Entrepreneurship Monitor, 2012).

H2: Education positively impacts on the probability of undertaking in women.

### **Socioeconomic status**

Despite ongoing support dedicated to this area, state resources dedicated to promoting entrepreneurship are inadequate. Only 10% of applicants receive benefits, and application processing periods are longer than six months. As time passes, motivations to complete a project are often stifled (Fuentes & Sánchez 2010).

Fuentes and Sánchez (2010) also highlight that subsidy values have become insignificant relative to the real needs of entrepreneurs. This factor in addition to excessive wait times and paperwork prevent many entrepreneurs from applying for financial support.

Kantis, Angelelli and Moori (2004) illustrate how social and economic structures affect entrepreneurship in Latin America. In this region, entrepreneurship, defined as the ability to create a dynamic and formal business, is less accessible to individuals with fewer resources. In addition, business development and training areas are less productive, entrepreneurs' motivations depend more on their needs than on their positive entrepreneurial spirit, and their networks are very limited. Entrepreneur resources are also constrained by a lack of personal savings, which serves as the main source of funding in most business projects, and by limited access to foreign capital.

H3: Socioeconomic level positively impacts on the probability of undertaking in women.

### **Women and entrepreneurship: Informal constraints**

Informal constraints derive from information transmitted as part of a society's cultural heritage (North, 1993). Knowledge, values and other factors that affect individual behaviors are passed on from generation to generation through teaching and imitation (Boyd & Richerson, 1985). Cultural filters offer continuity, and thus, informal solutions to problems of exchange of the past are transferred to the present, rendering informal constraints important sources of continuity for long-term social change (North, 2005).

North (1993) defines three types of informal limitations: extensions or modifications of formal norms, behavioral norms sanctioned by society and behavioral norms that are internally accepted by individuals. Five formal factors are identified accordingly: women's beliefs, motivations and perceptions; networking and collaboration; family roles; fear of failure; and entrepreneurial motivations prior workforce integration.

### **Women's beliefs, motivations and perceptions**

Altman and Brenner (1981) state that men are more likely to engage in entrepreneurship than women because male motivations are largely achievement-oriented and because men value work differently. Conversely, Langowitz and Minnitti (2007) examined variables that affect entrepreneurial motivations in women and found significant variables related to subjective perceptions, noting that women viewed themselves as less capable and perceived entrepreneurial circumstances as less favorable.

The perceived capabilities of female entrepreneurs relate to societal perceptions and to the perceptions of women. The former refers to the extent to which societies perceive women as capable of running businesses, and the latter relates to the extent to which women perceive themselves as capable entrepreneurs.

Research such as that of Langowitz and Minnitti (2007) finds that most female entrepreneurs view themselves as less capable than men and that this negatively affects their motivations to engage in entrepreneurship, also, Fuentes and Sánchez (2010) finds that female entrepreneurs exhibit lower degrees of entrepreneurial motivation than their male counterparts.

H4: Beliefs, motivations and perceptions positively impact on the probability of undertaking in women.

### **Networking and collaboration**

Networking and collaboration refers to the relationships that women have with individuals who do not belong to their company but who contribute to its survival and success (Aldrich, Rees & Dubinic 1989; Rosa & Hamilton 1994).

The presence of social, institutional and commercial networks may facilitate the entrepreneurial process by, for example, offering information on opportunities, entrepreneurial resources and problem-solving support. Several studies stress the importance of networking to entrepreneurial development and its role at certain stages of the entrepreneurial process (Johannisson & Monsted, 1997). This becomes a limitation, for example, as there is evidence that most firms managed or solely owned by women are young and small and may have more difficulty obtaining credit from banking institutions (Marques, 2015).

Baptista, Karaöz and Mendoca (2014), about business ventures initiated in response to unemployment, explain that various forms of human capital have little effect on business survival. The authors instead find that business survival relies mainly on previous business experience.

Research carried out in the United States, Italy and Northern Ireland shows that even when males and females develop networks in a similar fashion, their compositions differ. While networks developed by women mainly consist of women, men's networks are primarily composed of men (Aldrich, Reese & Dubinic 1989; Bruschi, 1992; Cromie & Briley 1992). Other studies find female entrepreneur preferences for employing collaboration networks that include family members (Gatewood et al. 2009; Greve & Salaff 2003).

H5: Contact networks positively impact on the probability of undertaking in women.

### **Family roles**

Verheul, Van Steel & Thurik (2004) highlight that family structures have a positive effect on entrepreneurial spirit for both genders. Self-employment supports flexible scheduling, telecommuting and greater family support. In turn, business ownership supports family needs. Additionally, the authors observe that when men become entrepreneurs, their wives are more likely to contribute as unpaid family workers. If, however, women are self-employed, their husbands are not likely to engage in their wives' businesses.

H6: Family role positively impacts on the probability of undertaking in women.

### **Fear of failure**

Numerous individuals do not explore new entrepreneurial initiatives due to their fears of not achieving expected results and due to stigmas related to failure. In this regard, Díaz, Sánchez & Postigo (2007) confirm that women, whether entrepreneurs or not, exhibit a stronger fear of failure, as they feel a greater sense of responsibility for their families. Women thus fear that entrepreneurial failure may negatively affect their family role.

Despite these findings, Chile exhibits only minor rates of fear of failure relative to most other countries examined in the GEM project (Poblete & Amorós, 2013).

H7: Fear of failure negatively impacts on the probability of undertaking in women.

### **Entrepreneurial motivations prior to workforce integration**

Entrepreneurial intention is motivated, among other factors, by psychological factors, including the desire for self-realization and for a sense of independence and freedom. Nonetheless, a major factor that supports the development of new ideas and businesses is that of family tradition. It has been found that a high percentage of student entrepreneurs come from families with at least some members who are self-employed or entrepreneurs. It has also been found that that internships or work experience in small- or medium-sized businesses influence students' entrepreneurial spirit (Shiersmann, 2002).

Labor market conditions also directly affect student entrepreneurship trends. If students realize that the market does not offer occupations that complements their education levels and believe that self-employment may deliver greater benefits, they will consider starting a business as a career choice (Henrekson & Rosenberg, 2000). However, the reality in Chile is different. Macroeconomic and political conditions are stable, and unemployment rates are relatively low. Hence, as students acquire levels of higher education, their chances of securing high-quality jobs improve. This strongly influences students approaching graduation who will prefer a career that is less risky over self-employment (Olmos & Castillo, 2007).

H8: Students' condition negatively impacts on the probability of undertaking in women.

As demonstrated through the studies presented, differences between both genders are evident; these differences lie in various aspects such as personality traits, entrepreneurial motivations and obstacles encountered while performing



managerial tasks. These differences, which may originate from discrimination within and outside of the labor market, affect the performance and behavior of female entrepreneurs (Cuevas & Gutiérrez, 2008).

## MATERIALS AND METHODS:

This research study is conducted over two phases. First, an exploratory review of background literature on women's entrepreneurship identifies factors that affect entrepreneurial activities. Second, a conclusive data analysis is performed. For this study, an individual database from the Adult Population Survey (APS) was used from the Global Entrepreneurship Monitor (GEM) project which include years 2011, 2012, 2013, 2014 and 2015. From this population-based universe, the information was filtered leaving only the data from Chile during that period, as a result, there is a sample of 21,908 adults between 18 and 65 years living in Chile. We achieved our conclusive objectives over two phases. First, a descriptive analysis of the Total Early-stage Entrepreneurial Activity (TEA) in relation to gender was carried out, this analysis sought to determine whether men enjoy advantages over women regarding environmental factors that influence entrepreneurship. To do so, cross-tabulations between the "gender" variable and environmental factors, categorized in formal and informal factors, were performed. Afterwards two binary logistic regressions are performed with the dependent variable TEA, for men and women, seeking to measure the impact of both formal and informal factors on entrepreneurship at early stage, and the differences associated to the gender of the entrepreneur. The dependent variable is the Total Early-Stage Entrepreneurial Activity (TEA), which measures the percentage of the population between 18 and 65 years old that is a newly entrepreneur or owner and manager of a new business (until 3,5 years). The detail of each independent variable is shown on Table 1, according to the description of GEM for each variable.

Table 1. Description of GEM for each variable

Name	Databased Variable	Description
Age	age	Age of respondent in years.
Educational background (Low)	UNEDUC categorized in LowEduc.	Contains individuals with: Pre-primary education, Primary education or first stage of basic education, & Lower secondary or second stage of basic education.
Educational background (Medium)	UNEDUC categorized in MedEduc.	Contains individuals with: (Upper) secondary education, & Post-secondary non-tertiary education,
Educational background (High)	UNEDUC categorized in HighEduc.	Contains individuals with: First stage of tertiary education & Second stage of tertiary education
Socioeconomic status (Low)	GEMHHINC categorized in LowIncome	Contains individuals with: Lowest 33% of income.
Socioeconomic status (Medium)	GEMHHINC categorized in MedIncome	Contains individuals with: Middle 33% of income
Socioeconomic status (High)	GEMHHINC categorized in HighIncome	Contains individuals with: Upper 33% of income

Name	Databased Variable	Description
Networking and collaboration	knowent	Population percentage (18 to 64 years) that knows someone personally who started a business in the past 2 years.
Women's beliefs, motivations and perceptions.	suskill	Population percentage (18 to 64 years) that believes to have the knowledge, skill and experience required to begin a new business.
Fear of failure	fearfail	Population percentage (18 to 64 years) that perceives the existence of opportunities but indicates that fear of failure is a constraint in terms of building a business.
Family Role	Homemaker	Full-time homemaker.
Entrepreneurial motivation prior to workforce integration	Student	A student.

Source: Amorós, Kuschel & Pizarro, 2014

## RESULTS AND DISCUSSION

The total early stage of entrepreneurial activity (TEA) analysis results indicate that with respect to age, males mainly become entrepreneurs during their youth (18 to 35 years of age), whereas women typically engage in entrepreneurial activities at a later age (between 36 and 50 years of age). Concerning educational variables, female and male entrepreneurs hold average levels of education, implying that they hold technical degrees and complete secondary education. Concerning socioeconomic status factors, 64% of the men surveyed claimed to secure high incomes. In the case of women, this figure reached only 39.8%, and 33.7% perceived themselves to secure low incomes. According to Table 2, female entrepreneurs exhibit lower incomes, lower educational levels and higher age variability relative to male entrepreneurs.

Table 2. Female entrepreneurs

	Male	Female
Low Education	9.2%	19.3%
Medium Education	59.3%	63.2%
High Education	31.4%	17.6%
Lowest 33%tile income	14.1%	33.7%
Meddle 33%tile income	21.9%	26.5%
Upper 33%tile income	64.0%	39.8%
Age [18 – 35]	45.1%	37.9%
Age [36 – 50]	36.3%	38.0%
Age [51 - 65]	18.5%	24.1%
Networking (knowent)	64.7%	58.9%
Perception of entrepreneurial skills (suskill)	87.5%	80.9%
Fear of failure (fearfail)	18.1%	21.7%
Family role (homemaker)	0.2%	6.3%
Entrepreneurial motivation prior to workforce integration (student)	1.7%	1.3%

Source: Own elaboration

With respect to informal limitations, and perceptions of entrepreneurial capabilities in particular, 87% of men feel capable of starting a business. Women, on the other hand, exhibit a slightly lower trend in this area, as only 80.9%

feel capable of starting a business. The men vs. women ratio indicates that men are 1.08 times more likely to feel capable of starting a business than women. With respect to social networking, 64.7% of men claim to know people who became entrepreneurs less than two years ago. This figure is slightly lower in the case of women (58.9%). Regarding family roles, only a 0.2% of the male respondents claim to be stay-at-home spouses, with the remaining 99.8% working under different occupations (i.e., part and full-time workers, students, retirees and entrepreneurs). Among female entrepreneurs, 6.3% of the women surveyed perform unpaid household chores. With respect to the fear-of-failure factor, only 18.1% of the male entrepreneurs admitted holding this fear, while 21.7% of the female entrepreneurs did so. Regarding entrepreneurial motivation prior to workforce integration, the rate of student entrepreneurship is extremely low. Only 1.7% of the male students surveyed are involved in early business development activities. For women, this figure decreases even further, barely reaching 1.3%. According to ANOVA analysis only in Homemaker and Student the hypothesis of equal means is accepted, then there's no statistically significant difference between gender in the Family Role and the Entrepreneurial motivation prior to workforce integration.

This descriptive analysis suggests that women face worse constraints relative to their male counterparts, both formally and informally, as they exhibit greater fears of failure and lower rates opportunity perception and networking. Similarly, female entrepreneurship is linked to lower education levels and lower incomes.

Following the descriptive analysis, two logistic regression models were developed to examine the impact of both formal and informal factors on entrepreneurship at early stage, and the differences associated to the gender of the entrepreneur. The results are presented in Tables 3 and 4.

Table 3. Logistical regression on early stage female entrepreneurship

Variables	B	Sig.
knowent	0.988	0
suskil	1.264	0
fearfail	-0.468	0
age	-0.015	0
Homemaker	-1.194	0
Student	-1.769	0
LowIncome*	-0.139	0.053
HighIncome	0.18	0.012
LowEduc	0.169	0.028
HighEduc	-0.459	0
Constant	-1.671	0

\*non-significant variable ( $p > 0.05$ )

Source: Own elaboration.

Concerning formal constraints, age has a significant and negative inverse effect in both cases rejecting H1. Older individuals face more limitations when starting a business. This may be related to psychological features specific to certain ages, to a lack of financial support from lending institutions or to a shortage of personal resources after retirement. A comparative analysis of the effect of this variable on both genders shows that women tend to start their businesses at older ages than men. This may be related to difficulties that women face when attempting to secure a job after turning fifty years of age. Under such circumstances, self-employment remains as the only viable employment option.

Table 4. Logistic regression on early stage male entrepreneurship

Variables	B	Sig.
knowent	0.929	0
suskill	1.403	0
fearfail	-0.309	0
age	-0.016	0
Homemaker*	-0.719	0.143
Student	-1.497	0
LowIncome	-0.212	0.018
HighIncome	0.294	0
LowEduc*	-0.102	0.285
HighEduc*	0.035	0.59
Constant	-1.963	0

\*non-significant variable ( $p > 0.05$ )

Source: Own elaboration

Regarding education, higher education levels negatively affect female entrepreneurship rejecting H2, whereas lower educational levels have the opposite effect. In the case of males, education does not significantly affect entrepreneurship trends. Though education is not a significant variable for men, men with higher degrees of educational specialization tend to start their own business, affording them an educational advantage over women.

The absence of significantly low incomes among female entrepreneurs is worth noting. For men, higher incomes are positively related to engagement in entrepreneurship; however, low incomes are significant for the model. High incomes can positively affect entrepreneur's decisions to become entrepreneurs, as lending institutions tend to offer better opportunities to individuals with high incomes or salaries, thus accepting H3.

Regarding informal constraints, all the examined variables significantly affect male and female entrepreneurs, except for the family role in the case of men. Nonetheless, perceptions of skills and entrepreneurial capabilities stand out as factors that significantly affect entrepreneurship trends, especially in the case of men. Langowitz and Minnitti (2007) conversely state that most women perceive themselves to be less capable and tend to envision a less favorable environment for women. Even so, H4 is accepted.

Concerning social networking constraints, the results indicate that networks increase both male and female probabilities of engaging in entrepreneurship, accepting H5. These results are consistent with the work of Aldrich, Reese & Dubinic (1989), Brusch (1992), Cromie and Birley (1992), Rosa and Hamilton (1994), Sorenson, Folker & Brigham (2008) and Gatewood et al. (2009). These authors analyzed female entrepreneur preferences (or needs) to utilize social networks, even when these networks are essentially familial, as Greve and Salaff (2003) have indicated. Concerning family roles, women who perform household chores are less likely to start their own businesses, rejecting H6. However, in the male regression model, this relationship is not significant. These results support those of Baughn, Chua & Neupert (2006) and Langowitz and Minniti (2007), who find that female entrepreneurship is implicitly regarded as less desirable in societies where women's roles are closely associated with family care.

Fear of failure decreases chances of engaging in entrepreneurship for both men and women, accepting H7. In most cases, entrepreneurial activities are not attempted or are abandoned due to fears of failure (Mullins & Forlani, 2005). Fears of failure serve as mayor psychological barriers that deter many potential entrepreneurs from engaging in entrepreneurship initiatives (Steward & Roth, 2001).

Concerning entrepreneurial motivation prior to workforce integration, the results show that being a student decreases the chances of engaging entrepreneurial activities for both males and females, accepting H8. Student motivations to engage in entrepreneurship are limited, especially in the case of women.

## CONCLUSION

This study identified factors that shape female entrepreneurship trends. Informal constraints have a greater effect on female entrepreneurship than formal constraints. In fact, the most influential positive variables that affect are perceived capability and networking, being a student has the greatest negative impact.

This study draws attention to the importance of improve entrepreneurs' business skills while also expanding their social networks. Improvements of these two determining entrepreneurship factors would in turn allow entrepreneurs to overcome fears of failure. The negative influence of family roles, and specifically of being a housewife, is cause for concern, as entrepreneurship and family care responsibilities appear to be incompatible.

All these findings require long term interrelated political measurements consistent with the purpose of building a culture of inclusion (specially towards the field of education), parallel to the construction of an institutional framework and the provision of services to help women meet their business goals (access to funding and services that help families, caring about kids and elderly relatives) (Global Entrepreneurship Monitor, 2015).

While this study identifies determining factors of female entrepreneurship in Chile, the inclusion of a qualitative phase focused on ethnographic study is recommended. Such an approach would not only further understandings of constraints on female entrepreneurship, but would also shed light on ways that female entrepreneurs respond to these constraints. Finally, entrepreneurship training must be encouraged in educational institutions; moreover, entrepreneurs must be afforded access to tools that expand their business knowledge and skills while expanding their network. As this is the most influential factor that affects entrepreneurship trends, providing greater access to such resources would counteract factors that limit student engagement in entrepreneurship.

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