UNIVERSITÀ DELLA CALABRIA

UNIVERSITA' DELLA CALABRIA

Dipartimento di Economia, Statistica e Finanaza e Dipartimento di Scienze Aziendali e Giuridiche

Scuola di Dottorato in Scienze Econonomiche ed Aziendali

Indirizzo

Entrepreneurship and Mangment

XXV CICLO

FEMALE AND MALE ENTREPRENEURSHIP: HOW WOMEN AND MEN FACE INSTITUTIONS

Settore Scientifico Disciplinare SECS/P08

Direttore: Ch.mo Prof.ssa Patrizia Ordine

Firma _____

Supervisore: Ch.mo Prof. Andrea Lanza

Firma _____

Dottorando: Dott./ssa Nadia Cosentino

Firma _____

UNIVERSITÀ DEGLI STUDI DELLA CALABRIA

XXV ciclo della Scuola di Dottorato in Scienze Economiche ed Aziendali

Female and Male Entrepreneurship: How Women and Men Face Institutions

Nadia Cosentino

Ph.D. Student

Strategic Management Area

Under the Supervision of Professor
Andrea Lanza

Sintesi

Recenti Studi considerano le imprenditrici come un importante fonte di lo sviluppo economico. Le donne che decidono di avviare attività commerciali, cosi come gli unomini, contribuiscono alla creazione di occupazione, stimolano la crescita economica e conferiscono eterogeneità imprenditoriale. Alcuni studi dimostrano che la propensione delle donne ad avviare attività commerciali è influenzata dagli stessi fattori che influenzano gli uomini, tuttavia evidenze empirice mostrano che il tasso di imprenditoria femminile è inferiore rispetto al tasso di imprenditoria maschile (M. Minniti , P. Arenius , 2003) . Lo scopo principale di questo lavoro è quello di esaminare i fattori istituzionali che influenzano l'imprenditorialità maschile e femminile in diversi paesi. Questo studio indaga precedenti ricerche sulle donne e sugli uomini imprenditori al fine di fornire ulteriori risultati che possono essere responsabili di una migliore comprensione di questo fenomeno . Questa analisi considera le differenze culturali, l'ambiente demografico, l'alfabetizzazione, l'istruzione, il livello sociale, e la crescita economica di diversi paesi paesi in tutto il mondo. I tre saggi presentati indagano tre diversi aspetti dello stesso tema e sono legati alla stesso filone teorico. Al fine di poter condurre le appropriate analisi e sviluppare teorie che contribuiscano ad arricchire la letteratura esistente, si é utilizziato i dati GEM e dati della Wold Bank. La decisione di concentrarsi su questo quadro teorico specifico è legato al bisogno di fornire delucidazioni che possano portare ad adeguati incentivi per l'imprenditorialità femminile .

Questo studio fornisce importanti evidenze empiriche legate:

- Alla realzione tra genere (uomo-donna), qualita' delle istituzioni e self-confidence delle donne nelle prorpie capacità imprenditoriale femminile (primo saggio);
- All relazione tra genere (uomo-donna), qualita' delle istituzioni governative e motivazioni che spingono le donne verso nuove attivita' commerciali (secondo saggio)
- Alla relazione tra genere (uomo-donna), qualita' delle istituzuioni , attività no-profit e attività for profit (terzo saggio)

Abstract

Recent researches consider female entrepreneurs important for economic development. Women like men contribute to employment creation and economic growth but they also make a contribution to the diversity of entrepreneurship in the economic process. Some studies show that the participation of women in entrepreneurship is affected by the same factors that affect men but evidence underline that the rate of female entrepreneurs is lower than male entrepreneurs (M. Minniti, P. Arenius, 2003)[1].

The main purpose of this work is to examine whether and how countries' institutional factors differently influence male versus female entrepreneurship. This study investigates previous marks about women and men entrepreneurs in order to provide additional results which can be responsible for a better understanding of this phenomenon. This analysis considers countries' differences in culture, demographic environment, literacy, education, socio-economic level, labor force, organizational forms, and employment by sectors, and economic growth.

The three essays presented in this work investigate three different aspects of the same topic and are related to the same literature review. Moreover, the sources of the data used for these three papers are always the same. We use GEM data and World Bank data to develop analyses that contribute to a literature that has omitted countries institutions' influences on both males and females aspiring entrepreneurs. The decision to focus on this specific theoretical framework is related to the need of well investigate the difference between women and men in entrepreneurship across countries in order to provide adequate incentives to female entrepreneurship. We provide a summary of the three essays in the section below.

Essay 1: Female and Male Aspiring Entrepreneurs: How to Boost Women's Entrepreneurial Propensity through Governmental Institutions' Quality and Perceived Skills

Different studies on institutions, entrepreneurship, and female self-employment lead to different conclusions. Especially, there is evidence that governmental institutions may both boost or discourage entrepreneurial activity. Taking into account the male role in entrepreneurship, we try

1 Women In Entrepreneurship Maria Minniti, PiaArenius Helsinki University Of Technology

to clarify this dilemma focusing on aspiring female entrepreneurs[2], perceived level of institutional quality and perceived skills. In doing this we adopt an agnostic research's approach. Considering individual self-confidence[3] in entrepreneurial entry decisions, this paper investigates male and female propensity in startup activities among contexts with different level of Governmental Institution's Quality (GIQ). Using individual Global Entrepreneurship Monitor (GEM) data and matching them with World Bank data, describing differences in Institutions across countries, this analysis contributes to extend a literature on female entrepreneurship that has omitted the importance of governmental institution on perceived self-efficacy among aspiring male and female entrepreneurs. Results show that on average institutions' quality increases the differences between men and women in startup activities. Despite the expectations, women appear less likely to start a new business in countries where the quality of governmental institutions is high. However, high levels of female self-confidence increase women's probability to become a new entrepreneur in contexts where the quality of governmental institutions is high. Results point out that self-confidence may be the key to boost female self-employment providing non-monetary incentives to women aspiring entrepreneurs in contest where the quality of governmental institutions is high. In order to promote economic development, through female startup activities, policy makers could provide national incentive on education and training to develop women's self-confidence in their entrepreneurial skills.

Essay 2: How Nascent Men and Women Entrepreneurs Face Necessity and Opportunity through Governmental Institution's Quality

This study investigates gender differences in entrepreneurial motivations of individuals that have already chosen to become entrepreneurs. This paper focuses on male and female entrepreneurs that decided to start a new business for Opportunity or Necessity. Using GEM individual data and matching them with World Bank data, describing differences in institutions, this research proposes an across countries analysis in order to understand reaction of men and women, that have already decided to become entrepreneurs out of necessity or to pursue entrepreneurial opportunities, to perceptions of governmental institutions' quality (GIQ). The novelty of this

[2] The literature defines differences in male and female propensity in startup activities as gender gap.

3 In this analysis, self- confidence is related to the individuals' perceived knowledge, skill and experience required to start a new business. Generally we will refer to self-confidence using other annotations, which are very common in literature, such as: self-efficacy, self-esteem, self- perception of own abilities.

analysis is related to the peculiar characteristics of the depended variable. It is a dichotomous one and it discriminates necessity based entrepreneurs from opportunity-based entrepreneurs. Moreover we consider a sample of only entrepreneurs. We examine the effects of Gender and GQI on the probability for an aspiring entrepreneur to start a business for opportunity or necessity. Results shows that that being a female nascent entrepreneurs has a negative effect on the probability to start a business because of opportunity but from another point of view being a nascent entrepreneurs woman has a positive effect on the probability to start a business out of necessity. Moreover GIQ moderate the negative effect of being a female nascent entrepreneur in case of opportunity-driven entrepreneurship. When Governmental institutions' Quality is high the probability for a woman nascent entrepreneurs to start a business in order to hunt business opportunity increases. Of the other hand when Governmental institutions' Quality is high the probability for a woman nascent entrepreneur to start a business because of necessity decreases.

Essay 3: Women in Self-Employment Entry Decisions, Social Entrepreneurship, and Institutions across Countries: a Starting Point

The aim of this paper is point the attentions on female social entrepreneurship as an important source to enhance female commercial entrepreneurship. This paper is an important starting point to explore how it is possible to promote female entrepreneurship by social entrepreneurship. This research as to be seen as the first step that lead to a more accurate research agenda. In order to propose social entrepreneurship as a complementary element to Governmental Institutions' Quality (GIQ), this analysis shows that when the quality of governmental institutions is high the probability of woman to be involved in social activities increase. Using 2009 GEM data, matching them with World Bank data detailing differences in institutions, this research proposes social entrepreneurship as an important element for female entry decision in commercial self-employment. We underline the importance of social entrepreneurship as a strategic choice in order to undertake profitable new business. Results show that social entrepreneurship facilitates women in subsequent entry in commercial entrepreneurship.

Female and Male Aspiring Entrepreneurs: How to Boost Women's Entrepreneurial Propensity through Governmental Institutions' Quality and Perceived Skills

Different studies on institutions, entrepreneurship, and female self-employment lead to different conclusions. Especially, there is evidence that governmental institutions may both boost or discourage entrepreneurial activity. Taking into account the male role in entrepreneurship, we try to clarify this dilemma focusing on aspiring female entrepreneurs[4], perceived level of institutional quality and perceived skills. In doing this we adopt an agnostic research's approach. Considering individual self-confidence[5] in entrepreneurial entry decisions, this paper investigates male and female propensity in startup activities among contexts with different level of Governmental Institution's Quality (GIQ). Using individual Global Entrepreneurship Monitor (GEM) data and matching them with World Bank data, describing differences in Institutions across countries, this analysis contributes to extend a literature on female entrepreneurship that has omitted the importance of governmental institution on perceived self-efficacy among aspiring male and female entrepreneurs. Results show that on average institutions' quality increases the differences between men and women in startup activities. Despite the expectations, women appear less likely to start a new business in countries where the quality of governmental institutions is high. However, high levels of female self-confidence increase women's probability to become a new entrepreneur in contexts where the quality of governmental institutions is high. Results point out that self-confidence may be the key to boost female self-employment providing non-monetary incentives to women aspiring entrepreneurs in contest where the quality of governmental institutions is high. In order to promote economic development, through female startup activities, policy makers could provide national incentive on education and training to develop women's self-confidence in their entrepreneurial skills.

[4] The literature defines differences in male and female propensity in startup activities as gender gap.

5 In this analysis, self- confidence is related to the individuals' perceived knowledge, skill and experience required to start a new business. Generally we will refer to self-confidence using other annotations, which are very common in literature, such as: self-efficacy, self-esteem, self- perception of own abilities.

1. Introduction

Although the number of female entrepreneurs is growing worldwide, the implications of this phenomenon for the entrepreneurial process remains largely unexplored. Yet, recent evidence systematically shows that the rate of female entrepreneurs is lower than male entrepreneurs (e.g. M. Minniti, P. Arenius, 2003, Delmar and Davidsson, 2000). According to the data of General Entrepreneurship Monitoring 2011 in just 8[6] of the 54 economies surveyed, the rates of female early-stage entrepreneurship are comparable to those of their male equivalents. These eight countries come from various global regions and represent every phase of economic development. Those evidences suggest that the nature and causes for gender differences in entrepreneurial behavior require further investigation.

Minniti et al. (2005) emphasize the importance of understanding what factors mobilize or prevent women from startup activities since it is widely recognized the role played by women in the economic development process of a country by new business creation (Acs, Arenius, Hay, and Minniti, 2005). Women contribute to employment creation and economic growth and they also make a contribution to the diversity of entrepreneurship in the economic process (Verheul and Turk, 2001). Some researches focus on the importance of individual characteristics in male and female entrepreneurial entry decision (Minniti, Arenius, and Langowitz, 2005, Langowitz and Minniti 2007). Other studies tried to point out the important role of institutions among gender on self-employment entry decisions (Estrin and Mieckieviz 2011, Amanda Elam and Siri Terjesen 2010; Thurik, and Stel Verheul, 2004).

Traditionally, gender differences in entrepreneurial activity have been attributed to differences in human and social capital (Greene 2000), differences in risk tolerance (Jianakoplos and Bernasek 1998) and management styles (Brush 1990, 1992). Moreover, women tend to be more sensitive than men to a variety of non-monetary factors (Boden 1999, Burke et al 2002, Lombard 2001). Lefkowitz (1994) has shown that men and women tend to react to the same set of incentives and that much of the difference across genders disappears after correcting for some socio-economic conditions. According to Wilson et al. (2007) a possible explanatory factor in disparity between women and men in their start-up propensity may be a lack of self-confidence. Boyd and Vozikis (1994) have shown that individual self-efficacy, defined as a person's belief in one's own capability to perform a task, influences the development of both entrepreneurial

[6] Panama, Venezuela, Jamaica, Guatemala, Brazil, Thailand, Switzerland and Singapore.

intentions and actions. Harper (1996) has linked entrepreneurial attitudes to the perception of possessing a strong internal locus of control. Koellinger et al (2007) and Langowitz and Minniti (2007) found evidence about the importance of self-confidence on the propensity to start a new business for both men and women.

Other research findings show that institutional factors explain gender differences in work patterns (Esping-Andersen, 1999; van der Lippe and van Dijk, 2002; Inglehart and Norris, 2003). In this article, we adopt an explicitly governmental definition of institutions as a set of quality perception of government actions (Kaufman et.al. 2010). In this sense, different countries may have different level of institutions' quality defined by six correlated variables[7]. This study tries to understand if this measure of institutions' goodness may differently affect male and female entry decisions in entrepreneurship and how perceptions about governmental institutions' quality affect self-confidence role in startup entry decisions. Different studies on institutions, entrepreneurship, and female self-employment lead to different conclusions. Especially, there is evidence that governmental institutions may boost or discourage entrepreneurial activity. We try to clarify this dilemma focusing on aspiring male and female entrepreneurs, perceived level of institutional quality and self-confidence. In doing so we adopted an agnostic research approach. However we introduce different potential explanations about relations between female entrepreneurship institutions' quality and self-efficacy. Then we let the data (i.e. the analysis) inform what explanation holds

The main purpose of this research is to provide evidence on whether and how, self-confidence combined whit different level of perception of good countries institutional factors influence female role in entrepreneurial entry decisions. This study pursues the idea that self-confidence is an important human characteristic that in presence of good institutions increases women willingness to be involved in startup activities. This analysis documents several statistical relationships between governmental institutional variables, female and male entrepreneurship, and individual perceived confidence.

[7] Worldwide Governance Index (WGI) cover over 200 countries and territories, measuring six dimensions of governance: Voice and Accountability, Political Stability and Absence of Violence/Terrorism, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption. The aggregate indicators are based on several hundred individual underlying variables, taken from a wide variety of existing data sources. This analysis uses a unique index obtained by means of a factor analysis of these six WGI indexes.

This analysis has several objectives. First, we provide a general framework of previous studies. Second, this research investigates theoretical explanations for male and female decisions to start a new business. Third this study tries to elucidate relationship about the quality of governmental institutions among gender and perceived skills in entrepreneurship. Using specific variables to identify how individuals perceive the quality of country levels governmental institutions, it is possible to define men and women's reactions in self-employment entry decision with respect to their self-confidence.

This investigation uses critical theoretical and empirical approach. At first, we consider two different general results from previous theories to elucidate perceived GIQ role in male and female entry decisions. Then we investigate if there is an individual characteristic that may increase propensity in startup involvement and what happens if GIQ interacts with this specific individual variable. Then, we focus on self-confidence in entrepreneurial skills. Finally, we investigate if GIQ may improve female self-confidence in entrepreneurial skills and what happens if we consider different level of Governmental Institution's Quality.

Considering the empirical framework of our exploration, results show that on average governmental institutions' quality (GIQ) increases the differences between men and women in startup activities. Despite the expectations, women appear less likely to start a new business in countries where the quality of governmental institutions is high. However, high levels of female self-confidence increase women's probability to become a new entrepreneur in contexts where the quality of governmental institutions is high.

Results point out that self-confidence may be the key to boost female self-employment providing non-monetary incentives to aspiring women entrepreneurs in contest where the quality of governmental institutions is high. In order to promote economic development, through female startup activities, policy makers could provide national incentive on education and training to develop women's self-confidence in their entrepreneurial skills.

This analysis contributes to clarify if governmental institutions boost or discourage female entrepreneurship. Moreover it helps to extend a literature on female entrepreneurship that has omitted the importance of individual self-efficacy among gender and governmental institution. Results point out that self-confidence may be the key to boost female self-employment providing non-monetary incentives to women aspiring entrepreneurs. In order to promote economic development, through female startup activities, policy makers could provide

national incentive on education and training to develop women's self-confidence in their entrepreneurial skills. Next pages provide a theoretical summary, our purposes, data and methodology used, results, conclusions, and further investigations.

2. Theoretical Framework

Despite increasing number of new female entrepreneurs, not enough is known about the relationship between governmental institutions and gender gap in self-employment entry decisions. Similarly, the link between perceived skills and intuitions' quality and women's propensity in startup activities is an understudied phenomenon. Considering the present theoretical framework we try to cover this theoretic gap.

In this chapter we present: (2.1.) a brief literature review on previous studies that investigate the Male and Female entrepreneurship; (2.2.) a brief literature review on previous studies that investigate the link between institutions and entrepreneurship; (2.2.1.) a brief literature review on previous studies that investigate if there is a link between institutions and gender gap in entrepreneurial entry decisions (2.3.) a brief literature review on previous studies that investigate the link between self-confidence and entrepreneurship; (2.3.1.) a brief literature review on previous studies that investigate if there are differences between self-confidence, male and female entrepreneurship; (2.4.) a theoretical summery that proposes our theory about what sort of relationships we might expect to find between male and female entrepreneurship, self-confidence, and governmental institutions' quality across countries.

2. 1. Male and Female entrepreneurship

This section summarizes theories on male and female self-employment. Past researches on entrepreneurship are strongly related to the role of men, for example Hebert and Link (1982) celebrate the key man, however in XX century interest in women entrepreneurs increased. Recent evidence systematically shows that the rate of female entrepreneurs is lower than male entrepreneurs (e.g. M. Minniti and P. Arenius, 2007), suggesting that the nature and causes for gender differences in entrepreneurial behavior requires further investigation.

Previous studies show that the factors affecting entrepreneurship may increase or decrease the gender gap in entrepreneurial entry decisions, these factors can be roughly classified as characteristics of the entrepreneur, the firm, and the environment (Gimeno, Folta, Whoo

1997). It is important to underline that the factors reducing the difference between men and women willing to start a new business are in prevalence personal characteristics.

Mukhtar (1998) points out that motivation and psychological traits may boost female entrepreneurship. Some authors explain insufficient participation of women in entrepreneurship by means of different value systems and different psychological aspects. For example personal satisfaction and other nonfinancial goals are more important than economical returns (Kyro, 2001; Buttner and Moore, 1997; Chaganti, 1986; Scott, 1986).

Other studies show that high participation in the labor force, high level of education, literacy, the desire of women to be economically independent, increase women in entrepreneurship (Alsos, Isaksen, Ljunggren,2006; Hisrich and O'Brien , 1982a; M. Minniti, 2003; ML. Kourilsky, WB. Walstad, 1998; J. Ruškus,2004). Minniti (2003) and Rebernik (2006) suggest that increased personal influence and prestige in society, in contrast with modest job, require, for the time being, great personal commitment which looks more tolerable to men than women. The general level of education in a country may be a development indicator, where a higher level of education is accompanied by a higher level of integration of women in the economic structure of the country and accordingly, a higher level of female self-employment.

Brush (1990, 1992) observed that men and women entrepreneurs differ very little with respect to demographic and psychological variables, while more pronounced differences seem to exist in business goals and management styles. Similarly, Langowitz and Minniti (2005) found that the factors influencing female and male entrepreneurship tend to be the same. In spite of these similarities, women's participation rates in entrepreneurship across countries are systematically below those of men. Some studies show that gender has not effect on entry decisions[8] unless it is considered with other individual variables such as perceptual variables (Minniti and Arenius, 2005). Minnitti (2003) suggests that differences in entrepreneurial behavior across genders result in part from differences in personal preferences and in the human capital accumulated by men and women. She found that compared to men, women entrepreneurs use smaller amounts of start-up capital, smaller proportion of equities, and more bank loans. Also, women owned businesses tend to be smaller and to grow more slowly than those owned by men, suggesting gender-based differences in the value attached to business expansion.

[8] Minniti and Arrhenius tried to isolate the gender effect considering the same characteristic (even in the color of eyes, color of hair, and so on)

According to Reimers and Honig (1995) discrepancy between men and women appears to be linked to social security system on labor force participation differences. It looks that in making labor supply decisions women consider social security and wealth rather than current earnings, while men are more likely to respond to current earnings rather than to other benefits. Some authors explain lower participation of women in entrepreneurship by their limited possibilities of financing. Isaksen, Ljunggren, 2006; Rosti, Chelli, 2005 argue that acquiring capital is more difficult for women than for men and that women have more difficulty in convincing investors.

In emerging countries gender stereotypes formed through the time (women's main role is to be wife and mother) are seen like the most important obstacles inhibiting women to start their own business (GražinaStartien, Rita Remeikien, 2008). According to Verheul and others (2005), women usually have less previous experience with starting up business; they may have less knowledge of government legislation and methods to comply with it, posing particular problems or even discouraging them to start business. Female entrepreneurs are predisposed to personal satisfaction, strong interpersonal relations, while men entrepreneurs to status, wealth and success.

Some studies agree on the concept that there are some factors that may have different effects on aspiring men and women entrepreneurs. Share of service sector, because the growth of service industries, has been a major factor in increasing female labor force participation (Oppenheimer, 1970; Ward and Pampel, 1985) and educational level (Kovalainen et al., 2002).

Finally, the distribution of female employment across sectors and the participation of women in managerial positions are also correlated to the level of female entrepreneurship, although their effects differ. In high income countries the percentage of women in public and private managerial positions is positively correlated to entrepreneurship opportunity, whereas in low income countries the correlation is negative. Using several data sources on entrepreneurship, Carree et al. (2002) and Van Stel et al. (2003) provide empirical evidence for this U-shaped relationship. Both female and male entrepreneurial activities are expected to show a U-shaped relationship with per capita income (Verheul, Stel and Thurik, 2004).

2.2. Governmental Institutions and Entrepreneurship

There is no simple way to consider a country's economic, social and political environment. However, as Anderson and Jack (2002) argued, new firm creation is an economic process embedded in a specific environment and we cannot ignore it. This analysis tries to understand how the actions of government and self-confidence variables affect female and male nascent entrepreneurs. Before investigating these phenomena we provide a summary of different findings about self-employment and Governmental Institutions

Baumol (1990) argued that institutional contexts may influence self-employment activities generating productive, non-productive, and even destructive forms of entrepreneurship. Institutions and the associated incentives and penalties for particular types of economic behavior determine the balance between these three forms, with higher quality institutions motivating entrepreneurs to choose productive over value-reducing activities. Schumpeter (1934) and Kirzner (1973) argued that in contexts where institutions are functioning effectively, entrepreneurial risks primarily relate to the nature of the ventures themselves, but in a developing economy, weaker institutions may increase net returns to nonproductive or even criminal activities.

Johnson et al. (2002), Kunt et al. (2006), Klapper et al. (2006), and Aidis C. (2010) show some relationship between entrepreneurship and institutions. They underline the critical role of property rights and the rule of law in underpinning productive entrepreneurial activities: weak Rule of Law increases the transaction costs of entrepreneurship as well as the riskiness of entrepreneurial activity (Estrin and Michievicz, 2011). De Soto (2001) argues that the lack of a well-defined and efficient system of registering, protecting and trading property rights may be the key obstacle, preventing entrepreneurs from utilizing and combining potentially productive assets and turning them into capital. North and Thomas (1973), Williamson (1985, 2000), Barzel (1997), Rodrik (2000), Acemoglu and Johnson (2005) and others have argued that the Rule of Law and its economic component, the property rights system, are constitutional level institutions that form the backbone of the market economy. A strong Rule of Law facilitates entrepreneurial entry because entrepreneurs are more confident about the possibility to protect their work, the enforcement of the contracts and reduction of transaction costs.

In recent institutional research, the focus has shifted from the assignment of rights per se to the institutional conditions that make effective the execution of these rights, especially exchange and the enforcement of legal contracts (Sonin 2003; De Soto 2001). As Coase (1960)

pointed out, the essence of transactions is the exchange of property rights rather than goods. Without clear title, transactions become subject to expropriation by more powerful agents (Besley, 1995; Laeven and Woodruff, 2007). In the language of entrepreneurship, without a mechanism to enforce clear property rights, a productive entrepreneur's desired future state becomes risky (Baumol, 1990). Lack of enforceable property rights also reduces incentives to explore possible opportunities, creating a vicious cycle of missed opportunities instead of a positive feedback loop of learning (Foss and Foss, 2008).

Aidis and Adachi (2007) pointed out that strategic investment in property, such as machinery or brands, is at risk where rule of law is weak. It means that a potential strategic entrepreneur would have more to lose than a potential survival entrepreneur in such circumstances, and investment in strategic entrepreneurship would be less likely where rule of law is weak.

Another element of the institutional context, important for entrepreneurial activity, is a cluster of regulations and policies determined by the government such as entry regulations, labor regulations, welfare, and taxes (Parker 2009; Aidis et al. 2010). Taxes and welfare provisions may affect entrepreneurial entry by their direct impact on expected returns from entrepreneurial activities and their opportunity costs. According to Levie and Autio (2011)[9] entry, labor, and exit regulations have a negative effect on entrepreneurship because these regulations are seen as obstacles to entrepreneurial activities that increase financial and non-financial costs for firms.

The sociological stream of entrepreneurship research has sought to explain the entrepreneurial occupational choice as the individual's response to institutional pressures to conform (Aldrich, 1979; Aldrich and Fiol, 1994; DiMaggio and Powell, 1983; Hwang and Powell, 2005; Sørensen, 2007; Thornton, 1999). Dreher and Grassebner (2007) found high corruption to be associated with reduced entrepreneurial entry. Fisman and Svensson (2007) presented evidence that corruption lowers growth rates of firms. Djankov et al. (2002) found a correlation of 0.68 between number of procedures for starting a business and corruption, supporting the tollbooth theory of the public choice school, which argues that more procedures and longer delays facilitate bribe extraction.

[9] The authors consider regulatory burden index that is comprehensive of regulation of entry index, labor index, regulation of exit index.

One could also argue that higher fees facilitate bribe extraction provided that the bureaucrat can lower the cost of fee to the entrepreneur. Djankov, S., La Porta, R., Lopez-de-Silanes, F., Shleifer, A. (2002) found that heavier regulation of entry is generally associated with greater corruption and a larger unofficial economy, but not with better quality of private or public goods countries. Entry is regulated more heavily by less democratic governments, and such regulation does not yield visible social benefits. The principal beneficiaries appear to be the politicians and bureaucrats themselves. Those environments are not favorable for entrepreneurial activities.

Desai et al. (2003) suggest that the institutional environment plays an important role in shaping the nature of industrial activity and, particularly, the dynamics of new enterprises. Specifically, greater fairness and protection of property rights is shown to increase rates of entry, decrease rates of exit, and lower average firm size. These effects, however, are not equally pronounced in all parts of Europe. According with the authors, higher levels of corruption and better functioning legal environments promote greater development of financial markets. In addition, the legal and institutional factors and the overall level of capital market development, in turn, have been shown to influence aggregate economic outcomes as in King and Levine (1993), Rajan and Zingales (1998), and Demirguc-Kunt and Maksimovic (1998).

Demirguc-Kunt et al. (2006) found that businesses are more likely to choose the corporate form in countries with developed financial sectors and efficient legal systems, strong shareholder and creditor rights, low regulatory burdens and corporate taxes and efficient bankruptcy processes. Corporations report fewer financing, legal and regulatory obstacles than unincorporated firms and this advantage is greater in countries with more developed institutions and favorable business environments. Authors found some evidence of higher growth of incorporated businesses in countries with good financial and legal institutions.

Aidis, Estrin, Mickiewicz, (2009) found that the key institutional features that enhance entrepreneurial activity are indeed the rule of law and limits to the state sector. They found a negative impact of the state sector (comprising in our second factor the level of taxation and the extent of welfare provision) on entrepreneurial activity. It would seem that policies to increase the fiscal role of the state in the economy are therefore in direct conflict with aspirations to create a more entrepreneurial society. Rule of Law has a positive impact on nascent entrepreneurs but the significance is very low.

Rafael La Porta, Florencio Lopez-de-Silanes, Andrei Shleifer, Robert Vishny (1999) found that poor countries, close to the Equator, ethno linguistically heterogeneous, use French or socialist laws, or have high proportions of Catholics or Muslims exhibit inferior government performance. They also showed that the larger governments tend to be the best performing ones. The importance of (reasonably) exogenous historical factors in explaining the variation in government performance across countries sheds light on the economic, political, and cultural theories of institutions.

Leora Klapper, Raphael Amit, Mauro F. Guillén and Juan Manuel Quesad (2010) underline the presence of significant relationships between entrepreneurial activity and indicators of economic and financial development and growth, the quality of the legal and regulatory environment and governance.

Aidis, Estrin, Tomasz Mickiewicz (2008) found that in Russia the negative environment, high level of corruption for business and especially entrepreneurial activity, has led to low levels of entrepreneurship. The relatively few who undertake some form of entrepreneurial activity in Russia are different in several interesting ways from their counterparts in more business friendly environments. Authors underline that networks are so important in Russia that those who are already in the business sector, more than in other countries, dominate entrepreneurial entry.

Levie and Autio (2011) claim: "entry into entrepreneurship is a strategic act for individuals who seek an optimal way to exploit their human, social, and financial capital. Tradeoffs associated with this choice are influenced by institutional conditions". They find lighter burden of regulation[4] associated with a higher rate and relative prevalence of strategic entrepreneurial entry. Rule of Law moderates regulatory burden effects on strategic entry only when it is strong.

According to Freedman (2011) collective sense may suggest that good governance raises entrepreneurship. The logic is that the economic and social benefits boost individual propensity in startup activity. However, Troilo (2011) found that "the number of procedures to enforce contracts, the number of procedures to start a business, and the number of days to start a business is negatively correlated with entrepreneurship, and that a common law legal system is negatively related to entrepreneurship" (Troilo, 2011, p. 158). Unlike Acs et al. (2008), Troilo (2011) found that well established laws that exist in developed countries may be a barrier to increased entrepreneurship.

This analysis considers the effect of governmental institutions quality on male and female aspiring entrepreneurs. We use an aggregate index that contemplates six dimensions of perceived countries' governance goodness that generally affect entrepreneurial entry decision. This Institutional Quality index is an output of a factor analysis that contains information's on the level of quality perceived of some variable mentioned above (Voice and Accountability, Political Stability and Absence of Violence/Terrorism, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption). However, this index does not include information about regulations of entry or exit and employment. As post estimation check we included this information in our analysis and the results lead to the same conclusions.

This study is not the first study that uses Worldwide Governance Indexes (WGI) to explore entrepreneurial propensity across countries but it is the first one that explore male and female entrepreneurial propensity considering one index built with those specific variables. Friedman (2011) found that perceived government effectiveness (WGI) was significantly negatively related to entrepreneurship. He explains these results with specific country policies and leadership direction that either promotes or prevents entrepreneurship. Another explanation is that countries whit good institutions have higher entry barriers for new businesses and more taxes.

2.2.1. Governmental Institutions, Male and Female Aspiring Entrepreneurs

This section provides a brief literature review about previous studies that focus on distinction between men and women entrepreneurs. Despite the growing number of female entrepreneurs, the implications of this phenomenon for the entrepreneurial process and performances remain largely unexplored; how the quality of governmental institutions affect male and female decisions in startup activities has escaped systematic study.

Estrin and Mickiewicz's (2011) propose that rule of law affect male and female entry decisions in new business. The authors consider the quality of government looking at the effect of Rule of Law[10] on male and female decisions to become entrepreneurs. They argue that women are less likely than men to undertake a business where the rule of law is weaker. The authors do

[10] It is a variable that consider the effectiveness of law and rules

not find any relationship between gender and rule of law[11]. However, the size of the state[12] seems likely to have a relatively negative impact on female entrepreneurs than on their male counterparts, because women's occupational decisions are often made within the social context of a household and women's activity rates are typically lower than men's, due to the additional burdens and responsibilities associated with domestic and caring labor. Probably women's decisions to enter into entrepreneurship will be more sensitive to contextual factors because the opportunity cost is higher for them than for men. A small state of sector implies that the provision of social security will be modest, at best, which may create incentives for women to become more economically active reducing gender gap.

Amanda Elam and Siri Terjesen (2010) investigate how different types of gender-linked social/cultural institutions may mitigate the influence of gender essentialist beliefs on the decision to start a business for men and women. They found that public expenditure on childcare as a percentage of GDP affects in different way women and men in entry decisions choices. Legal system is important to define economic opportunities and to understand how formal institutions affect entrepreneurship.

Verheul, Stel and Thurik (2004) argue that women usually have less previous experience with starting up a business. They may have less knowledge of government legislation and how to comply with it, posing particular problems or even discouraging them to start a business. Hence, business licensing may pose more problems for female than for male entrepreneurs, differentially affecting entrepreneurship of women and men.

According to Lundström (2001) policy measures can stimulate under-represented groups, such as women, highly educated, certain age categories, youth, immigrants and unemployed people. Despite these target group measures, such as promotion activities, entrepreneurship awards, counseling, training and advisory support, special micro-loan (or venture capital), under-represented groups may still have problems starting and running a business if the entrepreneurial culture in a country is weak (Stevenson and Lundström, 2001). Specific measures targeting female entrepreneurs will stimulate female entrepreneurship. On the whole, male entrepreneurs are not a target group, but benefit from more generic measures (Verheul, Stel and Thurik, 2006).

[11] Estrin and Mickiewicz Proxy of rule of law is constrain on executive from Polity IV 'Executive Constraints'; it scores from 1 = ''unlimited authority'' to 7 = ''executive parity''; higher denotes less arbitrariness. It includes also information on property rights.

[12] Heritage Foundation's variable of 'Government Size', which is based on the quadratic transformation of the ratio of government expense to GDP, with lower scores reflecting a larger government

Governmental action to facilitate women employment such as policies on child care facilities and parental leave may discourage female entrepreneurship; Gustafsson and Jacobsson (1985) argue that in countries with less generous parental leave schemes, more working mothers give up their jobs.

As we mentioned above institutional context and individual characteristics may affect the entrepreneurial behavior. Controlling for personal characteristics, this study focus on the importance of the self-esteem in male and female self-employment entry decisions. In particular, we investigate the relationship between governmental institutions, perceived skills and entry decisions in entrepreneurship.

2.3 Self-confidence and Entrepreneurship

Different entrepreneurial studies have investigated the relationship between entrepreneurial self-efficacy and entrepreneurial career preferences. There is evidence that individuals with higher entrepreneurial self-efficacy have higher entrepreneurial intentions (Krueger, Reilly, and Carsrud, 2000; Wang, Wong, and Lu, 2002).

Ryan (1970) theorizes that self-perception, or the way in which a person perceives his or her abilities and tendencies, plays a role in the development of intentions. Similarly, self-efficacy affects a person's beliefs regarding whether or not certain goals may be attained. Bandura (1977b) describes self-confidence as a person's belief in his or her capability to perform a given task.

According Boyd and Vozikis (1994) and Herron & Sapienza (1992) choices, aspirations, effort, and perseverance are all influenced by the self-perception of one's own capabilities; the acquisition of skills through past achievements reinforces self-efficacy and contributes to higher aspirations and future performance. Self-efficacy is acquired gradually through the development of complex cognitive, social, linguistic, and/or physical skills that are obtained through experience.

Boyd and Vozikis (1994) underline that self-efficacy affects the development of both entrepreneurial career intentions and subsequent actions. They propose that higher degrees of entrepreneurial self-efficacy develops higher entrepreneurial intentions, and individuals with both higher self-efficacy and higher intentions will have a higher probability of being involved in entrepreneurial activity later in life.

Self-confidence in entrepreneurial abilities (or self-efficacy) has been linked to the willingness of being an entrepreneur. Koellinger et al. (2006) suggest that entrepreneurs tend to exhibit higher self-confidence levels than the general population. Minniti et al., (2004) found that entrepreneurs differ from non-entrepreneurs in self-confidence levels, and that these beliefs in their abilities are closely linked to entrepreneurial intentions.

In addition to these general findings on self-efficacy's role in entrepreneurship, there is evidence that women have more probability than men to limit their career aspirations when they perceived a lack of necessary capabilities (Bandura, 1992).

2.3.1. Self-Confidence and Female versus Male Entrepreneurship

At this point of the dissertation it is shown that gender-gap in entrepreneurship exists. In order to boost entrepreneurial propensity in women this paper examines what happens between male and female individuals if we consider institutional quality and perceived entrepreneurial skills. Discrepancy in self-employment among gender could be explained by the propensity to start a new business. Women have a lower start-up propensity than men (Koellinger et al. 2008). Wilson et al. (2007) suggest that the reason of this disparity between women and men in their start-up propensity may be linked to a lack of self-confidence. The focus of this paper is on self-confidence in male and female entrepreneurial domain in presence of different levels of GIQ.
Eccles (1994) suggests that women are less likely to have higher expectations than men for success in a wide range of occupations. Lent and Hackett (1987) and Nevill and Schleckler (1988) provide evidence that gender is a significant variable in understanding differences in career self-efficacy. Not surprisingly, significantly lower levels of self-efficacy among women have been found in careers historically perceived as "nontraditional" for women (Bandura et al., 2001;Betz and Hackett, 1981; Scherer, Brodzinski, and Wiebe, 1990).

Scherer et al. (1990) argue that men tend to be more confident than women across a number of fields and in various research settings. With respect to entrepreneurship men seem to have an historical career preference for entrepreneurship. Some studies suggest that entrepreneurship is often viewed as male-gendered occupation and women do not identify themselves with the role of self-employer (Fielden et al., 2003, Ahl, 2006).

Fielden et al. (2003) found that a lack of self-confidence is one of the largest barriers to women entering business ownership. Previous research raises some important issues such as how

self-confidence may affect women entrepreneurs' confidence to grow their businesses (Fielden et al., 2003; Wilson et al., 2007). Related research shows that women are on the whole less growth oriented than men (Coleman, 2007).

The most recent Global Entrepreneurship Monitor study 2012 reported that these patterns occur globally among adult women. Women have lower levels of confidence in their ability to succeed as entrepreneurs.

2.4. Theoretical Summary and Hypothesis

The discussion above highlights three big issues: i) there is a discrepancy among results in literature about the effects that governmental institutions on male and female propensity to start a new business; ii) there is a lack of studies that consider the effect of a general index of governmental institutions' quality; iii) Previous literature does not consider how perceptions of governmental institutions' quality combined with different level of self-confidence affect men and women in entrepreneurial entry decisions.

The aim of this research is to understand propensity of women and men in self-employment entry decisions in presence of different level of GIQ and differences in male and female individual self-confidence[13]. Increasing evidence indicates that firms benefit from a location in a geographic cluster of similar firms (McCann and Folta, 2011). How environment is perceived encourages or discourages the willingness to work in a specific context and this means that it is very important to consider individuals' judgments about the setting in which nascent entrepreneurs decide to start a new business. Similarly, self-confidence in entrepreneurial skills is a specific characteristic that lead individuals to startup activities.

We argue that, in order to recognize governmental institutions effects, it could be appropriated to use and aggregate factor that contain information of the goodness' perception of the governance (GIQ). Moreover, we investigate how different levels of GQI in presence or absence of Self-confidence affect women and men in entrepreneurial entry decisions. We discuss that quality's perception of government system affect differently women and men in new business creations decision

[13] In this analysis self- confidence is related to the individuals' perceived knowledge, skill and experience required to start a new business. Generally we will refer to self-confidence using other annotations, which are very common in literature, such as: self-efficacy, self-esteem, self- perception of own abilities.

In the next three sub-sections (2.4.1), (2.4.2), and (2.4.3) we draw our hypothesis on female and male entrepreneurship entry decisions from gender gap in entrepreneurship theories, institutions and entrepreneurship theories, Self-confidence and entrepreneurship theories.

2.4.1. Female and Male Entrepreneurship and Governmental Institutional Quality

Considering governmental institutions and entry decisions in entrepreneurship, empirical results of previous study do not lead to a unique pattern. The mainstream of institutional literature supports the theory that good governmental institutions promote entrepreneurial activities. Studies show that good institutional context may increase startup activities across countries (Estrin and Mickiewicz, 2008) so it seems reasonable to think that GIQ could be positively related to citizens' willingness to start and manage new businesses. However other studies show that perceived government effectiveness is negatively related to entrepreneurship: straight regulations, rule of law and control of corruption may inhibit entrepreneurial activities (see Friedman 2011). Moreover, under certain conditions, rigid regulations, rule of law and control of corruption could be seen as strong entry barriers that may inhibit self-employment (Beck and Mahler, 1986; Lien, 1986; Dreher and Gassebner, 2007). So, it seems reasonable to suppose a negative relation between GIQ and willingness to start and manage new businesses.

What happens when we consider male and female individual characteristics? From a gender perspective the conclusions drawn from the literature review do not follow a specific pattern too. Institutional variables such as rule of law seem do not affect male and female entrepreneurs in different ways. Moreover Specific gendered institutional actions such as better maternity leave and good child care[14] lower the probability that a woman decides to become entrepreneur. However, good levels of female right preservation and democracy incentives women startup activities (Esrin and Mieckewicz, 2011). Amanda Elam and Siri Terjesen (2010) found that public expenditure on childcare as a percentage of GDP affects in different way women and men in entry decisions choices. State-based childcare and maternity leave may discourage women from starting businesses because, although it successfully mediates the challenges to full-time employment faced by women in conservative and liberal economies, it also removes the needs for women to seek flexible work alternatives. Verheul, Stel and Thurik

[14] We control for this variable

(2004) argue that women may have less knowledge of government legislation and this could discourage them to start a business.
Moreover, data from annual GEM Report (2012) confirm that the level of male entrepreneurs, even in countries where institutions are considered as good, is higher than women.

At this point, the theory leads us to two contrasting hypotheses:

- Higher Governmental Institutions' Quality leads to higher women probability to become aspiring entrepreneurs
- Higher Governmental Institutions' Quality leads to lower women probability to become aspiring entrepreneurs.

The first goal of this research is to find explanations to this dilemma. In doing this we focus on the definition given by Kaufmann, Kraay, and Mastruzzi (2010): they define governance as "the traditions and institutions by which authority in a country is exercised. This includes (a) the process by which governments are selected, monitored and replaced; (b) the capacity of the government to effectively formulate and implement sound policies; and (c) the respect of citizens and the state for the institutions that govern economic and social interactions among them." From this definition they drove six dimensions governance goodness' perception that is defined in table 1. We use these six indicators in order to obtain a GIQ index and offer a new alternative point of view that seems careless from previous studies but that could be relevant to investigate individuals' entrepreneurial entry decisions among gender, across countries.

2.4.2 Female and Male Entrepreneurship and self-confidence

Chowdhury and Endres (2005) and Gatewood, Shaver, Powers, and Gartner, (2002) suggests that women have both lower entrepreneurial self-efficacy and lower entrepreneurial intentions. Additionally, women may be more strongly influenced then men by any perceived skill lacks in the entrepreneurial domain. Minniti (2010) argues that women entrepreneurs tend to be more confident in their own skills then women who indicate no entrepreneurial activity. This pattern is identical to what men exhibit. Nonetheless, women's level of optimism and self-confidence with

respect to starting a business is lower than that of their male counterparts. These perceptions are subjective and are likely influenced by contextual factors, such as culture and social norms.

Rozier and Thompson, (1998) argued that women's self-confidence may on the whole be lower than men's. However, even in women's self-efficacy is lower than men this does not to imply that all women have low self-confidence in their entrepreneurial abilities; for this reason it seems reasonable to expect that self-confidence in entrepreneurial skills increases women propensity to become entrepreneurs. Moreover, if we consider gender as a moderator of skills we may expect that women with entrepreneurial self-confidence have more probability to become entrepreneurs then men with entrepreneurial self-confidence.

Table 1: Variables Description						
Variables	**Description**	**Obs**	**Mean**	**Std. Dev.**	**Min**	**Max**
Dependent variable						
Startup (Nascent entrepreneurs)	Those individuals who have taken some action toward creating a new business in the past year, and expect to own a share of the business they are starting, which must not have paid any wages or salaries for more than 3 months	811532	0.05056	0.2191	0	1
Individual independent variables						
Age	The exact age of the respondent	811532	42.49347	15.2282	14	99
female	1 = female, 0 otherwise	811532	0.514927	0.49978	0	1
Required skills to open a business	1 = respondent believes to have entrepreneurial skills to open a new business, zero otherwise	787448	0.488973	0.49988	0	1
in employment	Main Employment status or current working situation 1 respondent is either in full or part time employment, 0 if not	811532	0.623744	0.48445	0	1
(At least) post-secondary education	1 = respondent has a post-secondary or higher education attainment, 0 otherwise	811532	0.360982	0.48029	0	1
Higher education	1 = respondent has a higher education attainment	811532	0.138032	0.34493	0	1
Business angel in last 3 years	1 = business angel in past 3 years, 0 otherwise	811532	0.038626	0.1927	0	1
Current owner of business	1 = current owner/manager of business, 0 otherwise	811532	0.124041	0.32963	0	1
Knows other entrepreneurs	1 = personally knows entrepreneurs, in last 2 years, zero if not	811532	0.38136	0.48572	0	1
Fear of failure would not prevent start-up	1 = respondent believes that the fear of failure would prevent him/her from starting a business	811532	0.360411	0.48012	0	1
Country-level control variables						
GDP growth rate	Annual GDP growth rate (WB WDI 04 2009)	800950	3.37078	2.51016	-10.8945	18.2866
Tertile of GDP per capita (ppp)	GDP per capita at purchasing power parity, constant at 2005 $US (WB WDI 04 2009)	807407	26585.85	15007.1	287.326	67804.6
Childcare	Availability, affordability and quality of childcare services, as well as the role of the extended family (Economic Intelligence Unit), time invariant,	731010	3.535062	0.90843	2	5
Maternity Leave	Composite policy indicator that assesses length of maternity leave and benefits coverage (Economic Intelligence Unit), time invariant	731010	2.150328	0.84292	0	3.1
No Violence against women	Violence against women, relevant legislation (OECD Development Centre),	731010	0.260353	0.16438	0	0.75
Men Entrepreneurs Rate	Percentage of nascent and established men entrepreneurs from GEM	811532	0.627914	0.09037	0.21429	0.9375
Percentage of Sits Held by Men in Parliament		790124	76.13937	11.3539	52.7	100
Independent Governmental Institutional variable						
Governamenta Institutions' Quality	Composit index that cointeins informations about Voice and Accountability, Political Stability and Absence of Violence/Terrorism, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption	810449	0.694062	0.77813	-2.31206	1.79366

2.4.3 Female and Male Entrepreneurship, Governmental Institutions' Quality and Self-Confidence

Less is known about self-confidence in entrepreneurial entry decisions and male and female propensity in startup activities among contexts with different level of Governmental Institution's Quality (GIQ). We investigate how governmental institutions and skills moderate together female entrepreneurship. As we mentioned above we expect that perceived skills in entrepreneurship lead women in startup activities, moreover Köllinger, Minniti, and Schade (2007) found that some countries exhibit relatively high rates of start-up activity because their inhabitants are more (over-) confident than in other countries.

We argued we expect that GIQ could higher or lower female startup propensity. Considering both scenarios it seems reasonable to think that countries with high level of institutional quality may boost female self-confidence and so the probability of female to become an entrepreneur increase.

Scenario 1: GIQ highers women propensity of being involved in startup activities. If this case is true, self-confidence increases women probability of being involved in startup activities. It seems reasonable to think that good level of institutions' quality may reinforce this effect.

Scenario 2: GIQ lowers women propensity of being involved in startup activities.

Good institutions may offer more female protection, more stability, and more fairness, consequently women may have as many opportunities as men to be involved in employment rather than self-employment. However considering research on gendered self-confidence we supposed that this is true for women that do not have self-confidence in their own entrepreneurial abilities. In other word, we expect that when GIQ increases, the probability to become entrepreneurs is higher for women who believe to have entrepreneurial skills then women who do not believe to have entrepreneurial skills.

3. Method

3.1. Data

A strong point of this analysis is that our sample is very wide and representative of the population. The empirical approach is based on merging cross-country micro-economic data from the Global Entrepreneurship Monitor (GEM) with the Worldwide Governance Indicators from World Bank that provide country-specific institutional information.

This analysis uses nine years of country-level panel data developed by the Global Entrepreneurship Research Association (GERA). The study covers 73 developed and developing economies between 2001 and 2009 and includes all startups, disregarding their legal status; the individual level data are generated through surveys, which create stratified samples of at least 2,000 individuals per country, each year. The sample is selected from the whole working age population in each participating country and accordingly captures both entrepreneurs and non-entrepreneurs.

The age range of respondents varies substantially across national surveys, from as young as 14 to over 90 years in age. A set of weights has been developed from the adjustments based on standardized national population structure estimates for those who, being 18 to 64 years of age, qualify to be active in the labor force. Participants are largely dictated by the percentage coverage of the landline telephone network, where landline coverage is greater than 85% of all households and then the National Teams are permitted to use a landline-based survey outreach to generate a suitable list of participants to contact. For those countries where landline telephone coverage is not as wide-spread, this approach is less appropriate, so face-to-face interview techniques and/or mobile phones are also used. Upon receipt of the individual country level data by the Data Team, the data is cleaned, coded, and weighted to create a harmonized data set which ensures representativeness and consistency across all countries in the study (GEM Manual 2012).

The GEM dataset forms a unique and distinctive set of worldwide comparative data on national-level entrepreneurial activity. The strong point of the GEM dataset is that it measures genuine entrepreneurial intentions of representative populations of adult-age individuals, in a reliable and internationally comparable manner, both before and after the actual launch of the new start-up.

In order to explore the impact of the government effectiveness on gender gap entrepreneurial entry decisions, we use the Worldwide Governance Indicators from World Bank that provide information about the value of the governmental institutions and how they are perceived from the individuals. The WGI cover over 200 countries and territories, measuring six dimensions of governance, the aggregate indicators are based on several hundred individual underlying variables, taken from a wide variety of existing data sources. The data reflect the perceptions on governance of survey respondents and public, private, and nongovernmental organizations

experts worldwide. The WGI draw together data on perceptions of governance from a wide variety of sources and organize them into six clusters corresponding to the six broad dimensions of governance (Kaufmann, Kraay, and Mastruzzi, 2010).

To consider specific country-gender variables we employed others data sources, that are: OECD development center and Economic Intelligence Unit, both of them used to identify specific institutional variable that may affect women's life and individual entry decisions across countries.

3.2. Identifying Nascent Entrepreneurs

GEM data allow us to identify three categories of entrepreneurs: nascent entrepreneurs, new entrepreneurs, established entrepreneurs. Nascent entrepreneurs are individuals who are in the process of trying to start a firm. New entrepreneurs are owner-managers of entrepreneurial start-ups, which have been in existence for more than 3 months but not more than 42 months. Established entrepreneurs are owner-managers of entrepreneurial firms which have been in existence for longer than 42 months.

Following previous studies approaches (Estrin and Mickiewicz, 2011; Levie and Autio, 2011; Verheul, Stel, and Thurik, 2004), this analysis considers entry process in new business, for this reason the dependent variables identify if individuals are involved in nascent start-up activity or not. Nascent entrepreneurs are defined as those individuals who have taken some action toward creating a new business in the past year, and expect to own a share of the business they are starting, which must not have paid any wages or salaries for more than 3 months (Reynolds et al. 2005). We examine the effects of being an individual female or male entrepreneur, the perception of quality about governmental institutional and perceived self-confidence.

3.3. Predictor Variables

The explanatory variables used in this study, defined in table 1, are designed to correspond to the factors that help us to investigate relations between the goodness of institutions, self-confidence, and male versus female entrepreneurial entry decision. The three sub section 3.3.1.; 3.3.2 and 3.3.3 explain our predictors. In these sub-sections we provide definitions about the main variables used in this paper.

3.3.1 Female

This variable identifies individual's gender. It is a dichotomous variable that assumes either value equal to one if the respondent is a woman or zero if the respondent is a man. We use this variable to discriminate entrepreneurial propensity among gender. We do not postulate any assumption on gender role in self-employment because there is evidence that being a woman lowers the probability to become an entrepreneur. An extensive literature shows that female individuals have less probability then male ones to become entrepreneurs (Minniti 2003). On average, the 51% of the respondents is women. Across countries, female respondent are more than the male ones. This is true for all countries except United Arab Emirates, Malaysia, India, Jordan, Turkey, Korea, Singapore, Finland, Greece, China, Brazil, Norway, Sweden, Austria, Iceland, South Africa, Hungary, Philippines, Poland, Japan.

3.3.2 Governmental Institutions' Quality

These indicators provide highly specific and disaggregated information about particular dimensions of governance. We focus on six Worldwide Governance Indicators: a) Voice and Accountability and Political Stability and Absence of Violence/Terrorism which identify the process by which governments are selected, monitored and replaced; b) Government Effectiveness and Regulatory Quality which identify the capacity of the government to effectively formulate and implement policies; c) By definition we use Voice and Accountability as index of democracy level Rule of Law and Control of Corruption which identify the respect of citizens and the state for the institutions that govern economic and social interactions among them.

As shown in table 2, WGI indicators are strongly correlated. It means that to avoid multicollinearity it is not possible to use all the six variables together in the same analysis[15]. One solution could be to consider each single variable in six different regressions. However this can lead to omitted variables problems. To avoid misspecification problems and multicollinearity problems we generated one index of Governmental Institutions' Quality. A factor analysis

[15] It means that if we put all the indicators as independent variables (we will have six predictors) in one unique regression the analysis multicollinearity problems arise.

confirm that there is a latent factor behind WGI variables[16] so with the method of maximum likelihood we generated on composite index that represents institutions quality across countries.

Table 2. Correlation Matrix for WGI indexes							
		1	2	3	4	5	6
1	Voice and Accountability	1					
2	Political Stability and Absence of Violence/Terrorism	0.9564	1				
3	Government Effectiveness	0.9172	0.9357	1			
4	Regulatory Quality	0.9577	0.9534	0.9191	1		
5	Rule of Law	0.7287	0.7223	0.6573	0.7316	1	
6	Control of Corruption	0.8016	0.8375	0.8205	0.7998	0.6301	1

This analysis covers a time period between 2001 and 2009. Unfortunately 2001 in WGI data base is missing. In order to avoid the problem of missing values we decided to use the middle value between 2000 and 2002 to cover 2001 WGI's lack of data. Moreover we used lagged value to avoid endogeneity and to ensure temporal causality between our predictors and the independent variable.

Table 4 presents country-level averages for all predictor variables used in this study. On average institutions are perceived as good in country such as Finland, Denmark, Iceland, Switzerland, Sweden, Netherlands, New Zealand, Norway, Austria, Canada, Australia, Germany, Ireland, UK, Singapore, United States, Belgium, Chile, Hungary, Slovenia, Japan, France, Portugal, and Spain.

However if we consider Singapore, and Chile they respectively have a low level of good democracy, low index of voice and accountability, a low level of perceived political stability, Chile has a low index of political stability and absence of violence/terrorism however government effectiveness, regulatory quality, rule of law, and control of corruption are perceived as good for this reason GIQ index is high.

[16] Even if the theoretical construct of these variables seems to be different high levels of correlation (i.e.0.80) show that is reasonable use one factor that summarizes perceptions of governmental institutions' quality.

Table 4: Indipendent variables' Country Means			
Country	**GIQ**	**Female**	**Required Skills**
Argentina	-1.03267	0.5155438	0.6262794
Australia	1.193686	0.5886892	0.5408543
Austria	1.218739	0.4887759	0.5689882
Belgium	0.891875	0.5189628	0.3861566
Brazil	-0.3454	0.4881696	0.5736423
Canada	1.142225	0.5090421	0.5307735
Chile	1.080858	0.5195489	0.6442981
China	-0.79707	0.4863053	0.420751
Colombia	-0.33596	0.5223859	0.6910593
Czech Republic	0.697565	0.648294	0.3973289
Denmark	1.389595	0.5275757	0.4106497
Ecuador	-1.74854	0.5875416	0.7623639
Finland	1.37627	0.4815787	0.411512
France	0.699107	0.5268041	0.2814837
Germany	1.126288	0.5325464	0.402024
Greece	0.470894	0.4816898	0.5867196
Hungary	0.731314	0.4930349	0.4446731
Iceland	1.162689	0.489083	0.5307593
India	-0.7808	0.4111409	0.5473098
Indonesia	-1.11809	0.5830576	0.6059986
Ireland	1.381708	0.5266817	0.4976556
Israel	0.646159	0.5020277	0.4148564
Italy	0.514608	0.5160323	0.3893778
Japan	0.516754	0.4994153	0.1617259
Jordan	-0.23218	0.4273504	0.7238562
Korea	0.259813	0.4716948	0.3358545
Malaysia	0.019861	0.3994039	0.489648
Mexico	-0.12313	0.5025344	0.5530474
Netherlands	1.475292	0.540545	0.4111048
New Zealand	1.313256	0.5561587	0.6463725
Norway	0.869819	0.4885086	0.4311266
Peru	-0.30427	0.5117712	0.7972801
Philippines	-0.65101	0.4962231	0.7703574
Poland	0.275935	0.4965704	0.3682927
Portugal	0.608489	0.5	0.519988
Russia	-0.91595	0.5764153	0.1845204
Singapore	1.561677	0.4805089	0.3134425
South Africa	0.108009	0.4930311	0.3760992
Spain	0.837046	0.5009856	0.4961428
Sweden	1.212217	0.4886638	0.4220816
Switzerland	1.295162	0.5218336	0.5269589
Thailand	-0.1684	0.5976413	0.4248826
Turkey	-0.2022	0.4640706	0.5638463
Uganda	-0.6301	0.5448774	0.8539076
Uk	1.379791	0.5604214	0.4848503
United Arab Emir	0.181948	0.30084	0.6196051
United States	1.230066	0.501329	0.567844
Uruguay	-0.23312	0.5445712	0.6385224
Venezuela	-1.85082	0.5482353	0.7058824

The worst quality perceived is related to country such as Venezuela, Russia, Indonesia, Uganda, China, Colombia, Philippines, Peru, Argentina, India, Jamaica, Mexico, Turkey, Brazil, Thailand, Jordan, Croatia, South Africa, Malaysia, United Arab Emir, and Korea.

We notice that in countries such as Iceland, Norway, United States and New Zealand even if level of the six GIQ index is quite high, the difference between men and women in entrepreneurial entry decision is significantly high. The Norway case is particularly surprising not only because of a very good perception of the government system but also because since the 1980s Norway's changing governments have always been almost 50% women and it is the first country in the world that has established a special gender equality agenda (Cosentino, Donato, Montalto and Via, 2012). This first evidence let us think that good governmental institutions do not reduce gender discrepancy.

3.3.3 Self-confidence

In order to understand what happens if we consider GIQ, perceived entrepreneurial skills, and female entrepreneurship, we use the variable "required skills to start a business" defined as a dummy variable equal to one if the respondent personally believes to have the required skills to start a business; zero otherwise.

To test of self-confidence and GIQ effects on entry in entrepreneurship among gender we consider first of all a two way interaction between female and skills on the probability to become entrepreneurs. Then, we test a three way interaction between female, GQI and required skills. Afterwards, we examine what happens if we consider female individuals, self-confidence across low levels of GIQ, middle levels of GIQ, and high levels of GIQ. Finally, we demonstrate how female role changes in high quality institutional contexts among both respondents with self-confidence and respondent without self-confidence.

On average the 49% of respondents seem to be confident in their entrepreneurial skills. Table 4 shows countries with high level of self-confidence are United States, Austria, Brazil, Greece, Indonesia, United Arab Emirates, Argentina, Uruguay, Chile, New Zealand, Colombia, Venezuela, Jordan, Ecuador, Philippines, Peru, and Uganda. The 41% of female respondent have entrepreneurial self-confidence while men self-confident in their entrepreneurial skills are the 57% of the respondent.

Table 5: T-test For Significant Differences in Means for Men and Women with Entrepreneurial Self Confidence Across Counires			
Country	Required Skills male (1)	Required Skills female(2)	t-test for Significant Differences Between (1) &(2)
Argentina	0.7011864	0.5558078	(p<0.01)***
Australia	0.6585165	0.4590101	(p<0.01)***
Austria	0.6510239	0.4824482	(p<0.01)***
Belgium	0.4959535	0.2847466	(p<0.01)***
Brazil	0.6351823	0.5086995	(p<0.01)***
Canada	0.6068631	0.4569153	(p<0.01)***
Chile	0.7162987	0.5772457	(p<0.01)***
China	0.4925919	0.3449116	(p<0.01)***
Colombia	0.7443973	0.6421228	(p<0.01)***
Czech Republic	0.528481	0.3261803	(p<0.01)***
Denmark	0.5279758	0.3058744	(p<0.01)***
Ecuador	0.8088456	0.7293993	(p<0.01)***
Finland	0.4944656	0.3225088	(p<0.01)***
France	0.3592652	0.2116956	(p<0.01)***
Germany	0.5022463	0.3140618	(p<0.01)***
Greece	0.6653612	0.5009492	(p<0.01)***
Hungary	0.5154494	0.3718278	(p<0.01)***
Iceland	0.6441995	0.4121315	(p<0.01)***
India	0.638005	0.4182986	(p<0.01)***
Indonesia	0.685155	0.5491803	(p<0.01)***
Ireland	0.5947102	0.4106364	(p<0.01)***
Israel	0.511477	0.318091	(p<0.01)***
Italy	0.4621283	0.3209131	(p<0.01)***
Japan	0.2245989	0.1004411	(p<0.01)***
Jordan	0.8289102	0.579519	(p<0.01)***
Korea	0.4415274	0.2175573	(p<0.01)***
Malaysia	0.5017271	0.4715762	(p<0.10)
Mexico	0.5845644	0.5216346	(p<0.01)***
Netherlands	0.5585074	0.2862823	(p<0.01)***
New Zealand	0.7503573	0.5629063	(p<0.01)***
Norway	0.535111	0.3221045	(p<0.01)***
Peru	0.825657	0.7701863	(p<0.01)***
Philippines	0.7625146	0.7783019	(p<0.10)
Poland	0.4525288	0.2841312	(p<0.01)***
Portugal	0.6128451	0.4268513	(p<0.01)***
Russia	0.2470211	0.1390463	(p<0.01)***
Singapore	0.3825156	0.2390469	(p<0.01)***
South Africa	0.4309425	0.3196584	(p<0.01)***
Spain	0.543188	0.4490486	(p<0.01)***
Sweden	0.5279739	0.3113535	(p<0.01)***
Switzerland	0.638465	0.4249949	(p<0.01)***
Thailand	0.5003885	0.3739518	(p<0.01)***
Turkey	0.6739399	0.4349084	(p<0.01)***
Uganda	0.8767657	0.8347613	(p<0.01)***
Uk	0.6024298	0.3922961	(p<0.01)***
United Arab Emir	0.6772193	0.4829721	(p<0.01)***
United States	0.6628267	0.4732595	(p<0.01)***
Uruguay	0.7492809	0.5446791	(p<0.01)***
Venezuela	0.7436582	0.6744444	(p<0.01)***

Table 5 shows that on average across all countries the percentage of men which believe to have entrepreneurial skills in startup activities is higher than percentage of women which believe to have entrepreneurial skills in startup activities. T-test for significant differences in means shows that differences between men and women in perceived entrepreneurial skills are statistically significant across all countries but Philippines.

3.4. Control Variables

The control variables, also defined in Table 1, have been selected according to the previous literature to consider country level aspect, gender-specific measures of welfare, and personal characteristics that might drive people to become entrepreneurs.

3.4.1. Individual Controls

Individual characteristics are important determinants of entrepreneurship. To consider personal individualities in our regressions we include age, education, experience, and employment status. We use a quadratic specification because different studies underline an inverse U–shape relationship between age and decision to entry in a new business (Levesque and Minniti 2006).

A massive literature testifies that there is a relationship between educations and entry decisions in entrepreneurship therefore we control for post-secondary and higher education. Entrepreneurs with previous venture start-up or ownership experience may be endowed with human capital that is valuable in new venture situations because they have experience in the startup process and in running their own business (Gimeno, Folta, and Whoo, 1997). In order to consider previous experiences we include in our regressions the number of incumbent business owners and whether respondents have previously acted as a business angel.

Self-confidence is often related to risk-aversion. By the variable "fear of failure" we consider whether individuals are risk adverse or not. Finally, startup rates may be influenced by whether the potential entrepreneur is employed while deciding to start his/her own business (Folta and Delmar 2010) and therefore why we take account of employment status.

3.4.2. Macro-Level Controls

The GEM research shows that the level of a given country's economic development has a significant effect on the nature of its entrepreneurial activity (e.g. Van Stel et al., 2005).

All researches that study institutions' effects on entrepreneurship consider in their analysis country's economic expansion controlling for the country's GDP per capita (purchasing power parity). Table 3 shows that GDP is strongly correlated whit GIQ (ρ=0.80). Again, in order to avoid multicollinearity problems we controlled for three levels of income countries (low income, middle income and high income) based on tertiles of GDP[17]. Moreover we control for economic growth considering the change in GDP from previous year to current year (Livie, Autio 2011).

In gender analysis across countries it is important to consider macro variables that may incentives female entrepreneurship. According to Estrin and Mickiewicz (2011) we use data regarding particular country elements that are likely to have a more specific impact on women: adequate protection in combating violence against women. These indicators are reported by the OECD Development Centre. Besides, to consider gender-specific measures of welfare we use as Estrin and Mickiewicz variables such as maternity leave and childcare.

Maternity is a composite policy indicator that assesses the length of maternity leave and benefits coverage. Childcare is related to the availability, affordability and quality of childcare services, as well as the role of the extended family in providing childcare. Both indicators are compiled by the Economist Intelligence Unit (EIU and WB 2009). In the formal sector, actual maternity leave may be more extensive than minimum legal provisions. Also, while maternity leave is only available to individuals working in the formal sector, childcare is potentially available to all women, depending on how it is organized (Estrin and Mickiewicz 2011). Informal institutions may mitigate the effect of formal institutions and affect new startup development. This study, therefore, also investigates whether the potential nascent entrepreneur knows any other entrepreneur, we use lagged value to avoid endogeneity and to ensure temporal causality.

[17] Using tertile classification we obtained three level of income of income across countries:
countries with low levels of GDP income: 287.3257 < GDP < 25169.17
countries with middle levels of GDP income: 25571.18 < GDP < 35245.61
countries with high levels of GDP income : 35324.41 < GDP <67804.55

Table 3. Correlation Matrix for Variable Used In This Study																					
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	Age	1																			
2	Female	0.0319	1																		
3	in employment	-0.1516	-0.1676	1																	
4	(At least) post-secondary education	-0.0531	-0.0249	0.1622	1																
5	Higher education	-0.0259	-0.0143	0.1307	0.5379	1															
6	Business angel in last 3 years	-0.0108	-0.0535	0.0438	0.0428	0.0348	1														
7	Current owner of business	0.0162	-0.1057	0.2196	0.0268	0.0286	0.0926	1													
8	Knows other entrepreneurs	-0.1646	-0.1161	0.1376	0.0942	0.077	0.155	0.1472	1												
9	Fear of Failure Prevent Startup	-0.0392	0.0676	0.0062	-0.0298	-0.0107	-0.0256	-0.0873	-0.0301	1											
10	Required Skills To start a Business (Skills)	-0.0342	-0.1644	0.1799	0.1045	0.0813	0.1113	0.2745	0.2518	-0.1376	1										
11	men entrepreneurs rate	-0.0093	-0.0433	-0.008	-0.0311	-0.0525	-0.0087	-0.0739	-0.0063	-0.0046	-0.0647	1									
12	%of sits held by men in parliament	-0.0136	0.005	-0.0705	0.0059	-0.0498	0.0157	0.044	-0.0414	-0.0492	0.0131	-0.0866	1								
13	GDP growth rate	-0.1135	-0.0139	0.006	-0.0356	0.0484	0.0602	0.0685	0.0848	-0.0153	0.0521	-0.0944	0.2043	1							
14	Low Income Countries	-0.1472	-0.015	-0.0697	-0.1083	-0.1031	0.0469	0.0831	0.064	-0.0154	0.0661	-0.0757	0.4261	0.441	1						
15	Middle Income Countries	0.0218	-0.0037	0.0015	-0.062	-0.006	-0.0376	-0.0681	-0.0259	0.0858	-0.064	0.0875	-0.4183	-0.2215	-0.4795	1					
16	High Income Countries	0.1168	0.0179	0.0642	0.165	0.1034	-0.0062	-0.0094	-0.0342	-0.0724	0.0024	-0.0172	0.0215	-0.1919	-0.4582	-0.5603	1				
17	Childcare	0.0332	-0.0014	0.0345	0.025	0.0179	0.003	-0.0357	0.0553	-0.0481	-0.0685	0.1416	-0.3396	-0.0487	-0.1531	-0.0429	0.1879	1			
18	Maternity Leave	0.0258	0.0149	0.0385	-0.0301	0.0348	-0.0687	-0.0696	-0.0405	0.0379	-0.0443	0.0789	-0.4002	-0.2573	-0.2452	0.2974	-0.0697	0.2552	1		
19	No Violence against women	-0.1016	-0.029	-0.0361	-0.0164	-0.0319	0.0636	0.077	0.0799	-0.0208	0.0274	-0.0949	0.3407	0.3321	0.406	-0.2014	-0.1792	-0.04	-0.4212	1	
20	Governamental Istitution's Quality	0.1565	0.0208	0.0903	0.0896	0.0635	-0.0496	-0.0904	-0.0725	0.0004	-0.057	0.14	-0.2922	-0.4702	-0.712	0.1774	0.4924	0.2591	0.3532	-0.4697	1

Moreover, bearing in mind that historically entrepreneurship and governmental institutions have been men areas, we study male competitiveness and the percentage of seats held by men in parliament. Similarly to our predictors

3.5. Statistical Analysis

The dataset used for our purposes is an unbalanced panel data, with random individual observation[18] per year, and relatively short structure (maximum nine years). We are interested in testing goodness of governmental institutions' effect on new female entrepreneurs and new male entrepreneurs. We choose to employ panel regression to analyze the dataset because there is significant cross-country variability for all index values in the dataset.

According to Estrin and Mickiewicz (2011)[19] we adopt a random-effects probit model as our estimator and we use random country-year effects in all our estimations. These are a stronger measure than just country effects, as they allow for unobserved heterogeneity across countries but additionally account for measurement errors and idiosyncrasies that are country-year sample specific. We replicate the same study reported in Estrin and Mickiewicz's (2011) paper in order to validate the reliability of the data.

First of all we test direct effect of female, GIQ and skills on individual probability to enter in new business. In order to test self-confidence and GIQ effects on entry in entrepreneurship among gender we consider two way interactions respectively between: female and GIQ on the probability to become entrepreneurs; female and required entrepreneurial skills on the probability to become entrepreneurs. After that we test a three way interaction between female, GQI and required skills. Then we examine what happens if we consider female individuals, self-confidence across low levels of GIQ, middle levels of GIQ, and high levels of GIQ. Finally, we demonstrate how female role changes in high quality institutional contexts among both respondents with self-confidence and respondent without self-confidence.

[18] Respondents are randomly selected each year, across countries.

[19] To be confident with the data we replicate Estrin and Mickiewicz (2011) study. We obtained the same results.

Our core model is constructed as follows:

$$Prob(Entry)ijt = f(Female_{it}, GIQ_{jit}, Required\ entrepreneurial\ Skills_{it}, IndividualControls_{jit}, Level\ Controls_{jit});$$

(1)

The model to test How GIQ moderate female variable is:

$$Prob(Entry)ijt = f(Female_{it}, GIQ_{jit}, Self\text{-}Confidence_{it}, IndividualControls_{jit}, Level\ Controls_{jit,}\ GIQ*Female);$$

(2)

The model to test how required entrepreneurial skills moderate female variable constructed is:

$$Prob(Entry)ijt = f(Female_{it}, GIQ_{jit}, Self\text{-}Confidence_{it}, IndividualControls_{jit}, Level\ Controls_{jit}, Self\text{-}Confidence*Female);$$

(3)

The model to test the three way interaction between Female, GIQ, and Required skills is:

$$Prob(Entry)ijt = f(Female_{it}, GIQ_{jit}, Required\ entrepreneurial\ Skills_{it}, IndividualControls_{jit}, Level\ Controls_{jit}, GIQ*Female, Required\ entrepreneurial\ Skills*Female, GIQ*Self\text{-}Confidence*Female);$$

(4)

Where i denotes individuals, j denotes countries and t denotes time. Entry is a dummy variable and identifies whether or not an individual in a particular country at a particular date is engaged in nascent start-up or high aspiration start-up activity.

To check the robustness of our regression analyses, we analyzed our data using a logit model. Moreover we control for other for other institutional variables such entry and exit regulation, employment and we obtained always the same results[20]

4. Results

We examine the prevalence of men and women in entrepreneurial entry decisions relative to each country and then we propose multivariate analysis' results. In multivariate analysis we test direct effect of female, GIQ and skills on individual probability to enter in new business. In order to test self-confidence and GIQ effects on entry in entrepreneurship among gender we consider two way interaction respectively between: female and GIQ on the probability to become entrepreneurs; female and required entrepreneurial skills on the probability to become entrepreneurs. After that we test a three way interaction between female, GQI and required skills. Then we examine what happens if we consider female individuals, self-confidence across low levels of GIQ, middle levels of GIQ, and high levels of GIQ. Finally we demonstrate how female role change in high quality institutional contexts among both respondents with self-confidence and respondent without self-confidence.

4.1. Male and Female Startup Activity across Countries

The sample is drawn from the whole working age population in each participating countries and therefore captures both entrepreneurs and non-entrepreneurs. According to the data that we use about 5% of individuals are involved in startup activities and, although the number of women surveyed is bigger than the number of men ones, the total average of new male entrepreneurs is higher than female ones.

The data show that gender asymmetry in entry decision is consistent across all countries; figure 1 shows the comparative results for men and women in each country.

[20] Results are available from the authors.

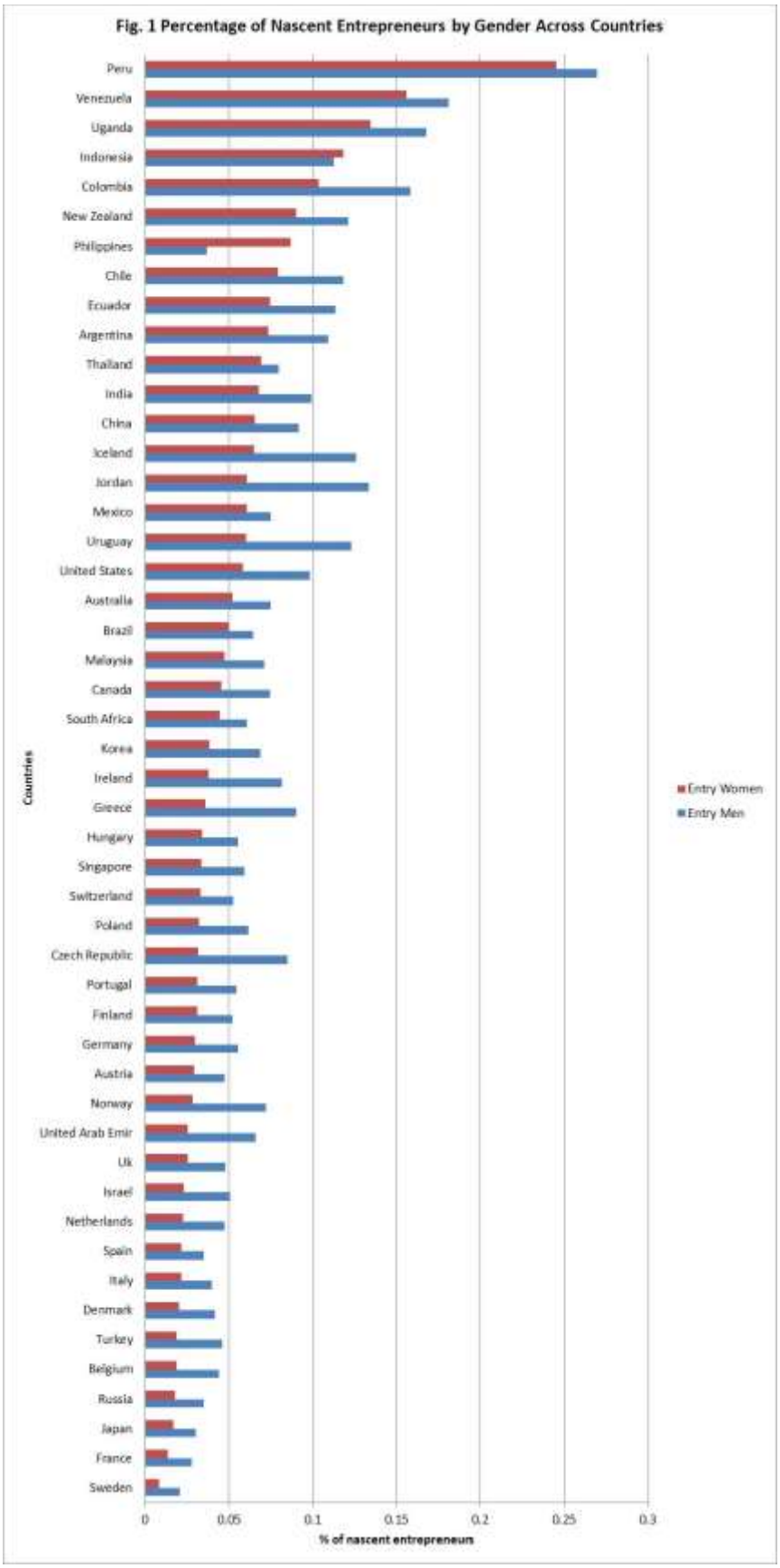
Fig. 1 Percentage of Nascent Entrepreneurs by Gender Across Countries
Peru
Venezuela
Uganda
Indonesia
Colombia
New Zealand
Philippines
Chile
Ecuador
Argentina
Thailand
India
China
Iceland
Jordan
Mexico
Uruguay
United States
Australia
Brazil
Malaysia
Canada
South Africa
Korea
Ireland
Greece
Hungary
Singapore
Switzerland
Poland
Czech Republic
Portugal
Finland
Germany
Austria
Norway
United Arab Emir
Uk
Israel
Netherlands
Spain
Italy
Denmark
Turkey
Belgium
Russia
Japan
France
Sweden
Countries
0
0.05
0.1
0.15
0.2
0.25
0.3
% of nascent entrepreneurs
Entry Women
Entry Men

Table 6: T-test for Depended Variable's Means Across Country by Gender			
Country	Entry Men (1)	Entry Women (2)	t-test for Significant Differences Between (1) &(2)
Argentina	0.1094207	0.0734971	(p<0.01)***
Australia	0.0750469	0.0522472	(p<0.01)***
Austria	0.0472245	0.0294627	(p<0.01)***
Belgium	0.0438822	0.0186948	(p<0.01)***
Brazil	0.0646091	0.0496189	(p<0.01)***
Canada	0.0743982	0.0453746	(p<0.01)***
Chile	0.1183668	0.0792001	(p<0.01)***
China	0.0917448	0.0652554	(p<0.01)***
Colombia	0.1581312	0.1035049	(p<0.01)***
Czech Republic	0.0850746	0.0315789	(p<0.01)***
Denmark	0.041619	0.0201248	(p<0.01)***
Ecuador	0.1136364	0.0746269	(p<0.01)***
Finland	0.0519919	0.031074	(p<0.01)***
France	0.0278556	0.0138384	(p<0.01)***
Germany	0.0552418	0.0295988	(p<0.01)***
Greece	0.0900192	0.0361804	(p<0.01)***
Hungary	0.0552553	0.0342751	(p<0.01)***
Iceland	0.1259376	0.0648688	(p<0.01)***
India	0.0991538	0.0680547	(p<0.01)***
Indonesia	0.1126984	0.1180477	(p<0.01)***
Ireland	0.081839	0.0380593	(p<0.01)***
Israel	0.0505389	0.0232834	(p<0.01)***
Italy	0.0396931	0.0218655	(p<0.01)***
Japan	0.0303679	0.0171707	(p<0.01)***
Jordan	0.1332228	0.0607407	(p<0.01)***
Korea	0.0685524	0.0383899	(p<0.01)***
Malaysia	0.0711332	0.0472637	(p<0.01)***
Mexico	0.0751092	0.0605187	(p<0.01)***
Netherlands	0.0474013	0.022804	(p<0.01)***
New Zealand	0.1208843	0.0900901	(p<0.01)***
Norway	0.0720204	0.0281949	(p<0.01)***
Peru	0.2696289	0.245183	(p<0.10)
Philippines	0.0369089	0.0866511	(p<0.01)***
Poland	0.0615194	0.0322311	(p<0.01)***
Portugal	0.0542986	0.0311086	(p<0.01)***
Russia	0.0350128	0.0178852	(p<0.01)***
Singapore	0.0594059	0.033615	(p<0.01)***
South Africa	0.0604833	0.0443386	(p<0.01)***
Spain	0.0350503	0.0219254	(p<0.01)***
Sweden	0.0208563	0.0085757	(p<0.01)***
Switzerland	0.052586	0.0329169	(p<0.01)***
Thailand	0.0799391	0.0691953	(p<0.10)
Turkey	0.0457648	0.0190079	(p<0.01)***
Uganda	0.1678692	0.1345922	(p<0.01)***
Uk	0.0479285	0.0256391	(p<0.01)***
United Arab Emir	0.0657604	0.0257164	(p<0.01)***
United States	0.0982913	0.058475	(p<0.01)***
Uruguay	0.1229128	0.0601241	(p<0.01)***
Venezuela	0.1809896	0.1555794	(p<0.10)

Clearly, the participation of women in entrepreneurial entry process varies significantly across the 52 GEM countries, the differences between men and women are remarkably stable across countries and participation rates for men tend to be higher than those of women. This is true for all the countries but Philippines and Indonesia, where women are more active than men in entrepreneurial entry decisions, however for Indonesia gender gap in entrepreneurial entry is not statistically significant. Also table 6 shows t-test results for significant differences in startup activities between men and women (except for Peru, Thailand, and Venezuela which are not statistically significant).

It is interesting to notice that countries where on average GIQ is high (such as France, Denmark, Netherlands, Belgium, and Sweden) show a higher gender gap in male and female entrepreneurship then countries where on average GIQ is low (such as Brazil, New Zealand, South Africa, China, Australia, India, Argentina, Chile, Malaysia, Ecuador, Colombia, and Hungary).

4.2. Multivariate Analysis

4.2.1 Empirical Evidence for Female and Male Entrepreneurial entry and GIQ

Table 7 shows the coefficients of random-effects probit model used to examine whether governmental institutions goodness boost or discourage female nascent entrepreneurs, taking account for perceived entrepreneurial skills (self-confidence).

If we consider the direct effect of female on propensity to start a business (model 1) we confirm previous studies' results. Female is directly and negatively associated with entrepreneurial entry rate ($p<0.01$), meaning being woman reduces individual probability to become entrepreneurs. Looking at the effect of Governmental institutions' Quality (GIQ) on startup activity (model 1) it is clear that on average the direct effect of GIQ is not statistically significant ($p>0.10$) and we are not able to draw conclusions about GIQ role on startup activities. This evidence neither confirms nor denies previous general theories about institutions effects on new business creation. The variable required skills to start a business (Skills) is a proxy of the presence of self confidence among respondent. Model 1 shows that required skills to start a business is directly and positively associated with entrepreneurial entry rate ($p<0.01$).

Table 7: Startup's Propensity Estimations Results

Model (1): Direct effect of Female, GIQ, and Self-Confidence on the probability of being involved in startup activities
Model (2): Interaction's effects between GIQ and Self-Confidence on the probability of being involved in startup activities
Model (3): Interaction's effects between Female and GIQ on the probability of being involved in startup activities
Model (4):Interaction's effects between Female and Self-Confidence on the probability of being involved in startup activities
Model (5): Three way interaction's effects (Female*GIQ*Self-Confidence) on the probability of being involved in startup activities

Variables	Model (1) startup	Model (3) startup	Model (2) startup	Model (4) startup	Model (5) startup
Age	0.0173***	0.0173***	0.0172***	0.0174***	0.0173***
	(.001)	(.001)	(.001)	(.001)	(.001)
Age squared	-0.000276***	-0.000276***	-0.000275***	-0.000277***	-0.000275***
	(.0000145)	(.0000145)	(.0000145)	(.0000145)	(.0000145)
Female	-0.100***	-0.0637***	-0.0994***	-0.123***	-0.0657***
	(.006)	(.008)	(.006)	(.012)	(.017)
in employment	0.260***	0.263***	0.261***	0.260***	0.263***
	(.008)	(.008)	(.008)	(.008)	(.008)
(At least) post-secondary education	0.0372***	0.0375***	0.0370***	0.0373***	0.0373***
	(.007)	(.007)	(.007)	(.007)	(.007)
Higher education	0.0216**	0.0217**	0.0210**	0.0215**	0.0211**
	(.010)	(.010)	(.010)	(.010)	(.010)
Business angel in last 3 years	0.291***	0.291***	0.291***	0.291***	0.291***
	(.011)	(.011)	(.011)	(.011)	(.011)
Current owner of business	-0.369***	-0.370***	-0.369***	-0.369***	-0.369***
	(.008)	(.008)	(.008)	(.008)	(.008)
Knows other entrepreneurs	0.340***	0.339***	0.340***	0.340***	0.340***
	(.006)	(.006)	(.006)	(.006)	(.006)
Fear of Failure Prevent Startup	-0.218***	-0.218***	-0.217***	-0.218***	-0.217***
	(.007)	(.007)	(.007)	(.007)	(.007)
Required Skills To start a Business (Skills)	0.754***	0.753***	0.714***	0.740***	0.719***
	(.007)	(.007)	(.010)	(.010)	(.014)
men entrepreneurs rate	-0.587***	-0.578***	-0.587***	-0.586***	-0.578***
	(.136)	(.136)	(.136)	(.136)	(.136)
%of sits held by men in parliament	-0.000529	-0.0005	-0.000564	-0.000526	-0.000537
	(.002)	(.002)	(.002)	(.002)	(.002)
GDP growth rate	-0.00171	-0.00167	-0.00172	-0.00172	-0.00171
	(.006)	(.006)	(.006)	(.006)	(.006)
Middle Income Countries	-0.279***	-0.280***	-0.279***	-0.279***	-0.280***
	(.046)	(.046)	(.047)	(.046)	(.046)
High Income Countries	-0.125**	-0.127**	-0.125**	-0.125**	-0.126**
	(.050)	(.050)	(.051)	(.050)	(.051)
Childcare	-0.0217	-0.022	-0.0212	-0.0216	-0.0214
	(.017)	(.017)	(.017)	(.017)	(.017)
Maternity Leave	-0.0571***	-0.0578***	-0.0575***	-0.0571***	-0.0581***
	(.019)	(.019)	(.019)	(.019)	(.019)
No Violence against women	0.236**	0.237**	0.239**	0.236**	0.239**
	(.093)	(.092)	(.093)	(.093)	(.093)
Governamental Istitution's Quality	-0.0085	0.0154	-0.0522*	-0.00851	-0.00798
	(.028)	(.028)	(.029)	(.028)	(.030)
Govenamental Institions'Quality*Female		-0.0528***			-0.0811***
		(.008)			(.016)
Govenamental Institions'Quality*Skills			0.0561***		0.0287**
			(.009)		(.013)
Female*Skills				0.0292**	-0.000247
				(.014)	(.019)
Govenamental Institions'Quality*Skills*Female					0.0414***
	(.002)	(.002)	(.002)	(.002)	(.002)
Constant	-2.202***	-2.221***	-2.166***	-2.192***	-2.191***
	(.226)	(.225)	(.226)	(.226)	(.226)
Observations	689275.0	689275.0	689275.0	689275.0	689275.0
Number of country_year	263	263	263	263	263

Year effects included but not reported
Estimator: probit model with random effects (country-years)
Marginal effects
Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Self-confidence increases the individual probability of being involved in startup activities. These results are coherent with previous theories which predicted that self-confidence in entrepreneurial skills increases probability to become a nascent entrepreneur.

Model 2 shows what happens to women propensity of being nascent entrepreneurs if we consider GIQ as moderator of gender. We have been agnostic about the relationship between being a woman, governmental institution's quality and entrepreneurial entry decisions. We tested if GIQ increases or decreases female negative effect on the probability to become a nascent entrepreneur. Our results support the hypothesis which claims that GIQ does not improve female effect on the probability of entry in entrepreneurship. A statistical significant association can be observed between the interaction of female and GIQ and the probability of being involved in startup activities ($p<0.01$).

The coefficient relates to the interaction of female and GIQ is negative. It means that, ceteris paribus, when GIQ increases, the negative effect of being a woman on the probability to enter in entrepreneurship increases too. In other words high quality of institutions lowers women's probabilities to be involved in startup activities.

4.2.1 Empirical Evidence for Female and Male Entrepreneurial entry and Self-Confidence

In order to provide a clear empirical framework, model 3 shows what happens if we use GQI as moderator of skills. The coefficient of the interaction is statistically significant ($p<0.01$) and positively associated to the probability of being involved in startup activities. It means that, ceteris paribus, when the quality of institutions increases the positive effect of self-confidence on the probability of entry in entrepreneurship increases too.

Model 4 tests the role of skills on female effects on entry in entrepreneurship's probability. Our expectations are confirmed. We used self-confidence as a moderator of female. Perceived entrepreneurial skills reduce the negative effect of being a woman on the probability to enter in self-employment. The coefficient of Female*Skills is statistically significant ($p<0.05$) and positively related to the probability of being involved in startup activities. It means that entrepreneurial self-confidence boosts female entrepreneurship by increasing the willingness of women to become entrepreneurs.

4.2.1 Empirical Evidence for Female and Male Entrepreneurial entry, GIQ, and Self-confidence

Finally model 5 tests the three way interaction between Female, GQI, and Required skills to start a new business (entrepreneurial self-confidence). As it can be seen the three way interaction (Female*GQI*Skills) is statistically significant ($p<0.05$) and positively associated with entrepreneurial entry rate. It means that in presence of entrepreneurial self-confidence, when Institutional Quality is high there is an improvement of Female negative effect on the probability of being involved in startup activities. In other words, ceteris paribus, when the quality of governmental institutions increases, the probability of women with entrepreneurial self-confidence to become entrepreneur is higher than the probability of those with no entrepreneurial self-confidence.

In order to better understand the results showed in model 5, we decided to investigate what happens if we consider three different levels of institutional quality. We split our sample in three sub-sample considering three different levels of GQI[21]. Table 8 shows results of our estimations for three GIQ groups (GQ1 considers country with low levels of governmental institutions quality; GQ2 considers country with middle levels of governmental institutions quality; GQ3 considers country with high levels of governmental institutions quality).

We notice that among the three groups of GIQ, Female direct effect on the probability to enter in entrepreneurship get worse when GIQ increases, confirming our findings about the negative relationship concerning institutional quality female and probability to enter in new business (see Female variables evolution in model 6, model 8 and model 10). It is interesting to notice that in presence of low and middle levels of governmental institutional quality the interaction between female and perceived entrepreneurial skills is not statistically significant.

[21] We split the sample considering quality of institutions. Using tertile methods we obtained:
countries with low levels of governmental institutions' quality : -2.312 < GQI <0.724
countries with middle levels of governmental institutions' quality : 0.7381< GQI <1.165
countries with high levels of governmental institutions' quality : 1.7221< GQI <1.794

Table 8: Startup's Propensity Estimations Results Considering ther different levels of GIQ

Model (6): Low GQI; Direct effects of Female and Self-Confidence on the probability of being involved in startup activities

Model (7): Low GQI; Interaction's effects between GIQ and Self-Confidence on the probability of being involved in startup activities

Model (8):Middle GIQ; Direct effects of Female and Self-Confidence on the probability of being involved in startup activities

Model (9): Middle GIQ; Interaction's effects between Female and Self-Confidence on the probability of being involved in startup activities

Model (10): High GQI; Direct effects of Female and Self-Confidence on the probability of being involved in startup activities

Model (11): High GIQ; Interaction's effects between Female and Self-Confidence on the probability of being involved in startup activities

Variables	Model (6) startup	Model (7) startup	Model (8) startup	Model (9) startup	Model (10) startup	Model (11) startup
Age	0.0268***	0.0268***	0.0118***	0.0118***	0.0130***	0.0132***
	(.002)	(.002)	(.002)	(.002)	(.002)	(.002)
Age squared	-0.000384***	-0.000384***	0.000217***	-0.000217***	-0.000235***	-0.000236***
	(.000029)	(.000029)	(.000028)	(.000028)	(.000022)	(.000022)
Female	-0.0688***	-0.0698***	-0.0955***	-0.0949***	-0.128***	-0.198***
	(.011)	(.021)	(.011)	(.023)	(.010)	(.021)
in employment	0.282***	0.282***	0.366***	0.366***	0.151***	0.151***
	(.012)	(.012)	(.014)	(.014)	(.013)	(.013)
(At least) post-secondary education	0.0447***	0.0447***	0.0118	0.0118	0.0549***	0.0549***
	(.013)	(.013)	(.013)	(.013)	(.013)	(.013)
Higher education	0.00587	0.00587	0.00829	0.00829	0.0378**	0.0377**
	(.020)	(.020)	(.017)	(.017)	(.015)	(.015)
Business angel in last 3 years	0.297***	0.297***	0.259***	0.259***	0.314***	0.315***
	(.018)	(.018)	(.019)	(.019)	(.020)	(.020)
Current owner of business	-0.511***	-0.511***	-0.286***	-0.286***	-0.298***	-0.297***
	(.014)	(.014)	(.014)	(.014)	(.015)	(.015)
Knows other entrepreneurs	0.318***	0.318***	0.308***	0.308***	0.388***	0.388***
	(.011)	(.011)	(.011)	(.011)	(.011)	(.011)
Fear of Failure Prevent Startup	-0.182***	-0.182***	-0.250***	-0.250***	-0.216***	-0.217***
	(.011)	(.011)	(.011)	(.011)	(.012)	(.012)
Required Skills To start a Business (Skills)	0.723***	0.723***	0.786***	0.786***	0.752***	0.707***
	(.013)	(.017)	(.013)	(.018)	(.013)	(.017)
men entrepreneurs rate	-0.892***	-0.892***	0.335	0.335	0.075	0.076
	(.232)	(.232)	(.281)	(.281)	(.195)	(.195)
%of sits held by men in parliament	-0.00541*	-0.00541*	0.00569**	0.00569**	0.000132	0.0000673
	(.003)	(.003)	(.003)	(.003)	(.003)	(.003)
GDP growth rate	-0.00289	-0.00289	-0.00342	-0.00342	0.00621	0.00617
	(.009)	(.009)	(.016)	(.016)	(.009)	(.009)
Middle Income Countries	-0.269***	-0.269***	-0.116	-0.116	-0.424***	-0.424***
	(.082)	(.082)	(.071)	(.071)	(.079)	(.079)
High Income Countries	-0.154	-0.154	0.00992	0.00992	-0.309***	-0.308***
	(.126)	(.126)	(.081)	(.081)	(.072)	(.072)
Childcare	-0.0523	-0.0523	-0.00314	-0.00315	-0.115***	-0.115***
	(.035)	(.035)	(.025)	(.025)	(.028)	(.028)
Maternity Leave	-0.0445	-0.0445	-0.0849**	-0.0849**	-0.0481**	-0.0483**
	(.037)	(.037)	(.034)	(.034)	(.020)	(.020)
No Violence against women	0.00717	0.00716	0.584***	0.584***	0.824***	0.821***
	(.174)	(.174)	(.194)	(.194)	(.120)	(.120)
Female*Skills		0.00126		-0.000769		0.0905***
		(.024)		(.025)		(.024)
Constant	-1.626***	-1.625***	-3.516***	-3.516***	-2.701***	-2.666***
	(.342)	(.342)	(.387)	(.387)	(.396)	(.397)
Observations	180725	180725	255874	255874	252676	252676
Number of country_year	122.0	122.0	66.0	66.0	75.0	75.0

Year effects included but not reported

Estimator: probit model with random effects (country-years)

Marginal effects

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 9: Startup's Propensity Estimations Results Considering ther High levels of GIQ and the presence or absence of self-confidendence		
Model (12): High GQI and presence of entrepreneurial self-confidence; Direct effects of Female on the probability of being envolved in statup activities activities		
Model (13): High GQI and absence of entrepreneurial self-confidence; Direct effects of Female on the probability of being envolved in statup activities activities		
	Model (12)	Model (13)
Variables	startup	startup
Age	0.0140***	0.00825**
	(.002)	(.004)
Age squared	-0.000251***	-0.000163***
	(.0)	(.0)
Female	-0.110***	-0.186***
	(.012)	(.022)
in employment	0.139***	0.189***
	(.015)	(.027)
(At least) post-secondary education	0.0432***	0.0755***
	(.014)	(.027)
Higher education	0.0440***	0.0353
	(.017)	(.034)
Business angel in last 3 years	0.286***	0.504***
	(.022)	(.051)
Current owner of business	-0.332***	0.174***
	(.015)	(.048)
Knows other entrepreneurs	0.375***	0.432***
	(.012)	(.023)
Fear of Failure Prevent Startup	-0.275***	-0.0775***
	(.014)	(.022)
Required Skills To start a Business (Skills)	0.304	-0.0759
	(.203)	(.268)
men entrepreneurs rate	0.00101	-0.000154
	(.003)	(.004)
%of sits held by men in parliament	0.00221	0.0249**
	(.010)	(.012)
GDP growth rate	-0.520***	-0.524***
	(.079)	(.106)
Middle Income Countries	-0.338***	-0.392***
	(.076)	(.105)
High Income Countries	-0.0929***	-0.0979***
	(.030)	(.037)
Childcare	-0.0517**	-0.0485*
	(.022)	(.028)
Maternity Leave	0.782***	0.896***
	(.129)	(.168)
No Violence against women	-0.0431	-0.0342
	(.075)	(.098)
Constant	-1.388***	-1.970***
	(.376)	(.469)
Observations	118843	133833
Number of country_year	75.0	75.0
	Year effects included but not reported	
	Estimator: probit model with random effects (country-years)	
	Marginal effects	
	Standard errors in parentheses	
	*** p<0.01, ** p<0.05, * p<0.1	

However, in model 11 the coefficient associated to the two way interaction between self-confidence and Female is strongly positively correlated to the probability of being a new entrepreneur. Again, results show that the probability of women who have entrepreneurial self-confidence to be involved in startup activities is higher than women that do not believe in their entrepreneurial skills in context where Governmental Institutions' Quality is high.

Table 9 shows better this last results: model 12 and model 13 represent results of female effect in High quality governmental institutional contexts when individuals do not think they have entrepreneurial skills (model 12) and when individuals think they have entrepreneurial skills (model 13). In high quality institutional context, Female negative effect on entry probability is worst if we consider people that do not have entrepreneurial self-confidence.

5. Discussion

The aim of the present paper is to investigate if governmental institutions' quality reduces or increases gender discrepancy in entrepreneurial entry decisions. Moreover, this analysis emphasizes the important role of self-confidence among different levels of GIQ in gendered decisions' entry in entrepreneurship and the factors influencing female entrepreneurship at the country-level. Using Global Entrepreneurship Monitor and World Bank data we test hypotheses concerning the impact of perceptions of governmental institutions on entrepreneurship entry decisions focusing on the role played by gender. Especially, even if we consider man in our analysis, we concentrate on women role in self-employment entry decisions across countries. We explored this topic because women play important role for employment creation and economic growth as well as they contribute to the diversity of entrepreneurship in the economic process (Verheul and Turk, 2001). For these reasons, it is important to understand what factors mobilize or prevent women from startup activities. Factors that contribute to a higher number of female entrepreneurs may be different from those contributing to a higher diversity of entrepreneurship in a country.

Our support is both empirical and theoretical. We contribute to extend the literature on female entrepreneurship, gender gap in entrepreneurship, institutions and entrepreneurial self-confidence. This paper tries to improve researches that omit the importance of the relationship among women issues, institutional context, and self-confidence and entry decisions in new business. We identify different studies on institutions and entrepreneurship and female self-employment that lead to different conclusions. Especially, there is evidence that governmental institutions may both boost or discourage entrepreneurial activity. Considering that gender gap in entrepreneurship does exist, we try to clarify this dilemma focusing on female aspiring entrepreneurs, perceived level of institutional quality, and perceived skills. Moreover, in doing so, we cover a literature gap related to the absence of studies that do not consider interactions

between women, GIQ and perceived skills in entrepreneurial entry decisions.

From an empirical point, of view we highlight that: governmental institutions, even if they are perceived as good, do not reduce gender gap in entrepreneurship entry decisions. We test how institutions' quality affects the probability to enter in new activities considering gender variable ("Female" variable). However, high levels of female self-confidence increase women's probability to become new entrepreneur in contexts where the quality of governmental institutions is high.

5.1. Governmental Institutions' Quality, Female and Male Entrepreneurship

Our results therefore provide a more differentiated understanding of institution and entrepreneurship theories, gender gap entrepreneurs and women issues. On overall we found that GIQ does not have a statistically significant impact on the probability to become a new entrepreneur. However if we consider the interaction between being a woman and GIQ, our results support the hypothesis which claims that GIQ does not improve the effect of being a woman on the probability of entry in entrepreneurship. It means that high quality of institutions lowers women's probabilities to be involved in startup activities.

Our findings support those theories which suggest that governmental institutions may discourage female entrepreneurship. These results could appear counterintuitive to the common sense. However, explanations are provided by several factors including women's historical role in the society. For example, women's probability to start a new business is reduced by the fact women are more sensitive to non-monetary incentive (Kyro, 2001; Buttner and Moore, 1997; Chaganti, 1986; Scott, 1986), Maternity Leave, and Child Care[22] (Amanda Elam and Siri Terjesen, 2010). Additionally, Friedman (2011) found that good governance quality prevents both male and female entrepreneurship because countries with good institutions have higher barriers for new businesses entry and more taxes. Moreover, these results may be explained in part by the differences in labor choices for women across countries, in which labor markets, institutional structures, and cultural norms provide limited ranges of incentives to women's entrepreneurial activity. Another explanation may be that for decade's entrepreneurship and governmental institutions have been men areas and strong institutionalized context may inhibit female willingness of being involved in startup activities.

[22] We investigated all these variables.

5.2. Entrepreneurial Self-Confidence, Female and Male entrepreneurship

Rozier and Thompson, (1998) argued that women's self-confidence may on the whole be lower than men's. However, even if women's self-efficacy is lower than men this not to imply that all women have low self-confidence in their entrepreneurial abilities; for this reason it seems reasonable to expect that self-confidence in entrepreneurial skills increases women propensity to become entrepreneurs. Moreover, if we consider gender as a moderator of skills we may expect that women with entrepreneurial self-confidence have more probability to become entrepreneurs then men with entrepreneurial self-confidence.

Descriptive analysis shows that the number of women which think to have entrepreneurial skills is lower than the number of men that believe to have entrepreneurial skills. Despite this evidence we argued that even if women's self-efficacy is lower than men this does not to imply that all women have low self-confidence in their entrepreneurial abilities; because of this it seems reasonable to expect that self-confidence in entrepreneurial skills increases women propensity to become entrepreneurs. Results suggest that self-confidence increases women propensity of being involved in startup activities. This evidence confirms previous results about self-confidence and probability to become an entrepreneur (Bandura, 1992; Koellinger et al., 2006; Minniti et al., 2004). Moreover if we consider gender ("Female" variable) as moderator of perceived entrepreneurial skills we notice that the effect of self-confidence is higher for women with entrepreneurial self-confidence then men with entrepreneurial self-confidence. These results are related to the conclusions about female entrepreneurship, Governmental Institutions' Quality, and entrepreneurial self-confidence described in the next sub-section.

5.3. Female Entrepreneurship, Governmental Institutions' Quality, and Entrepreneurial Self Confidence

As we mentioned above one of the aims of this paper is to investigate interaction between being a woman, GIQ, and self-confidence. With this analysis we cover a theoretical gap on studies about women's entrepreneurship entry decisions across countries, across different levels of Governmental Institutions' Quality and across perception of entrepreneurial skills.

Results show that the probability of women who have entrepreneurial self-confidence to be involved in startup activities is higher than women that do not believe in their entrepreneurial

skills in context where Governmental Institutions' Quality is high. It is clear that in high quality institutional context being a woman has a negative effect on probability to start a new business and it get worse if we consider people that do not have entrepreneurial self-confidence. One explanation could be that women with entrepreneurial self-confidence find better entrepreneurial conditions in countries where governance's quality is high so they decide to become entrepreneur rather then to choose another occupation. Self-confidence plays an important role in women entry decisions and in their environmental evaluations: these results provide new evidence that enrich previous literature on gender, institutions, self-confidence and entrepreneurship entry decisions. Results point out that self-confidence may be the key to boost female self-employment providing non-monetary incentives to women aspiring entrepreneurs in contest where the quality of governmental institutions is high. In order to promote economic development, through female startup activities, policy makers could provide national incentive on education and training to develop women's self-confidence in their entrepreneurial skills (Wilson, Kickul, and Marlino 2007)

6. Conclusions

The main contribution of this article is in the field of female entrepreneurship and gender gap research. In particular, the contribution is represented by an innovative analysis which considers the quality of governmental institutions' effect on women's startup activities among perceived entrepreneurial skills. In this article, we have shown that institutional conditions may increase gender gap reducing female entrepreneurship entry. Using previous researches on women, institutions, gender gap, self-confidence and entrepreneurial entry theories we underlined the need to provide a common explanatory framework on how perceptions about governmental institutional factors and self-confidence mitigate the negative effect of being a woman on the probability to start new business countries.

After analyzing other countries institutions, we found that perception GIQ does not reduce the distance among genders in both necessity and opportunity based entrepreneurship. Moreover, men self-confidence seems to have an important role with institutions on women entry decision in self-employment.

Our contribution is theoretical and empirical. First, we have enhanced theory on institutions and women in entrepreneurship by considering perception of governmental

institutions' quality and perception of entrepreneurial self-confidence. Second, our finding on female nascent entrepreneurs across countries contributes a new dimension to a growing empirical literature. We suggest that women participation in entrepreneurship entry may be enforced by self-confidence. Thought, our findings are important for policy maker. We point out the importance of improving female self-confidence by governmental system in order to provide non-monetary incentives to female entrepreneurship to promote employment and economic development. Bandura (1992) suggests targeted education can play an important role in developing levels of self-confidence. In order to promote economic development, through female startup activities, policy makers could provide national incentive on education and training to develop women's self-confidence in their entrepreneurial skills.

7. Limitations and Further Research

Although we approached our study with rigor and attention, it has some limitations that are typical of this kind of analysis. The results of this paper have therefore to be treated with awareness of these aspects.

First, it is not possible to consider all the macro-level variables that identify countries effect on individual behavior. Clearly, unobserved variables may be associated with the decision to start a business. This means that our conclusions about GQI and self-confidence suggested by our results could be inflated by omitted variables.

Then, the short structures of the data do not allow to use fixed effects that may help to analyze omitted variables. However, country-years effects allow for unobserved heterogeneity across countries accounting for measurement errors and idiosyncrasies that are country-year sample specific.

Finally, considering the structure of the analysis used in this paper, we could not use GEM data-base Industries' information. GEM provides information about Industries just about entrepreneurs not about the entire sample. Further research may focus just on entrepreneurs considering industry information that may affect male and female entry decisions across countries. Further research may use a two-stage model considering this analysis as starting point and testing the probability for a woman and a man to become entrepreneur and then in a second step test the differences among gender on probability to become a self –employer to become entrepreneur in a specific industry across countries.

References

Amit, R., Glosten, L., & Mueller, E. 1993. Challenges to theory development in entrepreneurship research. Journal of Management Studies, 30: 815-834.

Aidis, R., Estrin, S., & Mickiewicz, T. (2008). Institutions and entrepreneurship development in Russia: A comparative perspective. Journal of Business Venturing, 23(6),656–672.

Aidis, R., Estrin, S., & Mickiewicz, T. (2010). Size matters: Entrepreneurial entry and government. Small Business.

Acs, Z., Audretsch, D., & Evans, D. (1994). Why does the selfemployment rate vary across countries and over time?Discussion paper 871. London: CEPR. Economics. doi:10.1007/s11187-010-9299-y.

Acs, Z. and Audretsch, D. (1993). Small Firms and Entrepreneurship: An East-West Perspective. Cambridge: Cambridge University Press.

Acs, Z. J.; Arenius, P .; Hay, M., and M. Minniti (2005). 2004 Global Entrepreneurship Monitor. (London U.K. and B abson P ark, MA: London Business School and B abson College).

Birley, S. (1989). Female entrepreneurs: are they really any different? Journal of Small Business Management 27(1), 32. Retrieved October 25, 2003,

Bardasi, E., Sabarwal, S., & Terrell, K. (2011). How do female entrepreneurs perform? Evidence from three developing regions. Small Business Economics. doi:10.1007/s11187-011-9374-z

Brush C (1992). Research on women business owners: Past trends, a new perspective and future directions. Entrepreneurship Theory and Practice, **16**(4): 5-30.

Brush C (1997). Women-owned businesses: Obstacles and opportunities. Journal of Developmental Entrepreneurship, **2**(1): 1-25.

Brush CG (1990). Women and Enterprise Creation. In Enterprising Women: LocalInitiatives for Job Creation. Paris: OECD, pp37-55.

Brush, C. (2006). Women entrepreneurs: A research overview. In M. Casson, B. Yeung, A. Basu, & N. Wadeson (Eds.), Oxford handbook of entrepreneurship (pp. 611–628). Oxford UK: Oxford University Press.

Baumol, W. (1990). Entrepreneurship: Productive, unproductive, and destructive. Journal of Political Economy, 98(5), 893–921.

Burke, B., Arkowitz, H., & Dunn, C. (2002). The efficacy of motivational interviewing. In W. R. Miller & S. Rollnick (Eds.), Motivational interviewing: Preparing people for change (2nd ed., pp. 217–250). New York: Guilford Press.

C. Brander, K. E. Hartman, A. K. Trocha, N. G. Jones, R. P. Johnson, B.

Korber, P.Wentworth, S. P. Buchbinder, S.Wolinsky, B. D. Walker, & S. A. Kalams, 1998. Lack of strong immune selection pressure by the immunodominant, HLA-A*0201-restricted cytotoxic T lymphocyte response in chronic human immunodeficiency virus-1 infection. J Clin Invest 101(11):2559–2566. On p. 3.

Buttner, E. H. and Moore, D. (1997). Women's organizational exodus to entrepreneurship: Self-reported motivations & correlates w/ success. Journal of Small Business Management, January, 34-47.

Casson, Mark C. (1982). The Entrepreneur. An Economic Theory. Oxford: Martin Robertson.

Carree, M., van Stel, A., Thurik, R., & Wennekers, S. (2002). Economic development and business ownership: An analysis using data of 23 OECD countries in the period 1976–1996. Small Business Economics, 19(4), 271–290.

Chaganti, R. (1986). Management in women-owned enterprises. Journal of SmallBusiness Management, 24(4), 18-29.

Cliff, Jennifer E. (1998). Does One Size Fit All? Exploring Relationships Between Attitudes Towards Growth, Gender, and Business Size, Journal of Business Venturing vol. 13, no. 6, pp. 523-542.

Chell, E., Baines, S., 2000. Networking, entrepreneurship and microbusiness behaviour. Entrepreneurship and Regional Development 12, 195-215

Cooper, A.C. and W.C. Dunkelberg. (1987): "Entrepreneurial Research: Old Questions, New Answers, and Methodological Issues." American Journal of Small Business 3

Delmar, F. and Davidsson, P. (2000) Where do they come from? Prevalence And characteristics of nascent entrepreneurs. Entrepreneurship & Regional Development12:pp. 1-23.

Davidsson, Per & Honig, Benson L. (2003) The role of social and human

capital among nascent entrepreneurs. Journal of Business Venturing, 18(3), pp. 301-331.

Dunkelberg, W.C., Cooper, A.C., Woo, C.Y., and W. Dennis. "New Firm Growth and Performance." Frontiers of Entrepreneurship Research. N.A. Churchill, J.A. Hornaday, B.A. Kirchhoff, O.J. Krasner, & K.H. Vesper, eds., pp. 307-332. Wellesley, MA: Babson College, 1987

Elam and Terjesen (2010) Gendered institutions and cross-national patterns of business creation for men and women European Journal of Development Research; 22(2010)3

Estrin s., Mickiewicz T. (2011) Institutions and female entrepreneurship Small Bus Econ (2011) 37:397–415 DOI 10.1007/s11187-011-9373-0

GražinaStartien, Rita Remeikien, 2008 Gender Gap in Entrepreneurship ISSN 1392-2785 Engineering Economics. 2008. No 5 (60)

Gimeno, J.F.; Folta, T.B.; Cooper, A.C.; and Woo, C.Y. (1997). 'Survival of the fittest? Entrepreneurial human capital and the persistence of underperforming firms.' Administrative Science Quarterly, 42: 750-783.

Greene (2000). The psychological sources of partisan-leaning independence American Politics Research 28 (4), 511-537

Harper, GJ (1998). Reducing stress in life care settings: the challenge of converting researchinto practice. Practicing Anthropology 20:19-20.

Hisrich, R. and C.G. Brush, 1986, The Women Entrepreneur: Starting, Financing and managing a Successful New Business, Lexington, MA: Lexington Books.

Jack and Anderson 2002. The articulation of social capital in entrepreneurial networks: a glue or a lubricant?' Entrepreneurship and Regional Development, **14** (3), 93-210. Jianakoplos, Nancy Ammon, and Alexandra Bernasek. 1998. "Are Women More Risk Averse?"Economic Inquiry 36: 620-30.

Johnson, S., Kaufmann, D. & Zoido-Lobatón, P. (1998). "Regulatory Discretion and the Informal Economy." American Economic Review, 88 (2): 387–92

Kaufmann D., Kraay A., Mastruzzi M. (2010). Governance Matters: Aggregate and Individual Governance Indicators. 1996-2008 The Brookings Institution World Bank - Development Research Group (DECRG), World Bank Institute June 29, 2009 World Bank Policy Research Working Paper No. 4978

Klapper, Amit,, Guillén ,Quesad, Keefer (1997): Entrepreneurship and Firm Formation Across Countries. Policy Research Working Paper 4313.The World Bank Development Research Group Finance and Private Sector

Kovalainen, A., Arenius, P. and L. Galloway, 2002, Entrepreneurial activity of women in the global economy: analysis of data from 29 countries, paper presented at the Babson Kauffman Entrepreneurship Research Conference 2002, Boulder Colorado.

Knack, S., Keefer, P. (1997). Does Social Capital Have an Economic Payoff? A Cross-Country Investigation. Quarterly Journal of Economics 112 (4): 1251-1288

Kyro, P. (2001). Women entrepreneurs question men's criteria for success. www.babson.edu/entrep/fer/Babson%202001

Kuratko, Donald F . and Hornsby, Jeffrey S. (1997). Developing entrepreneurial leadership in contemporary organizations. Journal of Management Systems, 8. 17-27.

La Porta, Rafael, et al, 1997. "Trust in Large Organizations," American Economic Review, American Economic Association, vol. 87(2), pages 333-38, May.

La Porta,, Lopez-de-Silanes, Shleifer and R Vishn, (1999): "The Quality of Government" (with R. La Porta, F. Lopez-de-Silanes, and R. Vishny), Journal of Law, Economics and Organization,

LaPorta, R. & Shleifer, A. (2008). "The Unofficial Economy and Economic Development." Brookings Papers on Economic Activity 2: 275-364.

Levesque, Minniti 2006 The Effect of Aging on Entrepreneurial Behavior (2006). Journal of Business Venturing, Vol. 21, Issue 2,

Loayza, N. (1996). "The Economics of the Informal Sector: A Simple Model and Some Evidence from Latin America." Carnegie-Rochester Conference Series on Public Policy, 45: 129–62.

Loayza, N., Servén, L. & Oviedo, A. M. (2005). "The Impact of Regulation on Growth and Informality—Cross-Country Evidence." World Bank Policy Research Working Paper, World Bank, Washington, DC.

Maloney, W. (2004). "Informality Revisited." World Development 32 (7), pp. 1159-1178.

Misturelli, F., & Heffernan, C. (2008). "What is poverty? A diachronic exploration of the discourse on poverty from the 1970s to the 2000s." The European Journal of Development Research, 204: 666-684.

Minniti, M., Alllen, I.E. & Langowotz, N. (2005). Global Entrepreneurship Monitor 2005 Report on Women and Entrepreneurship. Babson College and London Business School.

Minniti (2010) European Journal of Development Research (2010) 22, 294–312. doi:10.1057/ejdr.2010.18; Published online 13 May 2010 Female Entrepreneurship and Economic Activity

McClelland, Swail, Bell, Ibbotson, 2005: Following the pathway of female entrepreneurs: A six-country investigation. Emerald Group Publishing Limited

Moss, Saunders (1987) Do Women Entrepreneurs Require Different Training? American Journal of Small Business

Nichter, S., & Goldmark, L. (2009). Small Firm Growth in Developing Countries. World Development, 37(9): 1453-1464.

North, D.C. (1990). Institutions, institutional change and economic performance. Cambridge: Cambridge University Press. Oppenheimer(1970): The Female Labor Force in the United States; Demographic and Economic Factors Concerning Its Growth and Changing Composition. Population Monograph Series, No. 5.

Parker, S.C.(2004) The Economics of Self-employment and Entrepreneurship. NewYork: Cambridge University Press.

Perry, G. et al (2007). Informality: Exit and Exclusion. Washington D.C.: The International Bank for Reconstruction and Development / The World Bank.

Pia Arenius Maria Minniti (2005). Perceptual Variables and Nascent Entrepreneurship Small Business Economics 24: 233–247 _ Springer 2005 DOI 10.1007/s11187-005-1984-x

Reynolds, P., et al. (2005). "Global Entrepreneurship Monitor: Data collection design and implementation 1998–2003." Small Business Economics, 24(3), 205–231.

Reynolds, D., Nicolson, R. I. and Hambly, H. (2003). Evaluation of an Exercisebased Treatment for Children with Reading Difficulties

Robinson, P.B., & Sexton, E.A. (1994). The effect of education and experience on self-employment success. Journal of Venturing, 9(2): 141-156.Schneider, F., & Enste, D. H.

(2000). “Shadow Economies: Size, Causes, and Consequences.” Journal of Economic Literature, 38 (1): 77–114.

Reimers, C. and M. Honig, 1995, Responses to social security by men and women, The Journal of Human Resources 31 (2), 359-382.

Rebernik M., Tominc P., Duh M., Rus M., Pušnik K., Krošlin T., Bradač B., Močnik D. (2006), Slovenian Entrepreneurship Observatory 2005 (Slovenski podjetniški observatorij 2005), Maribor, Faculty of Economics and Business

Schneider, F., Buehn, A., & Montenegro, C. E. (2010). “Shadow Economies All over the World: New Estimates for 162 Countries from 1999 to 2007.” The World Bank Policy Research Working Papers, WPS5356.

Schubert, S., A. Rakin, D. Fischer, J. Sorsa and J. Heesmann, 1999. Characterization of the integration site of Yersinia high-pathogenicity island in Escherichia coli. FEMS Microbiol. Lett., 179: 409-414.

Scott, 1986: Gender: A Useful Category of Analysis.

Sen, A. (1999). Development as Freedom. New York: Alfred A. Knopf.

Shane, S. (2009). Why Encouraging more People to Become Entrepreneurs is Bad Public Policy. Small Business Economics, 33(2):141–49.

Shane, S., & Venkataraman, S. 2000. The promise of entrepreneurship as a field of research. Academy ofManagement Review, 25: 217–226.

Thurik et al. (2002) Gender, entrepreneurial activity and entrepreneurial self-image: new insight into the question: "what is an entrepreneur?", Small Business and Entrepreneurship Development Conference at the University of Nottingham 15-16 April, (European Research Press, Shipley, UK, 2002), 452-463.

Verheul, Stel, and Thurik, 2004, Explaining female and male entrepreneurship across 29 countries, SCALES-paper series.

Verheul, I. and A.R. Thurik, 2001, Start-up capital: does gender matter?, Small Business Economics 16, 329- 345.

Verheul, R. (2005). Clinical utility of dimensional models for personality pathology. Journal of Personality Disorders, 19, 283-302. doi: 10.1521/pedi.2005.19.3.283.

Verheulyz Van Stelyz A Thurikyz R (2006). Explaining Female and Male Entrepreneurship at The Country Level Entrepreneurship & Regional Development, 151–183.

Ward, K. and F.C. Pampel (1985) Structural Determinants of Female Labor Force Participation in Developed Nations, 1955-1975. Social Sciences Quarterly, 66(3).654-667.

Wennekers S, van Stel A, Thurik R, Reynolds P (2005) Nascent entrepreneurship and the level of economic development. Small Bus Econ 24(3):293–309.

How Nascent Men and Women Entrepreneurs Face Necessity and Opportunity through Governmental Institution's Quality

This study investigates gender differences in entrepreneurial motivations of individuals that have already chosen to become entrepreneurs. This paper focuses on male and female entrepreneurs that decided to start a new business for Opportunity or Necessity. Using GEM individual data and matching them with World Bank data, describing differences in institutions, this research proposes an across countries analysis in order to understand reaction of men and women, that have already decided to become entrepreneurs out of necessity or to pursue entrepreneurial opportunities, to perceptions of governmental institutions' quality (GIQ). The novelty of this analysis is related to the peculiar characteristics of the depended variable which is a dichotomous one and it discriminates necessity based entrepreneurs from opportunity-based entrepreneurs. Moreover, we consider a sample of only entrepreneurs. We examine the effects of Gender and GQI on the probability for an aspiring entrepreneur to start a business for opportunity or necessity. Results show that being a female nascent entrepreneurs has a negative effect on the probability to start a business because of opportunity but from another point of view being a nascent woman entrepreneurs has a positive effect on the probability to start a business out of necessity. Moreover GIQ moderate the negative effect of being a female nascent entrepreneur in case of opportunity-driven entrepreneurship. When Governmental institutions' Quality is high the probability for a woman nascent entrepreneurs to start a business in order to hunt business opportunity increases. On the other hand when Governmental institutions' Quality is high the probability for a woman nascent entrepreneur to start a business because of necessity decreases.

1. Introduction

Reynolds et al. (2002) make an explicit conceptual distinction between "opportunity-based" and "necessity-based" entrepreneurship as contextual motivations. Contextual motivation is the influence of social, economic, and political environments that shape individual behaviors, and

thus may impact the likelihood of new firm findings among nascent entrepreneurs. Recent empirical and conceptual evidence, suggests that it is the entrepreneur's perception of the environment which plays a key role in the firm's chances of success (Bruno and Tyebjee 1982). Necessity-based entrepreneurship involves people who start a business because other employment options are either absent or unsatisfactory. In contrast, opportunity-based entrepreneurship involves those who choose to start their own business by taking advantage of a perceived entrepreneurial opportunity. Global assessments indicate that two-thirds of entrepreneurs self-classify as opportunity motivated while one-third self-classify as necessity motivated (Reynolds et al. 2002).

The main issue of this paper is to understand how governmental institutions address gender entrepreneurial motivation through opportunity and necessity driven entrepreneurship. We decided to concentrate on this phenomenon because incentive to female entrepreneurship is still an undervalued problem. If we are able to identify how government could increase female entrepreneurship entry in new business, we could be able to understand what incentives could be used to generate new female entrepreneurs that can lead economic growth through employment and production.

There is worldwide evidence that women are less likely to engage in the entrepreneurial activities than men (Minniti et al., 2005; Reynolds et al., 2002). In last few decades multiple waves of research tried to explain gender gap in entrepreneurial activity using a number of factors, such as differences in human capital (Greene, 2000; Verheul, et al, 2005), differences in social capital (Renzulli, et al, 2000), differences in motivations (Carter et al., 2003; Manolova, et al., 2008), and differences in preferences (Verheul etal., 2008). Analysis show that self-employed women have different characteristics than self-employed men (Cowling and Taylor, 2001; Georgellis and Wall, 2005). Brown et al. (2006) found that this difference is partly driven by various household structures, familial responsibility and employment status of the partner. Some researches point out the importance of female entrepreneurship as important source of employment for women. For example, female owned enterprises reduce discrimination against women in the labor market and fight against women trafficking by reducing unemployment (Welter et al, 2004). Similarly, women that succeed in entrepreneurial activities can serve as a role model for younger generations demonstrating new opportunities for employment.

It has long been known that the level of male and female entrepreneurship differs strongly

across countries. This variance is related to differences in levels of economic development (Wennekers et al. 2005), but also to diverging demographic, cultural, and institutional characteristics (Acs and Armington 2004; Busenitiz et al. 2000; Fusari 1996; Karlsson and Duhlberg 2003; Rocha 2004; Thurik et al. 2006; Wong et al. 2005; Arenius and Minniti 2005, Koellinger etal. 2005). Women and men differ in their decisions to start a new business also because of the motivations that related to that choice. Perceptions of GIQ could boost or discourage women and men nascent entrepreneurs' willingness to be involved in necessities or opportunities new business creation.

This paper examines the existence of gender gap in necessity and opportunity based entrepreneurship and institutions' effects on female entrepreneurship. We contribute to extend a literature that studies gender differences in self-employment across countries and institutions (McMullen, Bagby & Palich, 2008; Autio & Acs 2009; Aidis, Estrin & Mickiewicz, 2012; Estrin, Korosteleva & Mickiewicz, 2012). Additionally, this research extends the literature which presents entrepreneurship like an opportunity or a necessity that contribute to economic growth and welfare (Bruno and Tyebjee 1982; Reynolds et al. 2002; Acs and Armington 2004; Busenitiz et al. 2000; Fusari 1996; Karlsson and Duhlberg 2003; Rocha 2004; Thurik et al. 2006; Wong et al. 2005; Arenius and Minniti 2005, Koellinger etal. 2005)

The ability to implement such comparative analysis is enhanced by the opportunity to use individual GEM data and matching it with World Bank data describing differences in institutions quality across countries.

This study investigates gender differences in entrepreneurial motivations of individuals that have already chosen to become entrepreneurs. This paper focuses on male and female entrepreneurs that decided to start a new business for Opportunity or Necessity. Using GEM individual data and matching them with World Bank data, describing differences in institutions, this research proposes an across countries analysis in order to understand reaction of men and women, that have already decided to become entrepreneurs out of necessity or to pursue entrepreneurial opportunities, to perceptions of governmental institutions' quality (GIQ).

The novelty of this analysis is related to the peculiar characteristics of the depended variable which is a dichotomous one and it discriminates necessity based entrepreneurs from opportunity-based entrepreneurs. We examine the effects of Gender and GQI on the probability for an aspiring entrepreneur to start a business for opportunity or necessity.

Results shows that that being a female nascent entrepreneurs has a negative effect on the probability to start a business because of opportunity but from another point of view being a nascent entrepreneurs woman has a positive effect on the probability to start a business out of necessity. Moreover GIQ moderate the negative effect of being a female nascent entrepreneur in case of opportunity-driven entrepreneurship. When Governmental institutions' Quality is high the probability for a woman nascent entrepreneurs to start a business in order to hunt business opportunity increases. Of the other hand when Governmental institutions' Quality is high the probability for a woman nascent entrepreneur to start a business because of necessity decreases.

Next pages provide a theoretical summary, our purposes, data and methodology used, results, conclusions, and further investigations.

2. Theoretical Framework

Even if the number of new female entrepreneurs increased in the last years, the number of men that decide to be involved in self-employment, across countries, is bigger than women. Despite the relevance of this phenomenon not enough is known about the relationship between governmental institutions and gender necessity and opportunity based entrepreneurship. This matters because there is evidence that underline the importance of women in entrepreneurship in economic growth (GražinaStartien, Rita Remeikien, 2008; Reimers and Honig , 1995 ; Kyro, 2001; Buttner & Moore, 1997; Chaganti, 1986; Scott, 1986; Brush 1990, 1992; Langowitz & Minniti, 2005; Minniti, 2010) and different studies link necessities and opportunities in entrepreneurship as a way to understand economic and social development (Bruno and Tyebjee 1982; Reynolds et al. 2002; Acs and Armington 2004; Busenitiz et al. 2000; Fusari 1996; Karlsson and Duhlberg 2003; Rocha 2004; Thurik et al. 2006; Wong et al. 2005; Arenius and Minniti 2005, Koellinger etal. 2005).

In our analysis we consider studies which increasingly model and measure how male and female entrepreneurial activity is affected by different institutional factors (Verheul, I., van Stel, A., & Thurik., R., 2006; Terjesen, S., & Amoro, J. E , 2010; Estrin and Mickiewicz 2011). Moreover, we point our attentions on studies that underline the importance of motivation that leads to entry decisions in entrepreneurship (Crewson, 1997; Evans and Leighton, 1989; Acs 2006; Williams 2009; Block and Sandner, 2009; Sander Wennekers, André van Wennekers, Roy Thurik, Paul Reynolds2005; Perunovic, Zoran, 2002; Block & Wagner 2010).

In this section we present: (2.1.) a brief literature review on previous studies that investigate the link between institutions and entrepreneurship; (2.2.) a brief literature review on previous studies on institutions and necessity and opportunity entrepreneurship; (2.3.) a brief literature review on previous studies that investigate if there is a link between institutions, gender gap, and female entrepreneurship; (2.4.) theoretical summery that propose our theory about what sort of relationships we might expect to find between GQI, male and female necessity and opportunity entrepreneurship, and institutions across countries.

2. 1. Institutions and entrepreneurship

There is no simple way to consider a country's economic, social and political environment. However, as Anderson and Jack (2002) argued, new firm creation is an economic process embedded in a specific environment and we cannot ignore it. This analysis tries to understand how the actions of government and self-confidence variables affect female and male nascent entrepreneurs. Before investigating these phenomena we provide a summary of different findings about self-employment and Governmental Institutions

Baumol (1990) argued that institutional contexts may influence self-employment activities generating productive, non-productive, and even destructive forms of entrepreneurship. Institutions and the associated incentives and penalties for particular types of economic behavior determine the balance between these three forms, with higher quality institutions motivating entrepreneurs to choose productive over value-reducing activities. Schumpeter (1934) and Kirzner (1973) argued that in contexts where institutions are functioning effectively, entrepreneurial risks primarily relate to the nature of the ventures themselves, but in a developing economy, weaker institutions may increase net returns to nonproductive or even criminal activities.

Johnson et al. (2002), Kunt et al. (2006), Klapper et al. (2006), and Aidis C. (2010) show some relationship between entrepreneurship and institutions. They underline the critical role of property rights and the rule of law in underpinning productive entrepreneurial activities: weak Rule of Law increases the transaction costs of entrepreneurship as well as the riskiness of entrepreneurial activity (Estrin and Michievicz, 2011). De Soto (2001) argues that the lack of a well-defined and efficient system of registering, protecting and trading property rights may be the key obstacle, preventing entrepreneurs from utilizing and combining potentially productive

assets and turning them into capital. North and Thomas (1973), Williamson (1985, 2000), Barzel (1997), Rodrik (2000), Acemoglu and Johnson (2005) and others have argued that the Rule of Law and its economic component, the property rights system, are constitutional level institutions that form the backbone of the market economy. A strong Rule of Law facilitates entrepreneurial entry because entrepreneurs are more confident about the possibility to protect their work, the enforcement of the contracts and reduction of transaction costs.

In recent institutional research, the focus has shifted from the assignment of rights per se to the institutional conditions that make effective the execution of these rights, especially exchange and the enforcement of legal contracts (Sonin 2003; De Soto 2001). As Coase (1960) pointed out, the essence of transactions is the exchange of property rights rather than goods. Without clear title, transactions become subject to expropriation by more powerful agents (Besley, 1995; Laeven and Woodruff, 2007). In the language of entrepreneurship, without a mechanism to enforce clear property rights, a productive entrepreneur's desired future state becomes risky (Baumol, 1990). Lack of enforceable property rights also reduces incentives to explore possible opportunities, creating a vicious cycle of missed opportunities instead of a positive feedback loop of learning (Foss and Foss, 2008).

Aidis and Adachi (2007) pointed out that strategic investment in property, such as machinery or brands, is at risk where rule of law is weak. It means that a potential strategic entrepreneur would have more to lose than a potential survival entrepreneur in such circumstances, and investment in strategic entrepreneurship would be less likely where rule of law is weak.

Another element of the institutional context, important for entrepreneurial activity, is a cluster of regulations and policies determined by the government such as entry regulations, labor regulations, welfare, and taxes (Parker 2009; Aidis et al. 2010). Taxes and welfare provisions may affect entrepreneurial entry by their direct impact on expected returns from entrepreneurial activities and their opportunity costs. According to Levie and Autio (2011)[23] entry, labor, and exit regulations have a negative effect on entrepreneurship because these regulations are seen as obstacles to entrepreneurial activities that increase financial and non-financial costs for firms.

[23] The authors consider regulatory burden index that is comprehensive of regulation of entry index, labor index, regulation of exit index.

The sociological stream of entrepreneurship research has sought to explain the entrepreneurial occupational choice as the individual's response to institutional pressures to conform (Aldrich, 1979; Aldrich and Fiol, 1994; DiMaggio and Powell, 1983; Hwang and Powell, 2005; Sørensen, 2007; Thornton, 1999). Dreher and Grassebner (2007) found high corruption to be associated with reduced entrepreneurial entry. Fisman and Svensson (2007) presented evidence that corruption lowers growth rates of firms. Djankov et al. (2002) found a correlation of 0.68 between number of procedures for starting a business and corruption, supporting the tollbooth theory of the public choice school, which argues that more procedures and longer delays facilitate bribe extraction.

One could also argue that higher fees facilitate bribe extraction provided that the bureaucrat can lower the cost of fee to the entrepreneur. Djankov, S., La Porta, R., Lopez-de-Silanes, F., Shleifer, A. (2002) found that heavier regulation of entry is generally associated with greater corruption and a larger unofficial economy, but not with better quality of private or public goods countries. Entry is regulated more heavily by less democratic governments, and such regulation does not yield visible social benefits. The principal beneficiaries appear to be the politicians and bureaucrats themselves. Those environments are not favorable for entrepreneurial activities.

Desai et al. (2003) suggest that the institutional environment plays an important role in shaping the nature of industrial activity and, particularly, the dynamics of new enterprises. Specifically, greater fairness and protection of property rights is shown to increase rates of entry, decrease rates of exit, and lower average firm size. These effects, however, are not equally pronounced in all parts of Europe. According with the authors, higher levels of corruption and better functioning legal environments promote greater development of financial markets. In addition, the legal and institutional factors and the overall level of capital market development, in turn, have been shown to influence aggregate economic outcomes as in King and Levine (1993), Rajan and Zingales (1998), and Demirguc-Kunt and Maksimovic (1998).

Demirguc-Kunt et al. (2006) found that businesses are more likely to choose the corporate form countries with developed financial sectors and efficient legal systems, strong shareholder and creditor rights, low regulatory burdens and corporate taxes and efficient bankruptcy processes. Corporations report fewer financing, legal and regulatory obstacles than unincorporated firms and this advantage is greater in countries with more developed institutions

and favorable business environments. Authors found some evidence of higher growth of incorporated businesses in countries with good financial and legal institutions.

Aidis, Estrin, Mickiewicz, (2009) found that the key institutional features that enhance entrepreneurial activity are indeed the rule of law and limits to the state sector. They found a negative impact of the state sector (comprising in our second factor the level of taxation and the extent of welfare provision) on entrepreneurial activity. It would seem that policies to increase the fiscal role of the state in the economy are therefore in direct conflict with aspirations to create a more entrepreneurial society. Rule of Law has a positive impact on nascent entrepreneurs but the significance is very low.

Rafael La Porta, Florencio Lopez-de-Silanes, Andrei Shleifer, Robert Vishny (1999) found that poor countries, close to the Equator, ethno linguistically heterogeneous, use French or socialist laws, or have high proportions of Catholics or Muslims exhibit inferior government performance. They also showed that the larger governments tend to be the best performing ones. The importance of (reasonably) exogenous historical factors in explaining the variation in government performance across countries sheds light on the economic, political, and cultural theories of institutions.

Leora Klapper, Raphael Amit, Mauro F. Guillén and Juan Manuel Quesad (2010) underline the presence of significant relationships between entrepreneurial activity and indicators of economic and financial development and growth, the quality of the legal and regulatory environment and governance.

Aidis, Estrin, Tomasz Mickiewicz (2008) found that in Russia the negative environment, high level of corruption for business and especially entrepreneurial activity, has led to low levels of entrepreneurship. The relatively few who undertake some form of entrepreneurial activity in Russia are different in several interesting ways from their counterparts in more business friendly environments. Authors underline that networks are so important in Russia that those who are already in the business sector, more than in other countries, dominate entrepreneurial entry.

Levie and Autio (2011) claim: "entry into entrepreneurship is a strategic act for individuals who seek an optimal way to exploit their human, social, and financial capital. Tradeoffs associated with this choice are influenced by institutional conditions". They find lighter burden of regulation[4] associated with a higher rate and relative prevalence of strategic

entrepreneurial entry. Rule of Law moderates regulatory burden effects on strategic entry only when it is strong.

According to Freedman (2011) collective sense may suggest that good governance raises entrepreneurship. The logic is that the economic and social benefits boost individual propensity in startup activity. However, Troilo (2011) found that "the number of procedures to enforce contracts, the number of procedures to start a business, and the number of days to start a business is negatively correlated with entrepreneurship, and that a common law legal system is negatively related to entrepreneurship" (Troilo, 2011, p. 158). Unlike Acs et al. (2008), Troilo (2011) found that well established laws that exist in developed countries may be a barrier to increased entrepreneurship.

This analysis considers the effect of governmental institutions quality on male and female aspiring entrepreneurs. We use an aggregate index that contemplates six dimensions of perceived countries' governance goodness that generally affect entrepreneurial entry decision. This Institutional Quality index is an output of a factor analysis that contains information's on the level of quality perceived of some variable mentioned above (Voice and Accountability, Political Stability and Absence of Violence/Terrorism, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption). However, this index does not include information about regulations of entry or exit and employment. As post estimation check we included this information in our analysis and the results lead to the same conclusions.

This study is not the first study that uses Worldwide Governance Indexes (WGI) to explore entrepreneurial propensity across countries but it is the first one that explore male and female entrepreneurial propensity considering one index built with those specific variables. Friedman (2011) found that perceived government effectiveness (WGI) was significantly negatively related to necessity and opportunity driven entrepreneurship. He explains these results with specific country policies and leadership direction that either promotes or prevents entrepreneurship. Another explanation is that countries whit good institutions have higher entry barriers for new businesses and more taxes. Cosentino et al. (forthcoming) did not find any statistical significant relation between Governmental Institutions' Quality and probability of entry in entrepreneurship.

2.2. Opportunity and Necessity Entrepreneurship and Institutions

This section provides a brief summary of previous theory on Opportunity and Necessity Entrepreneurship and Institutions. Stevenson (1983) and Krueger Jr., (2007) hold that entrepreneurial management, defined as a set of opportunity-based management practices, can help firms remain vital and contribute to firm and social level value creation. According to Per Davidsson (1991) Objective measures of Ability, Need, and Opportunity can explain a substantial share of the variation in Actual (historical) Growth rates. Objective and subjective measures of these three factors can explain a substantial share of the variation in Growth Motivation. Moreover, need-related issues appear more important than Ability and Opportunity.

Block & Wagner (2010) use panel data to analyze how necessity and opportunity entrepreneurs differ in general, and in their ability to discover and exploit entrepreneurial opportunities. They found that the opportunities exploited by opportunity entrepreneurs are generally more profitable than those exploited by necessity entrepreneurs. They also found that the determinants of success differ to a strong degree for necessity and opportunity driven self-employers. Necessity entrepreneurs lack specific human capital necessary to succeed as an entrepreneur, together with the finding that specific human capital is a determinant of success, offers an interesting guidance for policy. Instead of merely providing money to start-ups by necessity entrepreneurs, the state could make its financial support contingent on a certain level of specific human capital, e.g., very specific labor market experience or a professional education in the professional field in which the venture is started.

The research illustrates that the level of entrepreneurship, reflected in the prevalence of incorporated and unincorporated nascent business relative to the labor force (or populations), differs strongly across countries (Wennekers et al. 2005). This variance is related to differences in levels of economic development and to diverging demographic, cultural, and institutional characteristics (Acs and Armington 2004; Busenitiz et al. 2000; Fusari 1996; Karlsson and Duhlberg 2003; Rocha 2004; Thurik et al. 2006; Wong et al. 2005).

Perunovic, Zoran (2002) confront necessity-based and opportunity-based entrepreneurial concepts in the transition of developing economies. The authors explore how different personal and regional characteristics can support either a necessity- or opportunity-based entrepreneurial environment. Results suggest national systems of innovation as a complementary and/or dominant catch-up strategy for transition and developing economies.

Bygrave, Hay, Emily Ng & Paul Reynolds (2003) examined informal investment in the

29 nations that participated in the Global Entrepreneurship Monitor (GEM) study in 2001. Investment was tabulated by gender, age of investor and amount invested for the 29 nations combined. Prevalence of opportunity-pull entrepreneurship was correlated with informal investment, entrepreneurial capacity, and perception of start-up opportunities in a subset of 18 GEM nations. In contrast, necessity-push entrepreneurship had no significant correlation with those same variables.

Sander Wennekers, André van Wennekers, Roy Thurik, Paul Reynolds (2005) hypothesize a U-shaped relationship between a country's rate of entrepreneurial dynamics and its level of economic development. This would imply a different scope for entrepreneurship policy across subsequent stages of development. Regressing global entrepreneurship (GEM) 2002 data for nascent entrepreneurship in 36 countries on the level of economic development as measured either by per capita income or by an index for innovative capacity, they found support for a U-shaped relationship. The results suggest that a 'natural rate' of nascent entrepreneurship is to some extent governed by 'laws' related to the level of economic development. For the most advanced nations, improving incentive structures for business start-ups and promoting the commercial exploitation of scientific findings offer the most promising approach for public policy. Developing nations, however, may be better of pursuing the exploitation of scale economies, fostering foreign direct investment and promoting management education.

Williams (2008) use empirical data from England, Ukraine and Russia on the motives of specific entrepreneurs operating wholly or partially in the informal economy, to evaluate critically the conventional view that entrepreneurs are either necessity-driven or opportunity-driven. The paper highlights that, for the vast majority, both necessity and opportunity drivers are involved in their decision to start up enterprises, along with a clear shift from necessity-oriented to opportunity-oriented motivations as their ventures become more established.

Block and Sandner (2009) analyze whether necessity entrepreneurs differ from opportunity entrepreneurs in terms of self-employment duration. Using univariate statistics, on data from the German Socio-Economic Panel Study (GSOEP), authors found that opportunity entrepreneurs remain in self-employment longer than necessity entrepreneurs. However, after controlling for the entrepreneurs' education in the professional area where they start their venture, this effect is no longer significant.

Williams (2009) evaluates critically the dichotomous representation between

entrepreneurs as either necessity- or opportunity-driven. Drawing upon face-to-face interviews in England with 70 entrepreneurs trading wholly or partially off-the-books, he found that the motives that lead of off-the-books entrepreneurs not only over-simplify their rationales for both necessity and opportunity purposes but also obfuscates how self-employers motives to change over time.

Acs & Varga (2006) distinguishes "necessity entrepreneurship," which is to become an entrepreneur because of no better option, from "opportunity entrepreneurship," which is an active choice to start a new enterprise based on the perception that an unexploited or underexploited business opportunity exists. Analyzing data gathered by GEM researchers in 11 countries, Authors have found that effects on economic growth and development of necessity and opportunity entrepreneurship vary greatly. Moreover they found that necessity entrepreneurship has no effect on economic development while opportunity entrepreneurship has a positive and significant effect.

Ozgen & Baron, 2007 argued that social networks matter in several ways for bot necessity and opportunity based entrepreneurship. They assist entrepreneurs in gaining access to the more exclusive or less costly resources needed in the process of setting up a venture. Also, they provide privileged access to information and resources that help to identify both more and better opportunities. Block & Wagner (2010) argue that differences in experience and involvement in social networks between necessity and opportunity entrepreneurs should lead to differences in opportunity discovery and exploitation. Being embedded in valuable social networks is important for successful venture creation (De Carolis & Saparito (2006); Jack & Anderson (2002); Larson (1992)).

Evans & Leighton (1989); Schiller & Crewson (1997) propose that necessity entrepreneurs should be more likely than opportunity entrepreneurs to exploit an entrepreneurial opportunity in a low-income sector. In line with this argument, empirical studies show that entrepreneurs with higher opportunity costs pursue more valuable opportunities, resulting in higher earnings. Also, Thurik et al. (2002) provide a detailed analysis of aggregate conditions influencing nascent entrepreneurship and argue that technology, level of economic development, culture, and institutions all influence the demand for entrepreneurship by creating opportunities available for start-ups. Perceptions represent the most recent group of variables included in empirical studies of new business creation (Arenius & Minniti 2005, Koellinger et al. 2005). An

increasing number of scholars agree that opportunity recognition represents the most distinctive and fundamental entrepreneurial behavior (Shane & Venkataraman 2000). In fact, there is wide agreement that entrepreneurs are individuals who are more likely than others to be "alert" to the identification and exploitation of profit opportunities (Kirzner 1973 and 1979).

2.3. Institutions, Female Entrepreneurship and Gender Gap

This section examines the relationship between female entrepreneurship, gender gap and institution. Aidis, Welter, Smallbone, and Nina Isakova (2007) suggest that interaction among economic, institutional, and transitional influences affects female entrepreneurship. Though formal institutions such as rules and regulations allow for the possibility of female business development, informal institutions such as gendered norms and values that reflect the patriarchy observed during the Soviet era restrict women's activities and their access to resources. Moreover, they argued that the evolving institutional framework might constrain women's formal integration into the emerging market economy by redefining and changing gender roles, thus restricting their access to external resources needed in order to realize a venture.

Brush (2006) argued that women are particularly restricted in their access to the economic resources needed for entrepreneurship, including capital and finance. Well defined, secure property rights facilitate access to resources and, in many institutional contexts.

Williamson (2002) suggests that institutions might also ascribe housebound roles to women, which would conflict with entrepreneurial activities. Informal institutions such as cultural traditions, social customs, and human rights tend to evolve as a culturally specific interpretation of formal rules, modifying and assisting in enforcing formal institutions. As Welter & Smallbone (2003) note, formal institutions not only influence the extent which female entrepreneurship (and entrepreneurship more generally) is able to develop, but formal institutions also affect the types of enterprises in which women can engage. Cultural norms and values help shape an individual's way into entrepreneurship and more specifically women's intentions to set up a business.

Reynolds, Bygrave and Autio (2004) argued that the countries with higher public expenditures on childcare tend to be countries with large social welfare sectors and current research indicates that large welfare sectors are negatively correlated with entrepreneurial participation rates. Consequently, state-based childcare may discourage women from starting

businesses.

Limited studies tried to link the governmental institutions, informal institutions and gender gap. Most of them found some soft relationships. Estrin & Mickiewicz (2011) propose that rule of law affect men and women entry decisions in new business. The authors consider the quality of government looking at the effect of rule of law[3] on men and women's decisions to become entrepreneurs. They argue that women are less likely than men to undertake a business where the rule of law is weaker. The authors do not find any relationship between gender and rule of law[4]. However, the size of the state[5] seems likely to have a relatively negative impact on female entrepreneurs than on their male counterparts, because women's occupational decisions are often made within the social context of a household and women's activity rates are typically lower than men's, due to the additional burdens and responsibilities associated with domestic and caring labor. Probably women's decisions to enter into entrepreneurship will be more sensitive to contextual factors because the opportunity cost is higher for them than for men. A small state of sector implies that the provision of social security will be modest and they may create incentives for women to become more economically active reducing gender gap.

Leora Klapper, Raphael Amit, Mauro F. Guillén and Juan Manuel Quesad (2007) try to find significant relationships between entrepreneurial activity and indicators of economic and financial development and growth, the quality of the legal and regulatory environment and governance.

Amanda Elam & Siri Terjesen (2010) investigated how different types of gender-linked social/cultural institutions may mitigate the influence of gender essentialist beliefs on the decision to start a business for men and women. They found that public expenditure on childcare as a percentage of GDP affects in different way women and men entry decisions. Legal system is important to define economic opportunities and to understand how formal institutions affect entrepreneurship. Elam, Terjesen (2010) and Verheul et al. (2006) explain differences in female and male entrepreneurship using respectively a sample of 11 and 29 countries. They discovered that gendered institutions (female business leadership, gender wage inequality and public expenditures on childcare) influence the decision to start a business indirectly through perceptions and gender.

Aidis et al. 2008 argued that with weak property rights entrepreneurs have to rely to a greater extent on informal social networks for resource acquisition and those networks tend to be

male-dominated. Due to gender defined social positioning, men may also be more effective in dealing with government officials (Bardasi et al. 2011) and in addressing problems of corruption.

Brush 2006 argued that women are particularly restricted in their access to the economic resources needed for entrepreneurship, including capital and finance. Well defined, secure property rights facilitate access to resources and, in many institutional contexts.

Cosentino et al. (forthcoming) found that women appear less likely to start a new business in countries where the quality of governmental institutions is high. However, high levels of female self-confidence increase women's probability to become a new entrepreneur in contexts where the quality of governmental institutions is high

2.4. Theoretical Summery and Hypothesis

The discussion above highlights two aspects: i) there are few studies that consider how formal governmental institutions affect male and female nascent entrepreneurs in both necessity and opportunity based decisions ii) how GQI affect male versus female nascent entrepreneurs' probability to start a business for necessity or opportunity.

In order to understand if male entrepreneurship prevents or facilitates female entrepreneurship, on next two sub-sections we draw our hypothesis on necessity and opportunity based entrepreneurship from institutions and entrepreneurship theories (2.4.1) and gender gap in entrepreneurship theories (2.4.2).

2.4.1. Female role in motivation

Minniti (2011) posits out that the choice to start a new business is often linked to necessity or to time and location flexibility: for example, to the type of independence that can accommodate family needs and child caring. Because of its nature, the possibility that female individuals in a country undertake entrepreneurial activities for necessity is higher than the possibility that female individuals undertake entrepreneurial activities for opportunity.

This paper tries to understand female role once that the choice of being involved in startup activities is already taken. More important, our research proposition is investigate gender role in nascent entrepreneur's motivations (necessity and opportunity).

Considering previous studies which highlight that gender gap is lower in necessity-based entrepreneurship (Minniti 2010) and being a woman has a negative effect on the probability of

start a new business because of opportunity, it seems reasonable to think that once an individual decide to be a nascent entrepreneur being a woman has no negative effect on the probability of start a new business out of necessity.

2.4.2. Quality of Governmental Institutions' role in female motivation

Cosentino et al. (forthcoming) argued that high levels of governmental institutions' quality reduce women probability of being involved is startup activities because those are perceived as good by wage work oriented women. But what happens if we consider individual that have already made the choice of being nascent entrepreneurs?

First of all, according to our previous studies, we do expect that, on average, the direct effect of GQI on the probability to undertake opportunity-based and necessity-based business activities, is not statistically significant. More important we do expect that once an individual has decided to be a new entrepreneur, the probability to start a new business for opportunity reasons for a women increases when the quality of institutions is high. It means that we expect that GQI positively moderate female negative effect in opportunity entrepreneurship.

3. Method

3.1. Data

A strong point of this analysis is that our sample is very wide and representative of the population. The empirical approach is based on merging cross-country micro-economic data from the Global Entrepreneurship Monitor (GEM) with the Worldwide Governance Indicators from World Bank that provide country-specific institutional information.

This analysis uses nine years of country-level panel data developed by the Global Entrepreneurship Research Association (GERA). The study covers 53 developed and developing economies between 2001 and 2009 and includes all startups, disregarding their legal status; the individual level data are generated through surveys, which create stratified samples of at least 2,000 individuals per country, each year. The sample is selected from working age population in each participating country and accordingly captures only entrepreneurs.

The age range of respondents varies substantially across national surveys, from as young as 14 to over 90 years in age. A set of weights has been developed from the adjustments based on

standardized national population structure estimates for those who, being 18 to 64 years of age, qualify to be active in the labor force. Participants are largely dictated by the percentage coverage of the landline telephone network, where landline coverage is greater than 85% of all households and then the National Teams are permitted to use a landline-based survey outreach to generate a suitable list of participants to contact. For those countries where landline telephone coverage is not as wide-spread, this approach is less appropriate, so face-to-face interview techniques and/or mobile phones are also used. Upon receipt of the individual country level data by the Data Team, the data is cleaned, coded, and weighted to create a harmonized data set which ensures representativeness and consistency across all countries in the study (GEM Manual 2012).

The GEM dataset forms a unique and distinctive set of worldwide comparative data on national-level entrepreneurial activity. The strong point of the GEM dataset is that it measures genuine entrepreneurial intentions of representative populations of adult-age individuals, in a reliable and internationally comparable manner, both before and after the actual launch of the new start-up.

In order to explore the impact of the government effectiveness on male and female nascent entrepreneurs, we use the Worldwide Governance Indicators from World Bank that provide information about the value of the governmental institutions and how they are perceived from the individuals. The WGI cover over 200 countries and territories, measuring six dimensions of governance, the aggregate indicators are based on several hundred individual underlying variables, taken from a wide variety of existing data sources. The data reflect the perceptions on governance of survey respondents and public, private, and nongovernmental organizations experts worldwide. The WGI draw together data on perceptions of governance from a wide variety of sources and organize them into six clusters corresponding to the six broad dimensions of governance (Kaufmann, Kraay, and Mastruzzi, 2010).

To consider specific country-gender variables we employed others data sources, that are: OECD development center and Economic Intelligence Unit, both of them used to identify specific institutional variable that may affect women's life and individual entry decisions across countries.

3.2. Identifying Nascent Entrepreneurs Opportunity and Necessity Driven

The novelty of this analysis is related to the peculiar characteristics of the dependent variable which is a dichotomous one and it discriminates necessity based entrepreneurs from opportunity-based entrepreneurs. Moreover we consider a sample of entrepreneurs. According to GEM manual 2012, entrepreneurship individual may decide to start for necessity or for opportunity reasons. New business intentions may reflect a voluntary pursuit of opportunity and entrepreneurship that reflects the necessity to engage in such activity in the absence of other employment opportunities (Reynolds et. al. 2002).

GEM data allow us to identify three categories of entrepreneurs: nascent entrepreneurs, new entrepreneurs, established entrepreneurs. Nascent entrepreneurs are individuals who are in the process of trying to start a firm. New entrepreneurs are owner-managers of entrepreneurial start-ups, which have been in existence for more than months but not more than 42 months. Established entrepreneurs are owner-managers of entrepreneurial firms which have been in existence for longer than 42 months.

This study considers entry process in new business, for this reason the dependent variables identify whether individuals are involved nascent start-up activity or not. Nascent entrepreneurs are defined as those individuals who have taken some action toward creating a new business in the past year, and expect to own a share of the business they are starting, which must not have paid any wages or salaries for more than 3 months (Reynolds et al. 2005).

Our analysis distinguishes between nascent necessity driven entrepreneurs and nascent opportunity driven entrepreneurs. As Block & Wagner 2011 underline a distinction should be made between entrepreneurship that reflects a voluntary pursuit of opportunity and entrepreneurship that reflects the necessity to engage in such activity in the absence of other employment opportunities (Reynolds et. al. (2002). They clarify by saying that "each respondent was asked to indicate whether he was starting and growing his business to take advantage of a unique market opportunity (opportunity entrepreneurship) or because it was the best option available (necessity entrepreneurship)" (Reynolds et al.; 2002).

3.3. Predictor Variables

The explanatory variables used in this study, defined in table 1, are designed to correspond to the factors that help us to investigate relations between the goodness of institutions, self-confidence, and male versus female entrepreneurial entry decision. The two sub section 3.3.1. and 3.3.2

explain our predictors. In these sub-sections we provide definitions about the main variables used in this paper.

3.3.1 Female

This variable identifies individual's gender. It is a dichotomous variable that assumes either value equal to one if the respondent is a woman or zero if the respondent is a man. We use this variable to discriminate entrepreneurial propensity among gender. We do not postulate any assumption on gender role in self-employment because there is evidence that being a woman lowers the probability to become an entrepreneur. An extensive literature shows that female individuals have less probability then male ones to become entrepreneurs (Minniti 2003). On average, the 51% of the respondents is women. Across countries, female respondent are more than the male ones. This is true for all countries except United Arab Emirates, Malaysia, India, Jordan, Turkey, Korea, Singapore, Finland, Greece, China, Brazil, Norway, Sweden, Austria, Iceland, South Africa, Hungary, Philippines, Poland, Japan.

Table 1: Variables Description						
Variables	**Description**	**Obs**	**Mean**	**Std. Dev.**	**Min**	**Max**
Dependent variable						
Startup (Nascent Necessity entrepreneurs)	Those individuals who have taken some action toward creating a new business in the past year, and expect to own a share of the business they are starting, which must not have paid any wages or salaries for more than 3 months, necessity-driven	39112	0.222259	0.41577	0	1
Startup (NascentOpportunity entrepreneurs)	Those individuals who have taken some action toward creating a new business in the past year, and expect to own a share of the business they are starting, which must not have paid any wages or salaries for more than 3 months, opportunity-driven	39112	0.777741	0.41577	0	1
Individual independent variables						
Age	The exact age of the respondent	39112	38.06006	12.24889	14	99
female	1 = female, 0 otherwise	39112	0.387937	0.487286	0	1
Required skills to open a business	1 = respondent believes to have entrepreneurial skills to open a new business, zero otherwise	38436	0.870148	0.336145	0	1
in employment	Main Employment status or current working situation 1 respondent is either in full or part time employment, 0 if not	39112	0.769815	0.420957	0	1
(At least) post-secondary education	1 = respondent has a post-secondary or higher education attainment, 0 otherwise	39112	0.42409	0.49421	0	1
Higher education	1 = respondent has a higher education attainment	39112	0.171559	0.377001	0	1
Business angel in last 3 years	1 = business angel in past 3 years, 0 otherwise	39112	0.109608	0.312405	0	1
Current owner of business	1 = current owner/manager of business, 0 otherwise	39112	0.144559	0.35166	0	1
Knows other entrepreneurs	1 = personally knows entrepreneurs, in last 2 years, zero if not	39112	0.661638	0.473158	0	1
Fear of failure would not prevent start-up	1 = respondent believes that the fear of failure would prevent him/her from starting a business	39112	0.235682	0.42443	0	1
Country-level control variables						
GDP growth rate	Annual GDP growth rate (WB WDI 04 2009)	38210	3.98866	2.997917	-10.8945	18.28661
Tertile of GDP per capita (ppp)	GDP per capita at purchasing power parity, constant at 2005 $US (WB WDI 04 2009)	38335	21520.39	17112.85	287.3257	67804.55
Childcare	Availability, affordability and quality of childcare services, as well as the role of the extended family (Economic Intelligence Unit), time invariant,	33370	3.441804	0.847075	2	5
Maternity Leave	Composite policy indicator that assesses length of maternity leave and benefits coverage (Economic Intelligence Unit), time invariant	33370	1.895258	0.921604	0	3.1
No Violence against women	Violence against women, relevant legislation (OECD Development Centre),	33370	0.311011	0.166634	0	0.75
Men Entrepreneurs Rate	Percentage of nascent and established men entrepreneurs from GEM	39112	0.60871	0.091537	0.214286	0.9375
Percentage of Sits Held by Men in Parliament	Percentage of Sits Held by Men in Parliament	38244	78.88584	10.59029	52.7	100
Independent Governmental Institutional variable						
Governamenta Institutions' Quality	Composit index that cointeins informations about Voice and Accountability, Political Stability and Absence of Violence/Terrorism, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption	39077	0.407702	0.923418	-2.31206	1.793659

Table 3. WGI correlation Matrix							
		1	2	3	4	5	6
1	Voice and	1					
2	Political S	0.9564	1				
3	Governme	0.9172	0.9357	1			
4	Regulator	0.9577	0.9534	0.9191	1		
5	Rule of La	0.7287	0.7223	0.6573	0.7316	1	
6	Control of	0.8016	0.8375	0.8205	0.7998	0.6301	1

3.3.2 Governmental Institutions' Quality

These indicators provide highly specific and disaggregated information about particular dimensions of governance. We focus on six Worldwide Governance Indicators: a) Voice and Accountability and Political Stability and Absence of Violence/Terrorism which identify the process by which governments are selected, monitored and replaced; b) Government Effectiveness and Regulatory Quality which identify the capacity of the government to effectively formulate and implement policies; c) By definition we use Voice and Accountability as index of democracy level Rule of Law and Control of Corruption which identify the respect of citizens and the state for the institutions that govern economic and social interactions among them.

As shown in table 2, WGI indicators are strongly correlated. It means that to avoid multicollinearity it is not possible to use all the six variables together in the same analysis[24]. One solution could be to consider each single variable in six different regressions. However this can lead to omitted variables problems.

To avoid misspecification problems and multicollinearity problems we generated one index of Governmental Institutions' Quality. A factor analysis confirm that there is a latent factor behind WGI variables[25] so with the method of maximum likelihood we generated on composite index that represents institutions quality across countries.

This analysis covers a time period between 2001 and 2009. Unfortunately 2001 in WGI data base is missing. In order to avoid the problem of missing values we decided to use the middle value between 2000 and 2002 to cover 2001 WGI's lack of data. Moreover we used lagged value to avoid endogeneity and to ensure temporal causality between our predictors and the independent variable.

[24] It means that if we put all the indicators as independent variables (we will have six predictors) in one unique regression the analysis multicollinearity problems arise.

[25] Even if the theoretical construct of these variables seems to be different high levels of correlation (i.e.0.80) show

Table 2: GQI across countries	
Country	GQI
Argentina	-1.038001
Australia	1.19134
Austria	1.217362
Belgium	0.8936383
Brazil	-0.3380631
Canada	1.141069
Chile	1.08029
China	-0.7949166
Colombia	-0.3320769
Czech Republic	0.6975652
Denmark	1.39025
Ecuador	-1.749789
Finland	1.374032
France	0.7005925
Germany	1.125582
Greece	0.4704025
Hong Kong	1.504635
Hungary	0.732679
Iceland	1.163612
India	-0.7824125
Indonesia	-1.118093
Ireland	1.374116
Israel	0.6414111
Italy	0.5141438
Japan	0.5145561
Jordan	-0.2349665
Korea	0.2638629
Malaysia	0.011531
Mexico	-0.1232726
Netherlands	1.47151
New Zealand	1.314775
Norway	0.8722569
Peru	-0.301472
Philippines	-0.651008
Poland	0.2756088
Portugal	0.6104045
Russia	-0.9186523
Singapore	1.559535
South Africa	0.1083057
Spain	0.8368975
Sweden	1.212858
Switzerland	1.296383
Thailand	-0.1691708
Turkey	-0.202374
Uganda	-0.6259273
Uk	1.379461
United Arab Emir	0.1820727
United States	1.230533
Uruguay	-0.2361768
Venezuela	-1.84287

Table 4 presents country-level averages for all predictor variables used in this study. On average institutions are perceived as good in country such as Finland, Denmark, Iceland, Switzerland, Sweden, Netherlands, New Zealand, Norway, Austria, Canada, Australia, Germany, Ireland, UK, Singapore, United States, Belgium, Chile, Hungary, Slovenia, Japan, France, Portugal, and Spain.

However if we consider Singapore, and Chile they respectively have a low level of good democracy, low index of voice and accountability, a low level of perceived political stability, Chile has a low index of political stability and absence of violence/terrorism however government effectiveness, regulatory quality, rule of law, and control of corruption are perceived as good for this reason GIQ index is high.

The worst quality perceived is related to country such as Venezuela, Russia, Indonesia, Uganda, China, Colombia, Philippines, Peru, Argentina, India, Jamaica, Mexico, Turkey, Brazil, Thailand, Jordan, Croatia, South Africa, Malaysia, United Arab Emir, and Korea.

We notice that in countries such as Iceland, Norway, United States and New Zealand even if level of the six GIQ index is quite high, the difference between men and women in entrepreneurial entry decision is significantly high. The Norway case is particularly surprising not only because of a very good perception of the government system but also because since the 1980s Norway's changing governments have always been almost 50% women and it is the first country in the world that has established a special gender equality agenda (Cosentino, Donato, Montalto and Via, 2012). This first evidence let us think that good governmental institutions do not reduce gender discrepancy.

3.4. Control Variables

The controls variable, also defined in Table 1, have been selected according to the previous literature to consider country level aspect, gender-specific measures of welfare, and personal characteristics that might drive people to become entrepreneurs.

3.4.1. Individual Controls

Individual characteristics are important determinants of entrepreneurship. To consider personal individualities in our regressions we include age, education, experience, and in employment

status. We use a quadratic specification because different studies underline an inverse U–shape relationship between age and decision to entry in a new business (Levesque and Minniti 2006).

A massive literature testifies that there is a relationship between educations and entry decisions in entrepreneurship therefore we control for post-secondary and higher education. Entrepreneurs with previous venture start-up or ownership experience may be endowed with human capital that is valuable in new venture situations because they have experience in the startup process and in running their own business (Gimeno, Folta, and Whoo, 1997). In order to consider previous experiences we include in our regressions the number of incumbent business owners, whether respondents have previously acted as a business angel, and whether the responded shut down a business in the past. Furthermore by the variable ‘‘fear of failure’’ we consider if individuals are risk adverse or not. Finally, startup rates may be influenced by whether the potential entrepreneur is employed while deciding to start his/her own business (Folta & Delmar 2010) and therefore why we take account of employment status.

3.4.2. Macro-Level Controls

The GEM research shows that the level of a given country’s economic development has a significant effect on the nature of its entrepreneurial activity (e.g. Van Stel et al., 2005).

All researches that study institutions’ effects on entrepreneurship consider in their analysis country’s economic expansion controlling for the country’s GDP per capita (purchasing power parity). Table 3 shows that GDP is strongly correlated whit GIQ (ρ=0.80). Again, in order to avoid multicollinearity problems we controlled for three levels of income countries (low income, middle income and high income) based on tertiles of GDP[26]. Moreover we control for economic growth considering the change in GDP from previous year to current year (Livie, Autio 2011).

In gender analysis across countries it is important to consider macro variables that may incentives female entrepreneurship. According to Estrin and Mickiewicz (2011) we use data regarding particular country elements that are likely to have a more specific impact on women:

[26] Using tertile classification we obtained three level of income of income across countries:
countries with low levels of GDP income: 287.3257 < GDP < 25169.17
countries with middle levels of GDP income: 25571.18 < GDP < 35245.61
countries with high levels of GDP income : 35324.41 < GDP <67804.55

adequate protection in combating violence against women. These indicators are reported by the OECD

Table 4. Correlation Matrix for Variable Used In This Study																					
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	Age	1																			
2	Female	0.0319	1																		
3	in employ	-0.1516	-0.1676	1																	
4	(At least)	-0.0531	-0.0249	0.1622	1																
5	Higher ed	-0.0259	-0.0143	0.1307	0.5379	1															
6	Business a	-0.0108	-0.0535	0.0438	0.0428	0.0348	1														
7	Current o	0.0162	-0.1057	0.2196	0.0268	0.0286	0.0926	1													
8	Knows oth	-0.1646	-0.1161	0.1376	0.0942	0.077	0.155	0.1472	1												
9	Fear of Fa	-0.0392	0.0676	0.0062	-0.0298	-0.0107	-0.0256	-0.0873	-0.0301	1											
10	Required	-0.0342	-0.1644	0.1799	0.1045	0.0813	0.1113	0.2745	0.2518	-0.1376	1										
11	men entre	-0.0093	-0.0433	-0.008	-0.0311	-0.0525	-0.0087	-0.0739	-0.0063	-0.0046	-0.0647	1									
12	%of sits h	-0.0136	0.005	-0.0705	0.0059	-0.0498	0.0157	0.044	-0.0414	-0.0492	0.0131	-0.0866	1								
13	GDP grow	-0.1135	-0.0139	0.006	-0.0356	0.0484	0.0602	0.0685	0.0848	-0.0153	0.0521	-0.0944	0.2043	1							
14	Low Incon	-0.1472	-0.015	-0.0697	-0.1083	-0.1031	0.0469	0.0831	0.064	-0.0154	0.0661	-0.0757	0.4261	0.441	1						
15	Middle In	0.0218	-0.0037	0.0015	-0.062	-0.006	-0.0376	-0.0681	-0.0259	0.0858	-0.064	0.0875	-0.4183	-0.2215	-0.4795	1					
16	High Incor	0.1168	0.0179	0.0642	0.165	0.1034	-0.0062	-0.0094	-0.0342	-0.0724	0.0024	-0.0172	0.0215	-0.1919	-0.4582	-0.5603	1				
17	Childcare	0.0332	-0.0014	0.0345	0.025	0.0179	0.003	-0.0357	0.0553	-0.0481	-0.0685	0.1416	-0.3396	-0.0487	-0.1531	-0.0429	0.1879	1			
18	Maternity	0.0258	0.0149	0.0385	-0.0301	0.0348	-0.0687	-0.0696	-0.0405	0.0379	-0.0443	0.0789	-0.4002	-0.2573	-0.2452	0.2974	-0.0697	0.2552	1		
19	No Violen	-0.1016	-0.029	-0.0361	-0.0164	-0.0319	0.0636	0.077	0.0799	-0.0208	0.0274	-0.0949	0.3407	0.3321	0.406	-0.2014	-0.1792	-0.04	-0.4212	1	
20	Governan	0.1565	0.0208	0.0903	0.0896	0.0635	-0.0496	-0.0904	-0.0725	0.0004	-0.057	0.14	-0.2922	-0.4702	-0.712	0.1774	0.4924	0.2591	0.3532	-0.4697	1

Development Centre. Besides, to consider gender-specific measures of welfare we use as Estrin and Mickiewicz variables such as maternity leave and childcare.

Maternity is a composite policy indicator that assesses the length of maternity leave and benefits coverage. Childcare is related to the availability, affordability and quality of childcare services, as well as the role of the extended family in providing childcare. Both indicators are compiled by the Economist Intelligence Unit (EIU and WB 2009). In the formal sector, actual maternity leave may be more extensive than minimum legal provisions. Also, while maternity leave is only available to individuals working in the formal sector, childcare is potentially available to all women, depending on how it is organized (Estrin and Mickiewicz 2011). Informal institutions may mitigate the effect of formal institutions and affect new startup development. This study, therefore, also investigates whether the potential nascent entrepreneur knows any other entrepreneur. Moreover, bearing in mind that historically entrepreneurship and governmental institutions have been men areas, we study male competitiveness and the percentage of seats held by men in parliament. Similarly to our predictors, we use lagged value to avoid endogeneity and to ensure temporal causality. Moreover we were able to control for different type of industry.

3.5. Statistical Analysis

The dataset used for our purposes is an unbalanced panel data, with random individual observation per year[6], and relatively short structure (maximum seven years). We are interested in testing what proxy of goodness of governmental institutional variables affects the male versus female new entrepreneurs. We choose to employ panel regression to analyze the dataset because there is significant cross-country variability for all index values in the dataset.

According to Estrin and Mieckevitz (2011) we adopt a random-effects probit model as our estimator and we use random country-year effects in all our estimations. This is a stronger measure than just country effects, as they allow for unobserved heterogeneity across countries but additionally account for measurement errors and idiosyncrasies that are country-year sample specific. As in Estrin and Mieckevitz (2011) we also experimented with the full set of country fixed effects, which could represent the most consistent estimator, but the probit model does not produce credible Wald statistics. This problem arises because the GEM dataset is highly

unbalanced, with many countries appearing just once or twice over time. Our framework suggests that institutions change less over time, for this reason the introduction of country fixed effects is problematic.

Our core model to test how institutions affect entrepreneur's necessity or opportunity based decisions is constructed as follows:

*Prob (Startup opportunity) ijt = f (GQIjit,, Femaleijt, Individual Controlsit, Country Level Controlsjit, GIQjit*Femaleit);*

Where i denotes individuals, j denotes countries and t denotes time. Entry is a dummy variable and identifies whether or not an individual in a particular country at a particular date is engaged in nascent start-up.

To check the robustness of our regression analyses, we analyzed our data using a logit model. Moreover we control for other for other institutional variables such entry and exit regulation, employment and we obtained always the same results[27]

4. Results

We examine the effects of Gender and GQI on the probability for an aspiring entrepreneur to start a business for opportunity or necessity.

We examine the prevalence of men and women nascent entrepreneurs among motivations. In multivariate analysis we test direct effect of female, GIQ. In order to test hoe GIQ moderate gender we consider two way interaction respectively between: female and GIQ on the probability to become entrepreneurs for Opportunity. Then we examine what happens if we consider female individuals across low levels of GIQ, middle levels of GIQ, and high levels of GIQ. Finally we demonstrate how female role change in high quality institutional contexts among both respondents with self-confidence and respondent without self-confidence.

4.1. Male and Female Nascent Entrepreneurs' Motivation

[27] Results are available from the authors.

The sample is made by entrepreneurs. According to the data that we use about 22% of nascent entrepreneurs are involved in startup activities out of necessity and about the 77% of nascent entrepreneurs are involved in startup activities to pursue entrepreneurial opportunities

The data show that gender asymmetry is consistent across all countries; Table 3 and Table 4 shows the comparative results for men and women in each country among motivations.

Table 5: Countries' Opportunity entrepreneur			
Country	OpportunityMen	OpportunityWomen	t-test for significan differences
Argentina	0.7363636	0.5906736	***
Australia	0.8860294	0.8533835	
Austria	0.8490566	0.862069	
Belgium	0.8991098	0.8961039	
Brazil	0.6277056	0.5899705	
Canada	0.822335	0.8166667	
Chile	0.7644172	0.6055363	***
China	0.6564417	0.5331325	***
Colombia	0.6763006	0.5956284	***
Czech Republic	0.8245614	0.7179487	
Denmark	0.9541779	0.9384615	
Ecuador	0.7792208	0.7655172	
Finland	0.8345324	0.8670886	
France	0.6982249	0.7096774	
Germany	0.7895792	0.7102649	***
Greece	0.8204489	0.6530612	***
Hong Kong	0.6896552	0.6969697	
Hungary	0.7580175	0.7142857	
Iceland	0.9220588	0.9290323	
India	0.7	0.5980861	**
Indonesia	0.915493	0.8173077	*
Ireland	0.8219512	0.8390244	
Israel	0.8020833	0.7191011	***
Italy	0.8760331	0.7205882	***
Japan	0.8175676	0.744186	
Jordan	0.8495575	0.8219178	
Korea	0.7164948	0.7111111	
Malaysia	0.8271605	0.8947368	
Mexico	0.8230088	0.7909605	
Netherlands	0.908284	0.8730964	
New Zealand	0.8401639	0.862069	
Norway	0.9483568	0.9266667	
Peru	0.7518868	0.6930693	***
Philippines	0.625	0.527027	
Poland	0.6283784	0.5540541	
Portugal	0.8817204	0.7358491	**
Russia	0.7594937	0.7592593	
Singapore	0.8613569	0.8870056	
South Africa	0.7033248	0.6077739	***
Spain	0.8654253	0.840987	***
Sweden	0.9018088	0.9310345	
Switzerland	0.8649789	0.9078947	
Thailand	0.7673267	0.8199234	
Turkey	0.6697248	0.6486486	
Uganda	0.6578171	0.5531915	**
Uk	0.8444063	0.8653595	***
United Arab Emir	0.9126214	0.90625	
United States	0.8668913	0.8421808	
Uruguay	0.7747036	0.6330935	***
Venezuela	0.7194245	0.5724138	***

Table6: Countries' means Necessity entrepreneurs			
Country	Necessitymen	NecessityWomne	t-test for significan differences
Argentina	0.2636364	0.4093264	***
Australia	0.1139706	0.1466165	
Austria	0.1509434	0.137931	
Belgium	0.1008902	0.1038961	
Brazil	0.3722944	0.4100295	
Canada	0.177665	0.1833333	
Chile	0.2355828	0.3944637	***
China	0.3435583	0.4668675	***
Colombia	0.3236994	0.4043716	***
Czech Republic	0.1754386	0.2820513	
Denmark	0.0458221	0.0615385	
Ecuador	0.2207792	0.2344828	
Finland	0.1654676	0.1329114	
France	0.3017751	0.2903226	
Germany	0.2104208	0.2897351	***
Greece	0.1795511	0.3469388	***
Hong Kong	0.3103448	0.3030303	
Hungary	0.2419825	0.2857143	
Iceland	0.0779412	0.0709677	
India	0.3	0.4019139	**
Indonesia	0.084507	0.1826923	*
Ireland	0.1780488	0.1609756	
Israel	0.1979167	0.2808989	***
Italy	0.1239669	0.2794118	***
Japan	0.1824324	0.255814	
Jordan	0.1504425	0.1780822	
Korea	0.2835052	0.2888889	
Malaysia	0.1728395	0.1052632	
Mexico	0.1769912	0.2090395	
Netherlands	0.091716	0.1269036	
New Zealand	0.1598361	0.137931	
Norway	0.0516432	0.0733333	
Peru	0.2481132	0.3069307	***
Philippines	0.375	0.472973	
Poland	0.3716216	0.4459459	
Portugal	0.1182796	0.2641509	**
Russia	0.2405063	0.2407407	
Singapore	0.1386431	0.1129944	
South Africa	0.2966752	0.3922261	***
Spain	0.1345747	0.159013	***
Sweden	0.0981912	0.0689655	
Switzerland	0.1350211	0.0921053	
Thailand	0.2326733	0.1800766	
Turkey	0.3302752	0.3513514	
Uganda	0.3421829	0.4468085	**
Uk	0.1555937	0.1346405	***
United Arab Emir	0.0873786	0.09375	
United States	0.1331087	0.1578192	
Uruguay	0.2252964	0.3669065	***
Venezuela	0.2805755	0.4275862	***

Clearly, the participation of women in opportunity-based entrepreneurship varies significantly across the 52 GEM countries, the differences between men and women are remarkably stable across countries and participation rates for men tend to be higher than those of women. However if we consider necessity-driven entrepreneurship female nascent entrepreneurs are higher than men. It means that nascent female entrepreneurs are more embedded in necessity-based entrepreneurship. However t-test for significant differences in means shows statistically significant results for countries such as: South Africa, Greece, Spain, Italy, UK, Germany, Peru, Argentina, Chile, Colombia, Indonesia, China, India, Uganda, Portugal, Venezuela, Uruguay, Israel.

4.2. Multivariate Analysis

4.2.1 Empirical Evidence for Female and Male nascent Entrepreneur's Motivation and GIQ

Table 5 shows the coefficients of random-effects probit model used to governmental institutions goodness and female effect on nascent entrepreneurs' motivation.

If we consider the direct effect of female on propensity to start a business (model 1) we confirm our expectations. Female is directly and negatively associated with the probability for a nascent entrepreneur of being involved in opportunity startup activities ($p<0.01$), meaning being woman nascent entrepreneurs reduces probability to undertake entrepreneurial activities for opportunity reasons. These results may be interpreted from a necessity-based point of view in these sense it is interesting underline that female increase nascent entrepreneur probability to undertake startup activities for necessity reasons.

Looking at the effect of Governmental institutions' Quality (GIQ) on startup activity (model 1) it is clear that on average the direct effect of GIQ is not statistically significant ($p>0.10$) and we are not able to draw conclusions about GIQ role on startup activities. This evidence is coherent with our previous foundlings (Cosentino et al., foth coming).

Table7: Startup's Propensity Estimations Results		
Model (1): Direct effect of Female, GIQ, on the probability of being startup for opportunity		
Model (2): Interaction's effects between GIQ and Female on the probability of being startup for opportunity		
	Model (1)	Model(2)
Variables	startupOPP	startupOPP
Age	-0.0202***	-0.0203***
	(.004)	(.004)
Age squared	0.000148***	0.000149***
	(.0)	(.0)
Female	-0.0928***	-0.122***
	(.020)	(.022)
in employment	0.315***	0.313***
	(.023)	(.023)
(At least) post-secondary education	0.269***	0.268***
	(.024)	(.024)
Higher education	0.133***	0.132***
	(.034)	(.034)
Business angel in last 3 years	0.115***	0.115***
	(.031)	(.031)
Current owner of business	0.0797***	0.0800***
	(.027)	(.027)
Knows other entrepreneurs	0.139***	0.139***
	(.020)	(.020)
Fear of Failure Prevent Startup	-0.188***	-0.188***
	(.021)	(.021)
Required Skills To start a Business (Skills)	0.164***	0.164***
	(.027)	(.027)
men entrepreneurs rate	0.325	0.319
	(.212)	(.212)
%of sits held by men in parliament	-0.00695***	-0.00700***
	(.002)	(.002)
GDP growth rate	0.000704	0.000639
	(.009)	(.009)
Middle Income Countries	0.179**	0.181**
	(.072)	(.072)
High Income Countries	0.258***	0.261***
	(.076)	(.076)
Childcare	0.0169	0.0173
	(.025)	(.025)
Maternity Leave	0.0356	0.037
	(.026)	(.026)
No Violence against women	-0.189	-0.192
	(.140)	(.140)
Governamental Istitution's Quality	0.0589	0.0272
	(.040)	(.041)
Govenamental Institions'Quality*Skills		0.0695***
Constant	.498	.507
	-0.342	-0.342
Observations	26753	26753
Number of country_year	257.0	257.0
Indutry effectc included but not repoted		
Year effects included but not reported		
Estimator: probit model with random effects (country-years)		
	Marginal effects	
	Standard errors in parentheses	
	*** p<0.01, ** p<0.05, * p<0.1	

Model 2 shows what happens to women nascent entrepreneurs' motivations if we consider GIQ as moderator of gender. Our results support the hypothesis which claims that GIQ does improve female effect on the probability that nascent entrepreneurs undertake startup activities to seek entrepreneurial opportunities. A statistical significant association can be observed between the interaction of female and GIQ and the probability of being involved in opportunity entrepreneurship ($p<0.01$). The coefficient relates to the interaction of female and GIQ is positive. It means that, ceteris paribus, when GIQ increases, the negative effect of being a woman on the probability to enter in opportunity based entrepreneurship decreases too. In other words high quality of institutions highers women nascent entrepreneurs' probabilities to be involved in opportunity-based entrepreneurship. At the same time we may also interpret these results as follow: A statistical significant association can be observed between the interaction of female and GIQ and the probability of being involved in necessity entrepreneurship ($p<0.01$). The coefficient relates to the interaction of female and GIQ is negative. It means that, ceteris paribus, when GIQ increases, the positive effect of being a woman on the probability to enter in necessity-based entrepreneurship decreases.

4.2.2 Empirical Evidence for Female and Male nascent Entrepreneur's Motivation among Different Levels of GQI

In order to better understand the results showed in model 5, we decided to investigate what happens if we consider three different levels of institutional quality. We split our sample in three sub-sample considering three different levels of GQI[28]. Table 6 shows results of our estimations for three GIQ groups (GQ1 considers country with low levels of governmental institutions quality; GQ2 considers country with middle levels of governmental institutions quality; GQ3 considers country with high levels of governmental institutions quality).

[28] We split the sample considering quality of institutions. Using tertile methods we obtained:
countries with low levels of governmental institutions' quality : -2.312 < GQI <0.724
countries with middle levels of governmental institutions' quality : 0.7381< GQI <1.165
countries with high levels of governmental institutions' quality : 1.7221< GQI <1.794

Table 8: Startup's Propensity Estimations Results			
Model (3): Low GQI; Direct effects of Female and Self-Confidence on the probability of being startup			
Model (4)MiddleGQI; Direct effects of Female and Self-Confidence on the probability of being startup			
Model (5):high GIQ;Direct effects of Female and Self-Confidence on the probability of being startup			
	Model (3)	Model (4)	Model (5)
Variables	startupOPP	startupOPP	startupOPP
Age	-0.0157**	-0.0327***	-0.0157**
	(.007)	(.008)	(.007)
Age squared	0.0000823	0.000313***	0.0000901
	(.0)	(.0)	(.0)
Female	-0.142***	-0.132***	0.0848**
	(.029)	(.035)	(.043)
in employment	0.286***	0.347***	0.356***
	(.032)	(.047)	(.048)
(At least) post-secondary education	0.306***	0.265***	0.189***
	(.037)	(.041)	(.047)
Higher education	0.199***	0.0347	0.180***
	(.058)	(.057)	(.060)
Business angel in last 3 years	0.145***	0.110*	0.0523
	(.043)	(.058)	(.071)
Current owner of business	0.127***	0.0329	0.0671
	(.040)	(.048)	(.059)
Knows other entrepreneurs	0.181***	0.127***	0.0792*
	(.029)	(.035)	(.042)
Fear of Failure Prevent Startup	-0.172***	-0.190***	-0.229***
	(.031)	(.038)	(.048)
Required Skills To start a Business (Skills)	0.192***	0.153***	0.109*
	(.039)	(.050)	(.056)
men entrepreneurs rate	-0.427	0.63	-0.08
	(.309)	(.550)	(.323)
%of sits held by men in parliament	-0.00145	-0.0203***	0.000425
	(.003)	(.005)	(.005)
GDP growth rate	-0.00203	0.0835***	-0.0228
	(.010)	(.029)	(.015)
Middle Income Countries	0.510***	0.113	0.179
	(.124)	(.133)	(.117)
High Income Countries	0.736***	0.303*	0.0941
	(.177)	(.156)	(.114)
Childcare	-0.0867**	-0.00268	0.100**
	(.044)	(.047)	(.047)
Maternity Leave	0.0186	0.09	0.0257
	(.043)	(.060)	(.031)
No Violence against women	-0.670***	0.689*	-0.394*
	(.211)	(.386)	(.221)
Constant	1.136***	1.157	-1.425**
	(.436)	(.748)	(.692)
Observations	10825.0	8675.0	7253.0
Number of country_year	118	66	73
Indutry effectc included but not repoted			
Year effects included but not reported			
Estimator: probit model with random effects (country-years)			
Marginal effects			
Standard errors in parentheses			
*** p<0.01, ** p<0.05, * p<0.1			

We notice that among the three groups of GIQ, Female direct effect on the motivation of entry get better when GIQ increases, confirming our findings about the positive relationship concerning institutional quality, female and probability pursue entrepreneurial opportunities. It is interesting to notice that in presence of low and middle levels of governmental institutional quality female coefficient is negative and statistically significant ($p<0.001$).

5. Discussion

The aim of the present paper is to investigate if governmental institutions' quality reduces or increases gender discrepancy in entrepreneurial entry decisions. Moreover, this analysis emphasizes the important role of self-confidence among different levels of GIQ in gendered decisions' entry in entrepreneurship and the factors influencing female entrepreneurship at the country-level. Using Global Entrepreneurship Monitor and World Bank data we test hypotheses concerning the impact of perceptions of governmental institutions on entrepreneurship entry decisions focusing on the role played by gender. Especially, even if we consider man in our analysis, we concentrate on women role in self-employment entry decisions across countries. We explored this topic because women play important role for employment creation and economic growth as well as they contribute to the diversity of entrepreneurship in the economic process (Verheul and Turk, 2001). For these reasons, it is important to understand what factors mobilize or prevent women from startup activities. Factors that contribute to a higher number of female entrepreneurs may be different from those contributing to a higher diversity of entrepreneurship in a country.

Our support is both empirical and theoretical. We contribute to extend the literature on female entrepreneurship, gender gap in entrepreneurship, institutions and entrepreneurial self-confidence. This paper tries to improve researches that omit the importance of the relationship among women issues, institutional context, and self-confidence and entry decisions in new business. We identify different studies on institutions and entrepreneurship and female self-employment that lead to different conclusions. Especially, there is evidence that governmental institutions may both boost or discourage entrepreneurial activity. Considering that gender gap in entrepreneurship does exist, we try to clarify this dilemma focusing on female aspiring entrepreneurs, perceived level of institutional quality, and perceived skills. Moreover, in doing

so, we cover a literature gap related to the absence of studies that do not consider interactions between women, GIQ and perceived skills in entrepreneurial entry decisions.

From an empirical point, of view we highlight that: governmental institutions, even if they are perceived as good, do not reduce gender gap in entrepreneurship entry decisions. We test how institutions' quality affects the probability to enter in new activities considering gender variable ("Female" variable). However, high levels of female self-confidence increase women's probability to become new entrepreneur in contexts where the quality of governmental institutions is high.

5.1. Governmental Institutions' Quality, Female and Male Entrepreneurship

Our results therefore provide a more differentiated understanding of institution and entrepreneurship theories, gender gap entrepreneurs and women issues. On overall we found that GIQ does not have a statistically significant impact on the probability to become a new entrepreneur. However if we consider the interaction between being a woman and GIQ, our results support the hypothesis which claims that GIQ does not improve the effect of being a woman on the probability of entry in entrepreneurship. It means that high quality of institutions lowers women's probabilities to be involved in startup activities.

Our findings support those theories which suggest that governmental institutions may discourage female entrepreneurship. These results could appear counterintuitive to the common sense. However, explanations are provided by several factors including women's historical role in the society. For example, women's probability to start a new business is reduced by the fact women are more sensitive to non-monetary incentive (Kyro, 2001; Buttner and Moore, 1997; Chaganti, 1986; Scott, 1986), Maternity Leave, and Child Care[29] (Amanda Elam and Siri Terjesen, 2010). Additionally, Friedman (2011) found that good governance quality prevents both male and female entrepreneurship because countries with good institutions have higher barriers for new businesses entry and more taxes. Moreover, these results may be explained in part by the differences in labor choices for women across countries, in which labor markets, institutional structures, and cultural norms provide limited ranges of incentives to women's entrepreneurial activity. Another explanation may be that for decade's entrepreneurship and governmental institutions have been men areas and strong institutionalized context may inhibit

[29] We investigated all these variables.

female willingness of being involved in startup activities.

5.2. Entrepreneurial Self-Confidence, Female and Male entrepreneurship

Rozier and Thompson, (1998) argued that women's self-confidence may on the whole be lower than men's. However, even if women's self-efficacy is lower than men this not to imply that all women have low self-confidence in their entrepreneurial abilities; for this reason it seems reasonable to expect that self-confidence in entrepreneurial skills increases women propensity to become entrepreneurs. Moreover, if we consider gender as a moderator of skills we may expect that women with entrepreneurial self-confidence have more probability to become entrepreneurs then men with entrepreneurial self-confidence.

Descriptive analysis shows that the number of women which think to have entrepreneurial skills is lower than the number of men that believe to have entrepreneurial skills. Despite this evidence we argued that even if women's self-efficacy is lower than men this does not to imply that all women have low self-confidence in their entrepreneurial abilities; because of this it seems reasonable to expect that self-confidence in entrepreneurial skills increases women propensity to become entrepreneurs. Results suggest that self-confidence increases women propensity of being involved in startup activities. This evidence confirms previous results about self-confidence and probability to become an entrepreneur (Bandura, 1992; Koellinger et al., 2006; Minniti et al., 2004). Moreover if we consider gender ("Female" variable) as moderator of perceived entrepreneurial skills we notice that the effect of self-confidence is higher for women with entrepreneurial self-confidence then men with entrepreneurial self-confidence. These results are related to the conclusions about female entrepreneurship, Governmental Institutions' Quality, and entrepreneurial self-confidence described in the next sub-section.

5.3. Female Entrepreneurship, Governmental Institutions' Quality, and Entrepreneurial Self Confidence

As we mentioned above one of the aims of this paper is to investigate interaction between being a woman, GIQ, and self-confidence. With this analysis we cover a theoretical gap on studies about women's entrepreneurship entry decisions across countries, across different levels of Governmental Institutions' Quality and across perception of entrepreneurial skills.

Results show that the probability of women who have entrepreneurial self-confidence to be involved in startup activities is higher than women that do not believe in their entrepreneurial skills in context where Governmental Institutions' Quality is high. It is clear that in high quality institutional context being a woman has a negative effect on probability to start a new business and it get worse if we consider people that do not have entrepreneurial self-confidence. One explanation could be that women with entrepreneurial self-confidence find better entrepreneurial conditions in countries where governance's quality is high so they decide to become entrepreneur rather then to choose another occupation. Self-confidence plays an important role in women entry decisions and in their environmental evaluations: these results provide new evidence that enrich previous literature on gender, institutions, self-confidence and entrepreneurship entry decisions. Results point out that self-confidence may be the key to boost female self-employment providing non-monetary incentives to women aspiring entrepreneurs in contest where the quality of governmental institutions is high. In order to promote economic development, through female startup activities, policy makers could provide national incentive on education and training to develop women's self-confidence in their entrepreneurial skills (Wilson, Kickul, and Marlino 2007)

6. Conclusions

We examine the effects of Gender and GQI on the probability for an aspiring entrepreneur to start a business for opportunity or necessity. This study investigates gender differences in entrepreneurial motivations of individuals that have already chosen to become entrepreneurs. This paper focuses on male and female entrepreneurs that decided to start a new business for Opportunity or Necessity. In particular, the contribution is represented by an innovative analysis which considers the peculiar characteristics of the depended variable

We examine the effects of Gender and GQI on the probability for an aspiring entrepreneur to start a business for opportunity or necessity. Results shows that that being a female nascent entrepreneurs has a negative effect on the probability to start a business because of opportunity but from another point of view being a nascent entrepreneurs woman has a positive effect on the probability to start a business out of necessity. Moreover GIQ moderate the negative effect of being a female nascent entrepreneur in case of opportunity-driven entrepreneurship. When Governmental institutions' Quality is high the probability for a woman

nascent entrepreneurs to start a business in order to hunt business opportunity increases. Of the other hand when Governmental institutions' Quality is high the probability for a woman nascent entrepreneur to start a business because of necessity decreases.

Our contribution is theoretical and empirical. First, we have enhanced theory on institutions and women in entrepreneurship by considering perception of governmental institutions' quality and perception of entrepreneurial motivation. Second, our finding on female nascent entrepreneurs across countries contributes a new dimension to a growing empirical literature. We suggest that once that a women decide to participate in entrepreneurship entry GDI plays an important role. Thought, our findings are important for policy maker. We point out the importance of improving female self-confidence by governmental system in order to provide non-monetary incentives to female entrepreneurship to promote employment and economic development.

7. Limitations and Further Research

Although we approached our study with rigor and attention, it has some limitations that are typical of this kind of analysis. The results of this paper have therefore to be treated with awareness of these aspects.

First, it is not possible to consider all the macro-level variables that identify countries effect on individual behavior. Clearly, unobserved variables may be associated with the decision to start a business. This means that our conclusions about GQI and self-confidence suggested by our results could be inflated by omitted variables.

Then, the short structures of the data do not allow to use fixed effects that may help to analyze omitted variables. However, country-years effects allow for unobserved heterogeneity across countries accounting for measurement errors and idiosyncrasies that are country-year sample specific.

References

Amit, R., Glosten, L., & Mueller, E. 1993. Challenges to theory development in entrepreneurship research. Journal of Management Studies, 30: 815-834.

Aidis, R., Estrin, S., & Mickiewicz, T. (2008). Institutions and entrepreneurship development in Russia: A comparative perspective. Journal of Business Venturing, 23(6),656–672.

Aidis, R., Estrin, S., & Mickiewicz, T. (2010). Size matters: Entrepreneurial entry and government. Small Business.

Acs, Z., Audretsch, D., & Evans, D. (1994). Why does the selfemployment rate vary across countries and over time?Discussion paper 871. London: CEPR. Economics. doi:10.1007/s11187-010-9299-y.

Acs, Z. and Audretsch, D. (1993). Small Firms and Entrepreneurship: An East-West Perspective. Cambridge: Cambridge University Press.

Acs, Z. J.; Arenius, P .; Hay, M., and M. Minniti (2005). 2004 Global Entrepreneurship Monitor. (London U.K. and B abson P ark, MA: London Business School and B abson College).

Birley, S. (1989). Female entrepreneurs: are they really any different? Journal of Small Business Management 27(1), 32. Retrieved October 25, 2003,

Bardasi, E., Sabarwal, S., & Terrell, K. (2011). How do female entrepreneurs perform? Evidence from three developing regions. Small Business Economics. doi:10.1007/s11187-011-9374-z

Brush C (1992). Research on women business owners: Past trends, a new perspective and future directions. Entrepreneurship Theory and Practice, **16**(4): 5-30.

Brush C (1997). Women-owned businesses: Obstacles and opportunities. Journal of Developmental Entrepreneurship, **2**(1): 1-25.

Brush CG (1990). Women and Enterprise Creation. In Enterprising Women: LocalInitiatives for Job Creation. Paris: OECD, pp37-55.

Brush, C. (2006). Women entrepreneurs: A research overview. In M. Casson, B. Yeung, A. Basu, & N. Wadeson (Eds.), Oxford handbook of entrepreneurship (pp. 611–628). Oxford UK: Oxford University Press.

Baumol, W. (1990). Entrepreneurship: Productive, unproductive, and destructive. Journal of Political Economy, 98(5), 893–921.

Burke, B., Arkowitz, H., & Dunn, C. (2002). The efficacy of motivational interviewing. In W. R. Miller & S. Rollnick (Eds.), Motivational interviewing: Preparing people for change (2nd ed., pp. 217–250). New York: Guilford Press.

C. Brander, K. E. Hartman, A. K. Trocha, N. G. Jones, R. P. Johnson, B.

Korber, P.Wentworth, S. P. Buchbinder, S.Wolinsky, B. D. Walker, & S. A. Kalams, 1998. Lack of strong immune selection pressure by the immunodominant, HLA-A*0201-restricted cytotoxic T lymphocyte response in chronic human immunodeficiency virus-1 infection. J Clin Invest 101(11):2559–2566. On p. 3.

Buttner, E. H. and Moore, D. (1997). Women's organizational exodus to entrepreneurship: Self-reported motivations & correlates w/ success. Journal of Small Business Management, January, 34-47.

Casson, Mark C. (1982). The Entrepreneur. An Economic Theory. Oxford: Martin Robertson.

Carree, M., van Stel, A., Thurik, R., & Wennekers, S. (2002). Economic development and business ownership: An analysis using data of 23 OECD countries in the period 1976–1996. Small Business Economics, 19(4), 271–290.

Chaganti, R. (1986). Management in women-owned enterprises. Journal of SmallBusiness Management, 24(4), 18-29.

Cliff, Jennifer E. (1998). Does One Size Fit All? Exploring Relationships Between Attitudes Towards Growth, Gender, and Business Size, Journal of Business Venturing vol. 13, no. 6, pp. 523-542.

Chell, E., Baines, S., 2000. Networking, entrepreneurship and microbusiness behaviour. Entrepreneurship and Regional Development 12, 195-215

Cooper, A.C. and W.C. Dunkelberg. (1987): "Entrepreneurial Research: Old Questions, New Answers, and Methodological Issues." American Journal of Small Business 3

Delmar, F. and Davidsson, P. (2000) Where do they come from? Prevalence And characteristics of nascent entrepreneurs. Entrepreneurship & Regional Development12:pp. 1-23.

Davidsson, Per & Honig, Benson L. (2003) The role of social and human

capital among nascent entrepreneurs. Journal of Business Venturing, 18(3), pp. 301-331.

Dunkelberg, W.C., Cooper, A.C., Woo, C.Y., and W. Dennis. "New Firm Growth and Performance." Frontiers of Entrepreneurship Research. N.A. Churchill, J.A. Hornaday, B.A. Kirchhoff, O.J. Krasner, & K.H. Vesper, eds., pp. 307-332. Wellesley, MA: Babson College, 1987

Elam and Terjesen (2010) Gendered institutions and cross-national patterns of business creation for men and women European Journal of Development Research; 22(2010)3

Estrin s., Mickiewicz T. (2011) Institutions and female entrepreneurship Small Bus Econ (2011) 37:397–415 DOI 10.1007/s11187-011-9373-0

GražinaStartien, Rita Remeikien, 2008 Gender Gap in Entrepreneurship ISSN 1392-2785 Engineering Economics. 2008. No 5 (60)

Gimeno, J.F.; Folta, T.B.; Cooper, A.C.; and Woo, C.Y. (1997). 'Survival of the fittest? Entrepreneurial human capital and the persistence of underperforming firms.' Administrative Science Quarterly, 42: 750-783.

Greene (2000). The psychological sources of partisan-leaning independence American Politics Research 28 (4), 511-537

Harper, GJ (1998). Reducing stress in life care settings: the challenge of converting researchinto practice. Practicing Anthropology 20:19-20.

Hisrich, R. and C.G. Brush, 1986, The Women Entrepreneur: Starting, Financing and managing a Successful New Business, Lexington, MA: Lexington Books.

Jack and Anderson 2002. The articulation of social capital in entrepreneurial networks: a glue or a lubricant?' Entrepreneurship and Regional Development, **14** (3), 93-210. Jianakoplos, Nancy Ammon, and Alexandra Bernasek. 1998. "Are Women More Risk Averse?"Economic Inquiry 36: 620-30.

Johnson, S., Kaufmann, D. & Zoido-Lobatón, P. (1998). "Regulatory Discretion and the Informal Economy." American Economic Review, 88 (2): 387–92

Kaufmann D., Kraay A., Mastruzzi M. (2010). Governance Matters: Aggregate and Individual Governance Indicators. 1996-2008 The Brookings Institution World Bank - Development Research Group (DECRG), World Bank Institute June 29, 2009 World Bank Policy Research Working Paper No. 4978

Klapper, Amit,, Guillén ,Quesad, Keefer (1997): Entrepreneurship and Firm Formation Across Countries. Policy Research Working Paper 4313.The World Bank Development Research Group Finance and Private Sector

Kovalainen, A., Arenius, P. and L. Galloway, 2002, Entrepreneurial activity of women in the global economy: analysis of data from 29 countries, paper presented at the Babson Kauffman Entrepreneurship Research Conference 2002, Boulder Colorado.

Knack, S., Keefer, P. (1997). Does Social Capital Have an Economic Payoff? A Cross-Country Investigation. Quarterly Journal of Economics 112 (4): 1251-1288

Kyro, P. (2001). Women entrepreneurs question men's criteria for success. www.babson.edu/entrep/fer/Babson%202001

Kuratko, Donald F . and Hornsby, Jeffrey S. (1997). Developing entrepreneurial leadership in contemporary organizations. Journal of Management Systems, 8. 17-27.

La Porta, Rafael, et al, 1997. "Trust in Large Organizations," American Economic Review, American Economic Association, vol. 87(2), pages 333-38, May.

La Porta,, Lopez-de-Silanes, Shleifer and R Vishn, (1999): "The Quality of Government" (with R. La Porta, F. Lopez-de-Silanes, and R. Vishny), Journal of Law, Economics and Organization,

LaPorta, R. & Shleifer, A. (2008). "The Unofficial Economy and Economic Development." Brookings Papers on Economic Activity 2: 275-364.

Levesque, Minniti 2006 The Effect of Aging on Entrepreneurial Behavior (2006). Journal of Business Venturing, Vol. 21, Issue 2,

Loayza, N. (1996). "The Economics of the Informal Sector: A Simple Model and Some Evidence from Latin America." Carnegie-Rochester Conference Series on Public Policy, 45: 129–62.

Loayza, N., Servén, L. & Oviedo, A. M. (2005). "The Impact of Regulation on Growth and Informality—Cross-Country Evidence." World Bank Policy Research Working Paper, World Bank, Washington, DC.

Maloney, W. (2004). "Informality Revisited." World Development 32 (7), pp. 1159-1178.

Misturelli, F., & Heffernan, C. (2008). "What is poverty? A diachronic exploration of the discourse on poverty from the 1970s to the 2000s." The European Journal of Development Research, 204: 666-684.

Minniti, M., Alllen, I.E. & Langowotz, N. (2005). Global Entrepreneurship Monitor 2005 Report on Women and Entrepreneurship. Babson College and London Business School.

Minniti (2010) European Journal of Development Research (2010) 22, 294–312. doi:10.1057/ejdr.2010.18; Published online 13 May 2010 Female Entrepreneurship and Economic Activity

McClelland, Swail, Bell, Ibbotson, 2005: Following the pathway of female entrepreneurs: A six-country investigation. Emerald Group Publishing Limited

Moss, Saunders (1987) Do Women Entrepreneurs Require Different Training? American Journal of Small Business

Nichter, S., & Goldmark, L. (2009). Small Firm Growth in Developing Countries. World Development, 37(9): 1453-1464.

North, D.C. (1990). Institutions, institutional change and economic performance. Cambridge: Cambridge University Press. Oppenheimer(1970): The Female Labor Force in the United States; Demographic and Economic Factors Concerning Its Growth and Changing Composition. Population Monograph Series, No. 5.

Parker, S.C.(2004) The Economics of Self-employment and Entrepreneurship. NewYork: Cambridge University Press.

Perry, G. et al (2007). Informality: Exit and Exclusion. Washington D.C.: The International Bank for Reconstruction and Development / The World Bank.

Pia Arenius Maria Minniti (2005). Perceptual Variables and Nascent Entrepreneurship Small Business Economics 24: 233–247 _ Springer 2005 DOI 10.1007/s11187-005-1984-x

Reynolds, P., et al. (2005). "Global Entrepreneurship Monitor: Data collection design and implementation 1998–2003." Small Business Economics, 24(3), 205–231.

Reynolds, D., Nicolson, R. I. and Hambly, H. (2003). Evaluation of an Exercisebased Treatment for Children with Reading Difficulties

Robinson, P.B., & Sexton, E.A. (1994). The effect of education and experience on self-employment success. Journal of Venturing, 9(2): 141-156.Schneider, F., & Enste, D. H.

(2000). “Shadow Economies: Size, Causes, and Consequences.” Journal of Economic Literature, 38 (1): 77–114.

Reimers, C. and M. Honig, 1995, Responses to social security by men and women, The Journal of Human Resources 31 (2), 359-382.

Rebernik M., Tominc P., Duh M., Rus M., Pušnik K., Krošlin T., Bradač B., Močnik D. (2006), Slovenian Entrepreneurship Observatory 2005 (Slovenski podjetniški observatorij 2005), Maribor, Faculty of Economics and Business

Schneider, F., Buehn, A., & Montenegro, C. E. (2010). “Shadow Economies All over the World: New Estimates for 162 Countries from 1999 to 2007.” The World Bank Policy Research Working Papers, WPS5356.

Schubert, S., A. Rakin, D. Fischer, J. Sorsa and J. Heesmann, 1999. Characterization of the integration site of Yersinia high-pathogenicity island in Escherichia coli. FEMS Microbiol. Lett., 179: 409-414.

Scott, 1986: Gender: A Useful Category of Analysis.

Sen, A. (1999). Development as Freedom. New York: Alfred A. Knopf.

Shane, S. (2009). Why Encouraging more People to Become Entrepreneurs is Bad Public Policy. Small Business Economics, 33(2):141–49.

Shane, S., & Venkataraman, S. 2000. The promise of entrepreneurship as a field of research. Academy ofManagement Review, 25: 217–226.

Thurik et al. (2002) Gender, entrepreneurial activity and entrepreneurial self-image: new insight into the question: "what is an entrepreneur?", Small Business and Entrepreneurship Development Conference at the University of Nottingham 15-16 April, (European Research Press, Shipley, UK, 2002), 452-463.

Verheul, Stel, and Thurik, 2004, Explaining female and male entrepreneurship across 29 countries, SCALES-paper series.

Verheul, I. and A.R. Thurik, 2001, Start-up capital: does gender matter?, Small Business Economics 16, 329- 345.

Verheul, R. (2005). Clinical utility of dimensional models for personality pathology. Journal of Personality Disorders, 19, 283-302. doi: 10.1521/pedi.2005.19.3.283.

Verheulyz Van Stelyz A Thurikyz R (2006). Explaining Female and Male Entrepreneurship at The Country Level Entrepreneurship & Regional Development, 151–183.

Ward, K. and F.C. Pampel (1985) Structural Determinants of Female Labor Force Participation in Developed Nations, 1955-1975. Social Sciences Quarterly, 66(3).654-667.

Wennekers S, van Stel A, Thurik R, Reynolds P (2005) Nascent entrepreneurship and the level of economic development. Small Bus Econ 24(3):293–309.

Women in Self-Employment Entry Decisions, Social Entrepreneurship, and Institutions across Countries: a Starting Point

The aim of this paper is to analyze female social entrepreneurship to determine possibilities to promote female commercial entrepreneurship[30]. This study as to be seen as a first step that leads to a more accurate research agenda. In order to propose social entrepreneurship as a complementary element to Governmental Institutions' Quality (GIQ), this analysis shows that when the quality of governmental institutions is high the probability of woman to be involved in social activities increases. Using 2009 GEM data, matching them with World Bank data detailing differences in institutions, this research proposes social entrepreneurship as an important element for female entry decision in commercial self-employment. We underline the importance of social entrepreneurship as a strategic choice in order to undertake profitable new business. Results show that social entrepreneurship facilitates women in subsequent entry in commercial entrepreneurship.

1. Introduction

Even with the growing number of female entrepreneurs across countries, the implications of this phenomenon for the entrepreneurial process remains largely unexplored. Recent evidence systematically shows that the rate of female entrepreneurs is lower than male entrepreneurs (e.g. M. Minniti, P. Arenius, 2003), suggesting that the nature and causes for a low presence of women in entrepreneurial behavior require further investigation.

[30] Definition of social and commercial entrepreneurship will be presented in Sect. 2.1

This analysis investigates the relationship between governmental institutions actions and female social entrepreneurship. Moreover, it elucidates the link between female social entrepreneurship and women's commercial self-employment entry decisions.

More than a few studies focus on the role of social entrepreneurs in creating economic prosperity (e.g. Kirzner, 1973; Leff, 1979; Schumpeter, 1961). Authors such as Cooperrider & Pasmore (1991) identify entrepreneurial activity as an important driver of economic growth. Dees (1998b) and Prabhu (1998) propose that social entrepreneurs provide innovative or exceptional leadership in social enterprises. Weerawardena & Sullivan Mort (2001) suggest that social entrepreneurship results in an organization achieving a sustainable competitive advantage, allowing it to achieve its social mission.

We decided to focus on this phenomenon because incentive to female entrepreneurship is still an undervalued problem. If we are able to identify how government could increase female entrepreneurship entry in new business, we could be able to understand what incentives could be used to generate new female entrepreneurs that can lead economic growth through employment and production. Furthermore, recent studies point out that entrepreneurship is an important source of employment for women. For example, female owned enterprises reduce discrimination against women in the labor market and fight against women trafficking by reducing unemployment (Welter et al, 2004). Similarly, women that succeed in entrepreneurial activities can serve as a role model for younger generations demonstrating new opportunities for employment. Nevertheless, there are worldwide evidences that women are less likely to engage in the entrepreneurial activities than men (Minniti et al., 2005; Reynolds et al., 2002).

In last few decades multiple waves of research tried to explain gender gap in entrepreneurial activity using a number of factors, such as differences in human capital (Greene,2000; Verheul, et al, 2005), differences in social capital (Renzulli, et al, 2000), differences in motivations (Carter et al., 2003; Manolova, et al., 2008), and differences in preferences (Verheul etal., 2008). Research shows that self-employed women have different characteristics than self- employed men (Cowling and Taylor, 2001; Georgellis and Wall,

2005). Brown et al. (2006) found that this difference is partly driven by various household structures, familial responsibility and employment status of the partner.

Although different studies focus on female entrepreneurship and on social entrepreneurship, female social entrepreneurship's effects on commercial is still understudied. The aim of this paper is to cover this theoretical gap.

It is important to consider how government institutions and relationship with other entrepreneurs affect entry decisions in female commercial self-employment in order to develop policy decisions that lead to economic development and social welfare. Also, from a managerial point of view, social entrepreneurship could be seen as a strategic choice used by female to avoid country-specific obstacles to entrepreneurship, improve self-confidence, and entrepreneurial knowledge.

We contribute to extend a literature that studies the role of women self-employment entry decisions across countries. Moreover, this research extends the literature which presents social entrepreneurship as an important aspect of economic growth and institutional context in which social entrepreneurs create contexts for market transactions that can later be exploited by commercial entrepreneurs (Mair & Marti, 2006, 2009; Mair, Marti & Ventresca, 2012; McMullen, 2011). Even though there are studies that explore which institutions support individuals to undertake commercial entrepreneurship (McMullen, Bagby & Palich, 2008; Autio & Acs 2009; Aidis, Estrin & Mickiewicz, 2012; Estrin, Korosteleva & Mickiewicz, 2012), it is still not completely understood the impact of formal institution on individual commitment in new social business considering women in the social sphere, as well as how social entrepreneurship leads to commercial entrepreneurship across countries.

The ability to implement such analysis is enhanced by the opportunity to use individual GEM data and matching it with World Bank data describing differences in institutions quality across countries. Because of the availability of the data, the analysis considers one year of GEM data set. This study could be seen as a starting point to understand the importance of institutions in social female entrepreneurship and the subsequent entry in commercial entrepreneurship. We found that good institutions' quality

incentive social entrepreneurship and this facilitates subsequent entry in female commercial entrepreneurship.

2. Theoretical Framework

Even if the number of new female entrepreneurs increased in the last years, the number of men that decide to be involved in self-employment, across countries, is bigger than women. Furthermore, the relevance of social entrepreneurship as incentive to start a new commercial activity is increasing. Despite different studies focus on female entrepreneurship and on social entrepreneurship, female social entrepreneurship's effects on commercial is still understudied.

The importance of this topic is due to the fact there are evidences underlining the relevance of female entrepreneurship in economic growth (GražinaStartien, Rita Remeikien, 2008; Reimers and Honig, 1995; Kyro, 2001; Buttner & Moore, 1997; Chaganti, 1986; Scott, 1986; Brush 1990, 1992; Langowitz & Minniti, 2005; Minniti, 2010). In addition, different studies link social entrepreneurship and economic and social development (Campbell, S., 1997; Dees, J. G., 1998a; Wallace, S. L., 1999; Eikenberry, A. M., & Kluver, J. D., 2004; Thompson, J. L., Alvy, G., & Lees, A., 2000; Thompson, J. L., 2002)

Under the assumption that increasing the willingness of women to entry in self-employment is a driver of a desirable economic growth, we consider studies which are progressively model and measure how female entrepreneurial activity is affected by different institutional factors (Verheul, I., van Stel, A., & Thurik., R., 2006; Terjesen, S., & Amoro, J. E, 2010; Estrin and Mickiewicz, 2011). Moreover, we point our attentions on economic studies that underline the importance of entrepreneurship in economic and social context (Borins, 2000; Lewis, 1980; Waddock & Post, 1991; Wallace, 1999; Hibbert, Hogg, & Quinn, 2001; Waddock & Post, 1991).

In this section we present: (2.1.) a definition of social and commercial entrepreneurship; (2.2.) a brief literature review on previous studies that investigate the link between institutions and entrepreneurship; (2.3.) a brief literature review on previous studies on institutions and social entrepreneurship; (2.4.) a brief literature review on

previous studies that investigates associations between institutions and female entrepreneurship; (2.5.) a theoretical summary that propose our theories about what sort of relationships we might expect to find between, social and commercial entrepreneurship and institutions across countries.

2.1. Definition of Social and Commercial Entrepreneurship

Social entrepreneurship could be explained as the process of pursuing suitable solutions to social problems. In detail, social entrepreneurs are those individual that decide to become self-employer in order to create and sustain social value (e.g., Dees & Anderson, 2003; Emerson & Twersky, 1996). Social entrepreneurs pursue opportunities to reach their social goals and in doing this they get resources in both nonprofit and profit worlds and operate in all kind of organizations: large and small; new and old; religious and secular; nonprofit, for-profit, and hybrid (e.g., Austin, Leonard, Reficco, & Wei-Skillern, 2004; Dees, 1998).

Commercial entrepreneurs typically measure performance in profit and return, the mission of their action is related to the opportunity or the need to commit with a successful business to pursue economical gain, reputations, success (Stevenson, 1983, Shumpeter 1934; David McClelland, 1961). It doesn't mean that social entrepreneurs do not consider factor such as profits, personal realizations or achievements but social entrepreneurs also take into account a positive return to society. According to Thompson, Alvy, & Lees (2000) for-profits that are involved in innovative action in order to create social capital can be considered as social entrepreneurs. Social entrepreneurship typically focuses on social, cultural, and environmental goals and is commonly associated with the voluntary and not-for-profit sectors.

In other words, according with Estrin, Mickiewicz & Stephan (2013) commercial entrepreneurs rely on market exchange and have the objective to maximize profits while social entrepreneurs supply needs that are not addressed by for-profit ventures (McMullen, 2011). Even if commercial and social entrepreneurs are then distinguished by their primary objectives (profits and social wealth respectively); they also have much in common, such as the central role of innovation, the necessity to bear risk and to invest (Zahra, Gedajlovic,

Neubaum & Shulman, 2009). Cook, Dodds, & Mitchell, (2001) and Wallace (1999) argued that social enterprises that carry out for profit actions to support other non-profit activities can be viewed as social entrepreneurs.

2. 2. Institutions and Entrepreneurship

There is no simple way to consider a country's economic, social and political environment. However, as Anderson and Jack (2002) argued, new firm creation is an economic process embedded in a specific environment and we cannot ignore it.

This analysis ties social and commercial women entrepreneurs, formal governmental institutions and networks as informal institutions. We try to understand how the actions of government (by the variables Political Stability, Control of Corruption, and Rule of Law) and networks variables affect female nascent social entrepreneurs and the subsequent entry in commercial entrepreneurship.

Baumol (1990) argued that institutional contexts may influence self-employment activities generating productive, non-productive, and even destructive forms of entrepreneurship. Institutions and the associated incentives and penalties for particular types of economic behavior determine the balance between these three forms, with higher quality institutions motivating entrepreneurs to choose productive over value-reducing activities. Schumpeter (1934) and Kirzner (1973) argued that in contexts where institutions are functioning effectively, entrepreneurial risks primarily relate to the nature of the ventures themselves, but in a developing economy, weaker institutions may increase net returns to nonproductive or even criminal activities.

Johnson et al. (2002); Kunt et al. (2006) Klapper et al. (2006); Aidis C. (2010) show some relationship between entrepreneurship and institutions; they underline the critical role of property rights and the rule of law in underpinning productive entrepreneurial activities: weak Rule of Law increases the transaction costs of entrepreneurship as well as the riskiness of entrepreneurial activity (Estrin & Michievicz, 2011).

De Soto (2001) argues that the lack of a well-defined and efficient system of registering, protecting and trading property rights may be the key obstacle, preventing

entrepreneurs from utilizing and combining potentially productive assets and turning them into capital. North & Thomas (1973), Williamson (1985, 2000), Barzel (1997), Rodrik (2000), Acemoglu & Johnson (2005) and others have argued that the Rule of Law and its economic component, the property rights system, are constitutional level institutions that form the backbone of the market economy. A strong Rule of Law facilitates entrepreneurship entry because entrepreneurs are more confident about the possibility to protect their work, the enforcement of the contracts and reduction of transaction costs. In recent institutional research, the focus has shifted from the assignment of rights per se to the institutional conditions that make effective the execution of these rights, especially exchange and the enforcement of legal contracts (Sonin 2003; De Soto 2001). As Coase (1960) pointed out, the essence of transactions is the exchange of property rights rather than goods. Without clear title, transactions become subject to expropriation by more powerful agents (Besley, 1995; Laeven and Woodruff, 2007). In the language of entrepreneurship, without a mechanism to enforce clear property rights, a productive entrepreneur's desired future state becomes risky (Baumol, 1990). Lack of enforceable property rights also reduces incentives to explore possible opportunities, creating a vicious cycle of missed opportunities instead of a positive feedback loop of learning (Foss & Foss, 2008).

Potential strategic entrepreneurs need to protect their property rights. Strategic investment in property, such as machinery or brands, is at risk where rule of law is weak. A potential strategic entrepreneur or investor would have more to lose than a potential survival entrepreneur in such circumstances, and investment in strategic entrepreneurship would be less likely under such conditions (Aidis & Adachi, 2007).

Another element of the institutional context, important for entrepreneurial activity, is a cluster of regulations and policies determined by the government such as entry regulations, labor regulations, welfare, and taxes (Parker 2009; Aidis et al. 2010). Taxes and welfare provisions may affect entrepreneurial entry by their direct impact on expected returns from entrepreneurial activities and their opportunity costs. According to Levie & Autio (2011) entry, labor, and exit regulations have a negative effect on entrepreneurship because these regulations are seen as obstacles to entrepreneurial activities that increases financial and

non-financial costs for firms. The sociological stream of entrepreneurship research has sought to explain the entrepreneurial occupational choice as the individual's response to institutional pressures to conform (Aldrich, 1979; Aldrich & Fiol, 1994; DiMaggio & Powell, 1983; Hwang & Powell, 2005; Sørensen, 2007; Thornton, 1999).

Dreher & Grassebner (2007) found high corruption to be associated with reduced entrepreneurial entry. Fisman & Svensson (2007) presented evidence that corruption lowers growth rates of firms. Djankov et al. (2002) found a correlation of 0.68 between number of procedures for starting a business and corruption, supporting the tollbooth theory of the public choice school, which argues that more procedures and longer delays facilitate bribe extraction. One could also argue that higher fees facilitate bribe extraction provided that the bureaucrat can lower the cost of fee to the entrepreneur.

Djankov, S., La Porta, R., Lopez-de-Silanes, F., Shleifer, A. (2002) found that heavier regulation of entry is generally associated with greater corruption and a larger unofficial economy, but not with better quality of private or public goods countries. Entry is regulated more heavily by less democratic governments, and such regulation does not yield visible social benefits. The principal beneficiaries appear to be the politicians and bureaucrats themselves. Those environments are not favorable for entrepreneurial activities.

Desai et al. (2003) suggest that the institutional environment plays an important role in shaping the nature of industrial activity and, particularly, the dynamics of new enterprises. Specifically, greater fairness and protection of property rights is shown to increase rates of entry, decrease rates of exit, and lower average firm size. These effects, however, are not equally pronounced in all parts of Europe. According with the authors, higher levels of corruption and better functioning legal environments promote greater development of financial markets. In addition, the legal and institutional factors and the overall level of capital market development, in turn, have been shown to influence aggregate economic outcomes as in King & Levine (1993), Rajan & Zingales (1998), and Demirguc-Kunt & Maksimovic (1998).

Demirguc-Kunt et al. (2006) found that businesses are more likely to choose the corporate form in countries with developed financial sectors and efficient legal systems, strong shareholder and creditor rights, low regulatory burdens and corporate taxes

and efficient bankruptcy processes. Corporations report fewer financing, legal and regulatory obstacles than unincorporated firms and this advantage is greater in countries with more developed institutions and favorable business environments. Authors found some evidence of higher growth of incorporated businesses in countries with good financial and legal institutions.

Ruta Aidis, Saul Estrin, Tomasz Mickiewicz, (2009) found that the key institutional features that enhance entrepreneurial activity are indeed the rule of law and limits to the state sector. They found a negative impact of the state sector (comprising in our second factor the level of taxation and the extent of welfare provision) on entrepreneurial activity. It would seem that policies to increase the fiscal role of the state in the economy are therefore in direct conflict with aspirations to create a more entrepreneurial society. Rule of Law has a positive impact on nascent entrepreneurs but the significance is very low.

Rafael La Porta, Florencio Lopez-de-Silanes, Andrei Shleifer, Robert Vishny (1999) found that poor countries, close to the Equator, ethno linguistically heterogeneous, use French or socialist laws, or have high proportions of Catholics or Muslims exhibit inferior government performance. They also showed that the larger governments tend to be the better performing ones. The importance of (reasonably) exogenous historical factors in explaining the variation in government performance across countries sheds light on the economic, political, and cultural theories of institutions.

Ruta Aidis, Saul Estrin, and Tomasz Mickiewicz (2008) found that negative environment, high level of corruption, for business and especially entrepreneurial activity, in Russia has led to low levels of entrepreneurship. The relatively few who undertake some form of entrepreneurial activity in Russia are different in several interesting ways from their counterparts in more business friendly environments. Authors underline that networks are so important in Russia that those who are already in the business sector, more than in other countries, dominate entrepreneurial entry.

Levie & Autio (2011) claim: “entry into entrepreneurship is a strategic act for individuals who seek an optimal way to exploit their human, social, and financial capital. Trade-offs associated with this choice is influenced by institutional conditions”. They

find lighter burden of regulation[31] associated with a higher rate and relative prevalence of strategic entrepreneurial entry. Rule of Law moderates regulatory burden effects on strategic entry only when it is strong.

2.3. Institutions, Social Entrepreneurship and Commercial Entrepreneurship

The arguments listed above (section 2.2) are equally relevant for both social and commercial entrepreneurs, and hybrids ones[32]. However, the impact of institutions may be different for social entrepreneurship because they have social objectives in addition to personal enrichment. Different studies tried to theorize the social entrepreneurship phenomena in a different number of fields, including formal institutions, such as community organizations, social action organizations, and charities. The majority of the literature on social entrepreneurship has evolved within the domain of non-government not-for-profit organizations.

Sullivan Mort et al. (2003) argue the effect of environmental changes with increased globalization, 'reinventing government' initiatives and the increasing entry of for-profit organizations into markets traditionally served by nonprofits as the context for social entrepreneurship.

Estrin, Mickiewicz, Stephan (2013) propose that "the association between government activism and both commercial and social entrepreneurship will be negative thou the disincentive effects will be felt more keenly by commercial entrepreneurs". Using social capital theory they model and test the relationship between social and commercial entrepreneurship drawing on social capital theory. They propose that the country prevalence rate of social entrepreneurship is an indicator of constructible nation-level social capital and enhances the likelihood of individual commercial entry. Furthermore the authors show that both social and commercial entrepreneurial entry is facilitated by certain formal institutions, specifically strong property rights and low government activism.

[31] The authors consider regulatory burden index that is comprehensive of regulation of entry index, labor index, regulation of exit index.

[32] Social entrepreneurs who also choose self-employment over alternative occupations.

Evans (1996), Woolcock & Narayan (2000), and Putman 2000 emphasized that social initiatives and government may have complementary effects if social enterprises partner with government. Putnam (2000) found a positive relation between citizen's participation in social activities and institution's efficacy.

Evans (1996), Woolcock & Narayan (2000) pointed the attention on the "synergy approach". This approach analyzes the link between the state and civil society and the role of social capital for the social change. It highlights collaborative relationships among the state, the private sector and civic associations. According to Evans (1996b) social structures complement governmental institutions meaning that the public and private sectors work collaboratively for a common objective. Moreover, social structures may be embedded in governmental system. According to Evans (1996), Woolcock & Narayan (2000), and Putman 2000, governmental institutions provide public goods, ensure respect for the law, and more important may encourage positive interactions among different social groups.

Kwon & Arenius (2010), Stephan & Uhlaner, (2010) argued that groups' norms indicated by the prevalence of social entrepreneurship can reduce transaction costs and thus can make it easier for commercial entrepreneurs to access new information and resources as well as to identify new opportunities. Social entrepreneurship, supporting social objectives and group needs, builds cooperation and goodwill and hence social entrepreneurs' actions and the enterprises they create enhance cooperative norms within a nation. Thus, social entrepreneurship offers a view on nation-level social capital which is constructible and growing through use.

Social entrepreneurship can generate these positive spillover effects because it reflects a bottom-up social self-organization that aims to benefit others. It provides positive signals about caring for others, and examples of goodwill and cooperation. Moreover, the organizations that social entrepreneurs create are often built to overcome social exclusion and to enhance market participation by those in society who are underprivileged. So, they create new ties, often at the cost of breaking existing social barriers (Mair & Marti, 2009, Mair et al., 2012). Addressing social problems which are multi-faceted, social entrepreneurs build collaborative relationships with a wide range of stakeholders, formal and informal

institutions (e.g., Di Domenico, Haugh & Tracey, 2010; Peredo & Chrisman, 2006).

Cosentino et al. (forthcoming) did not find any statistical significant relation between Governmental Institutions' Quality and probability of entry in entrepreneurship.

2.4. Institutions and Female Entrepreneurship

This section examines the relationship between female entrepreneurship and institution. According to the GEM annual report 2009, limited studies tried to link together governmental institutions, networks and female social entrepreneurship. On the other hand there are a lot of studies that focus on the relationship between institutions and women entrepreneurs.

Aidis, Welter, Smallbone, and Nina Isakova (2007) suggest that interaction among economic, institutional, and transitional influences affects female entrepreneurship. Although formal institutions such as rules and regulations allow for the possibility of female business development, informal institutions such as gendered norms and values that reflect the patriarchy observed during the Soviet era restrict women's activities and their access to resources. Moreover they argued that the evolving institutional framework might constrain women's formal integration into the emerging market economy by redefining and changing gender roles, thus restricting their access to external resources needed in order to realize a venture.

Brush (2006) argued that women are particularly restricted in their access to the economic resources needed for entrepreneurship, including capital and finance.

Williamson (2002) suggests that institutions might also ascribe housebound roles to women, which would conflict with entrepreneurial activities. Informal institutions such as cultural traditions, social customs, and human rights tend to evolve as a culturally specific interpretation of formal rules, modifying and assisting in enforcing formal institutions. As Welter & Smallbone (2003) note, formal institutions not only influence the extent which female entrepreneurship (and entrepreneurship more generally) is able to develop, but formal institutions also affect the types of enterprises in which women can engage. Cultural

norms and values help shape an individual's way into entrepreneurship and more specifically women's intentions to set up a business.

Reynolds, Bygrave and Autio (2004) argued that the countries with higher public expenditures on childcare tend to be countries with large social welfare sectors and current research indicates that large welfare sectors are negatively correlated with entrepreneurial participation rates. Consequently, state-based childcare may discourage women from starting businesses.

Cosentino et al. (Forthcoming) found that on average institutions' quality increase the differences between men and women in startup activities. Despite the expectations women appear less likely to start a new business across countries when the quality of governmental institutions is high. However, high levels of female self-confidence increase women's probability to become a new entrepreneur in contexts where the quality of governmental institutions is high.

2.5 Theoretical Summary and Hypothesis

The discussion above highlights two big issues: i) there are few studies that consider how formal governmental institutions actions affect women social entrepreneurship; ii) social entrepreneurship's effect on female entry decisions in commercial self-employment entry decisions is still unknown.

The main topic of this analysis is to understand how to increase the number of women in entrepreneurship in order to incentivize economic growth, women role in society, and welfare. We decided to focus on this phenomenon because incentive to female entrepreneurship is still an undervalued problem. If we are able to identify how government could increase female entrepreneurship entry in new business we will be able to understand what incentives could be used to generate new female entrepreneurs that can lead economic growth through employment and production.

The attempt of this analysis is to contribute to social, institutional and female entrepreneurship literature. We try to understand if formal governmental institutions

actions may help us to explicate female entry decisions in social and commercial entrepreneurship.

We expect that social entrepreneurship is a driver for women entry in new commercial activities, for this reason first of all we investigate when the need of social female entrepreneurship occur, then, we try to understand how social entrepreneurship affects female commercial entrepreneurship.

Individual's decisions are based not only on economic reason but also on non-financial purpose and especially on the perception of the environment conditions; this is true even if we consider nascent entrepreneur. Increasing evidence indicates that firms benefit from a location in a geographic cluster of similar firms (McCann & Folta, 2011). How environment is perceived encourages or discourages the willingness to work in a specific context. This analysis points out the role of formal governmental institutions' quality as determinants of countries environment. Especially we center our attention on: (2.5.1) quality of governmental institutions and social entrepreneurship and (2.5.2) social entrepreneurs' role in female commercial self-employment.

2.5.1. Governmental Institutions' quality and Entry into Social Entrepreneurship

The first step of this analysis is to examine the effects of Governmental Institutions' Quality (GIQ) on the probability for women to become social entrepreneurs.

Different studies underline that weak governmental institutions increases the transaction costs of entrepreneurship as well as the riskiness of entrepreneurial activity and the probability to become self-employer decreases (Johnson et al. 2002; Kunt et al. 2006; Klapper et al. 2006; Aidis C. 2010). Dreher & Grassebner (2007) found high corruption to be associated with reduced entrepreneurial entry. Fisman and Svensson (2007) presented evidence that corruption lowers growth rates of firms.

According to "synergy approach" postulated by Evans (1996), Woolcock & Narayan (2000) we could hypothesize that good environments, with good effectiveness of institution is high, leads women in social entrepreneurship to pursue social interest and to create

positives synergies through institutional environment in order to improve women opportunities across countries. Even if some studies theorized the deficiencies in the provision of social goods, weak government institutions may create a demand for social entrepreneurship. Baker et al. (2005) indicated that social entrepreneurs to be effectively supportive have to be free to operate across countries. Again, it means that it seems reasonable to expect that high level of governmental institutions' quality increase women probability of being involved in social entrepreneurship.

2.5.2. Social entrepreneurship and subsequent entry in Commercial entrepreneurship

Dees (1998) claims that as to a for profit firm, the mission of which is to create superior value for its customer, the primary intent of the social entrepreneur is to create superior social value for clients. He says that a social entrepreneur's ability to attract resources (capital, labor, equipment, etc.) in a competitive marketplace is a good indication that venture represents a more productive use of these resources than the alternative it is competing against. Country prevalence rate of social entrepreneurship is an indicator of constructible nation-level social capital and enhances the likelihood of individual entry commercial entrepreneurship. Social entrepreneurship can lower transaction cost and thus can make it easier for commercial entrepreneurs to access new information and resources as well as to identify new opportunities (Kwon & Arenius, 2010; Stephan & Uhlaner, 2010). Verheul, R. Thurik (2001); Brush, Hisrich (1999); Estrin, Mickiewicz, Stephan (2013) found that the probability that individuals in a country undertake commercial entrepreneurial activity is positively influenced by the national prevalence rate of social entrepreneurship in that country.

As a source of social capital, social entrepreneurship may have important benefits for commercial entrepreneurs. We argue that women can undertake social entrepreneurship as a strategic choice that lead to a sub-sequential entry in female self-employment. Thought, social entrepreneurship encourages women to take new business activities. Moreover female social entrepreneurship may boost female entrepreneurship giving monetary and non-monetary (i.e. knowledge) support to female aspiring entrepreneurs.

3. Method

3.1. Data

The empirical approach is based on merging cross-country micro-economic data from the Global Entrepreneurship Monitor (GEM) with the Worldwide Governance Indicators from World Bank that provide country-specific institutional information.

This analysis uses one year of country-level panel data developed by the Global Entrepreneurship Research Association (GERA). The study covers 31 developed and developing economies in 2009 and includes all startups, disregarding their legal status; the individual level data are generated through surveys, which create stratified samples of at least 2,000 individuals per country, each year. The sample is selected from the whole working age population in each participating country and accordingly captures both entrepreneurs and non-entrepreneurs. The age range of respondents varies substantially across national surveys, from as young as 14 to over 90 years in age. A set of weights has been developed from the adjustments based on standardized national population structure estimates for those who, being 18 to 64 years of age, qualify to be active in the labor force. Participants are largely dictated by the percentage coverage of the landline telephone network, where landline coverage is greater than 85% of all households and then the National Teams are permitted to use a landline-based survey outreach to generate a suitable list of participants to contact. For those countries where landline telephone coverage is not as wide-spread, this approach is less appropriate, so face-to-face interview techniques and/or the use of mobile phones are also used. Upon receipt of the individual country level data by the Data Team, the data is cleaned, coded, and weighted to create a harmonized data set which ensures representativeness and consistency across all countries in the study (GEM Manual 2012).

The GEM dataset forms a unique and distinctive set of worldwide comparative data on national-level entrepreneurial activity. The strong point of the GEM dataset is that it measures genuine entrepreneurial intentions of representative populations of adult-age

individuals, in a reliable and internationally comparable manner, both before and after the actual launch of the new start-up.

In order to explore the impact of the government effectiveness on female entrepreneurship entry decisions, we use the Worldwide Governance Indicators from World Bank that provide information about the value of the governmental institutions and how they are perceived from the individuals. The WGI cover over 200 countries and territories, measuring six dimensions of governance, the aggregate indicators are based on several hundred individual underlying variables, taken from a wide variety of existing data sources. The data reflect the perceptions on governance of survey respondents and public, private, and nongovernmental organizations experts worldwide. The WGI draw together data on perceptions of governance from a wide variety of sources and organize them into six clusters corresponding to the six broad dimensions of governance (Kaufmann, Kraay, and Mastruzzi, 2010).

In order to contemplate specific country-gender variables we employed other data sources, that are: OECD development center and Economic Intelligence Unit, both of them used to identify specific institutional variable that may affect women life and individual entry decisions across-countries. Moreover, to control for labor freedom we use Heritage Index.

3.2. Identifying Nascent Social and Commercial Entrepreneurs

GEM data allow us to identify three categories of entrepreneurs: nascent entrepreneurs, young entrepreneurs, established entrepreneurs. Nascent entrepreneurs (defined in Table 1) are individuals who are in the process of trying to start a firm. New entrepreneurs are owner-managers of entrepreneurial start-ups, which have been in existence for more than 3 months but not more than 42 months. Established entrepreneurs are owner-managers of entrepreneurial firms which have been in existence for longer than 42 months.

Generally, this study considers female entry process in new business, for this reason the dependent variables identify whether women are involved nascent start-up activity or not. Nascent female entrepreneurs are defined as those women who have taken some action toward creating a new business in the past year, and expect to own a share of the business they are starting, which must not have paid any wages or salaries for more than 3 months (Reynolds et al. 2005). The same method is used by Bosma et al., (2010) and Lepoutre et al. (2011). According to Mair & Marti, (2006), Zahra et al.(2009), Estrin, Mickiewicz, Stephan (2013), we distinguish social and commercial female entrepreneurs considering women's answers to a set of specific questions related to the main focus of the firm. Questions about starting and owner-managing any kind of activity, organization or initiative that has a particularly social, environmental or community objective identify social entrepreneurship. Commercial entrepreneurs are those entrepreneurs that pursue profit and personal achievements as primary goal.

As shown in table 2 on average the number of nascent female social entrepreneur's is lower across countries then number of nascent female commercial entrepreneurs in 2009. However Denmark, United Arab Emir, Norway, Chile, United States, Jordan, Finland, Greece, Belgium, Hungary, and Russia show higher level of social entrepreneurship with respect to commercial entrepreneurship. If we consider GQI of these countries we notice that Denmark, Norway, United States, Belgium, Finland have a good degree of governmental institutions' quality. On the other hand, United Arab Emir, Russia and Greece present a quite low degree of institutional goodness. However the number of countries with good GIQ is higher than the number with low levels of GIQ.

Table 1: Variables Description						
Variables	**Description**	**Obs**	**Mean**	**Std. Dev.**	**Min**	**Max**
Dependent variable						
Startup (Nascent Commenrcial Entrepreneurs)	Those individuals who have taken some action toward creating a new business in the past year, and expect to own a share of the business they are starting, which must not have paid any wages or salaries for more than 3 months	61167	0.041297	0.198977	0	1
Startup (Nascent Social Entrepreneurs)	Those individuals who have taken some action toward creating a new business in the past year, and expect to own a share of the business they are starting, which must not have paid any wages or salaries for more than 3 months	59238	0.028478	0.166336	0	1
Individual independent variables						
Age	The exact age of the respondent	61167	42.53822	14.6329	16	99
Required skills to open a business	1 = respondent believes to have entrepreneurial skills to open a new business, zero otherwise	59394	0.47291	0.49927	0	1
in employment	Main Employment status or current working situation 1 respondent is either in full or part time employment, 0 if not	61167	0.505959	0.499969	0	1
(At least) post-secondary education	1 = respondent has a post-secondary or higher education attainment, 0 otherwise	61167	0.334445	0.4718	0	1
Higher education	1 = respondent has a higher education attainment	61167	0.025014	0.156167	0	1
Business angel in last 3 years	1 = business angel in past 3 years, 0 otherwise	61167	0.031079	0.173532	0	1
Current owner of business	1 = current owner/manager of business, 0 otherwise	61167	0.111138	0.314306	0	1
Knows other entrepreneurs	1 = personally knows entrepreneurs, in last 2 years, zero if not	61167	0.332042	0.47095	0	1
Involved in Social Entrepreneurship	1=personally involved in Social Entrepreneurship, zero otherwise	59238	0.026925	0.161867	0	1
Fear of failure would not prevent start-up	1 = respondent believes that the fear of failure would prevent him/her from starting a business	61167	0.414832	0.492697	0	1
Country-level control variables						
GDP growth rate	Annual GDP growth rate (WB WDI 04 2009)	59110	2.194702	3.097056	-4.24355	10.11742
Tertile of GDP per capita (ppp)	GDP per capita at purchasing power parity, constant at 2005 $US (WB WDI 04 2009)	71.77 370	26585.85	15007.06	287.3257	67804.55
Childcare	Availability, affordability and quality of childcare services, as well as the role of the extended family (Economic Intelligence Unit), time invariant,	47215	3.285757	0.737192	2	5
Maternity Leave	Composite policy indicator that assesses length of maternity leave and benefits coverage (Economic Intelligence Unit), time invariant	47215	2.142894	0.786527	0	3.1
No Violence against women	Violence against women, relevant legislation (OECD Development Centre),	47215	0.27392	0.164655	0	0.75
Men Entrepreneurs Rate	Percentage of nascent and established men entrepreneurs from GEM	60585	0.619612	0.081949	0.432099	0.934426
Percentage of Sits Held by Men in Parliament	Percentage of Sits Held by Men in Parliament	59658	76.66143	11.17886	58.5	100
Independent Governmental Institutional variable						
Governamenta Institutions' Quality	Composit index that cointeins informations about Voice and Accountability, Political Stability and Absence of Violence/Terrorism, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption	60631	0.371404	0.989422	-2.31206	1.635887

Table 2: Main variable 2009 Country Mean				
	(column1)	(column2)	(column3)	(column4)
Country	Commercial_Startup	Social_Startup	Already Involved in Startup activities	GIQ
Argentina	0.07020	0.03316	0.09814	-1.32731
Belgium	0.01686	0.02057	0.01699	1.00096
Brazil	0.05161	0.00645	0.00129	-0.45218
Chile	0.09279	0.10840	0.02304	1.15506
China	0.07370	0.03182	0.03978	-0.66690
Colombia	0.12630	0.09324	0.05594	-0.23750
Denmark	0.01377	0.09122	0.14630	1.53935
Ecuador	0.06651	0.00700	0.00350	-1.75681
Finland	0.03270	0.04145	0.05181	1.24782
Germany	0.04127	0.01377	0.02275	1.10810
Greece	0.03686	0.04516	0.03226	0.43784
Hungary	0.04825	0.05167	0.01667	0.77854
Iceland	0.07110	0.05148	0.06864	0.92951
Israel	0.02683	0.02553	0.04204	0.76142
Italy	0.01879	0.01208	0.01879	0.52133
Jordan	0.03474	0.04683	0.00906	-0.16449
Korea	0.07389	0.02956	0.03941	0.26636
Malaysia	0.01835	0.00306	0.00917	-0.13150
Netherlands	0.04279	0.02206	0.01838	1.41566
Norway	0.03467	0.06801	0.10662	0.98698
Peru	0.14553	0.06946	0.01302	-0.14188
Russia	0.02786	0.02907	0.03779	-0.95491
South Africa	0.03771	0.02982	0.02294	0.02076
Spain	0.01372	0.00701	0.00544	0.82688
Switzerland	0.04397	0.02991	0.05413	1.21044
Uganda	0.11836	0.02425	0.03731	-0.75909
Uk	0.02224	0.01242	0.04206	1.41030
United Arab Emir	0.02685	0.06278	0.00897	0.13188
United States	0.04063	0.05518	0.02646	1.15608
Uruguay	0.06362	0.02295	0.01311	-0.25484
Venezuela	0.11868	0.05531	0.01327	-2.01589

If we consider the number of individual involved in social entrepreneurship across countries (table 2 column 4) we notice that the ratio of female already involved in social entrepreneurship is higher in countries where GQI is high (i.e. Finland, Switzerland, Colombia, Iceland, Argentina, Norway, Denmark).

3.3. Predictor Variables

The explanatory variables used in this study, defined in table 1, are designed to correspond to the factors that help us to investigate how the governmental decision and networks affects female social entrepreneurship entry decision. As well as control variables used in this analysis, it is possible to list the main independent variables used in this investigation in two categories: (3.3.1) individual predictor variables; (3.3.2) national macro-level variables.

3.3.1. Individual Predictors

To test how social entrepreneurship affects the sub sequential entry in entrepreneurship in other to avoid causality problems we consider young and established female social entrepreneurship. As we mentioned above, GEM database allow us to distinguish nascent, young and established entrepreneurs and this is possible not only for female individual but also for individual who are social committed or for individual that are more profit oriented.

According to Estrin, Mickiewicz & Stephan (2013) we generate a composite variable that consider whether or not women are already involved in young or established social entrepreneurship. We assign value 1 if the respondent is a woman that owns or manage a company and have paid wages or salaries for more than 42 months (established entrepreneur) or if the respondent is a woman that owns or manage a company and have paid wages, not nascent, but operational for 42 months maximum (young entrepreneurs).

3.3.2 National Macro Level Variables: Governmental Institutions' Quality

These indicators provide highly specific and disaggregated information about particular dimensions of governance. We focus on six Worldwide Governance Indicators: a) Voice and Accountability and Political Stability and Absence of Violence/Terrorism which identify the process by which governments are selected, monitored and replaced; b) Government Effectiveness and Regulatory Quality which identify the capacity of the government to effectively formulate and implement sound policies by the variables; c) By definition we use Voice and Accountability as index of democracy level Rule of Law and Control of Corruption which identify the respect of citizens and the state for the institutions that govern economic

and social interactions among them. As shown in table 3, WGI indicators are strongly correlated.

Table 3:correlation matrix WGI indexes							
		1	2	3	4	5	6
1	Voice and Accountability	1					
2	Political Stability and Absence of Violence/Terrorism	0.5849	1				
3	Government Effectiveness	0.8018	0.7372	1			
4	Regulatory Quality	0.8691	0.6205	0.9286	1		
5	Rule of Law	0.834	0.6884	0.9559	0.9375	1	
6	Control of Corruption	0.8337	0.6951	0.9553	0.9175	0.9604	1

It means that to avoid multicollinearity it is not possible use all the six variables together in the same analysis[33]. One solution could be to consider each single variable in six different regressions. However this can lead to omitted variables problems. To avoid misspecification problems and multicollinearity problems we generated one index of Governmental Institutions' Quality. A factor analysis confirm that there is a latent factor behind WGI variables[34] so with the method of maximum likelihood we generated on composite index that represents institutions quality across countries. Moreover we used lagged value to avoid endogeneity and to ensure temporal causality between our predictors and the independent variable. Table 2 column 4 presents country-level values for Governmental Institutions' quality index in 2009. In country such as Iceland, Norway, Belgium, Germany, Chile, United States, Switzerland, Finland, UK, Netherlands, and Denmark institutions are perceived as good. However if we consider Chile, it has a low index of political stability and absence of violence/terrorism however government effectiveness, regulatory quality, rule of law, and control of corruption are perceived as good for this reason GIQ index is high.

The worst quality perceived is related to country such as Venezuela, Russia, Indonesia, Uganda, China, Colombia, Philippines, Peru, Argentina, India, Jamaica, Mexico, Turkey, Brazil, and Thailand Jordan, Croatia, South Africa, Malaysia, United Arab Emir, Korea.

[33] It means that if we put all the indicators as independent variables (we will have six predictors) in one unique regression the analysis multicollinearity problems arise.

[34] Even if the theoretical construct of these variables seems to be different high levels of correlation (i.e.0.80) show that is reasonable use one factor that summarizes perceptions of governmental institutions' quality.

We notice that in countries such as Iceland, Norway, United States and New Zealand even if level of the six GIQ index is quite high the difference between men and women in entrepreneurial entry decision is significantly high. The Norway case is particularly surprising not only because of very good perceptions of government system but also because since the 1980s, Norway's changing governments have always been almost 50% women and it is the first country in the world that has established a special gender equality agenda (Cosentino, Donato, Montalto and Via, 2012).

3.4. Control Variables

The control variables, defined in Table 1, have been selected according to the previous literature to consider country level aspect, gender-specific measures of welfare, and personal characteristics that might drive people to become entrepreneurs.

3.4.1. Individual Controls

Individual characteristics are important determinants of entrepreneurship. To consider personal individualities in our regressions we include age, education, experience, and in employment status. We use a quadratic specification because different studies underline an inverse U–shape relationship between age and decision to entry in a new business (Levesque and Minniti 2006).

A massive literature testifies that there is a relationship between education and entry decisions in entrepreneurship therefore we control for post-secondary and higher education. Entrepreneurs with previous venture start-up or ownership experience may be endowed with human capital that is valuable in new venture situations because they have experience in the startup process and in running their own business (Gimeno, Folta, and Whoo, 1997). In order to consider previous experiences we include in our regressions the number of incumbent business owners and whether respondents have previously acted as a business angel. Furthermore by the variable ''fear of failure'' we consider if individuals are risk adverse or not.

According to North (1990), entrepreneurs adapt their activities and strategies to the opportunities or limitations provided by formal and informal institutional frameworks. For

these reasons, we analyze whether the potential nascent female entrepreneur knows any other entrepreneur.

The probability of being a nascent entrepreneur may not be purely interpreted as a causal mechanism (Bauman et al. 2012), in fact people with positive perceptions about their skills have higher probabilities to be engaged in entrepreneurial activity. This is the reason why we also analyze whether individuals believe to have the required skills and knowledge to start a business or not. Finally, startup rates may be influenced by whether the potential entrepreneur is employed while deciding to start his/her own business (Folta & Delmar, 2010) and therefore why we take account of employment status.

3.4.2. Macro-Level Controls

The GEM research shows that the level of a given country's economic development has a significant effect on the nature of its entrepreneurial activity (e.g. Van Stel et al., 2005).

All researches that study institutions' effects on entrepreneurship consider in their analysis country's economic expansion controlling for the country's GDP per capita (purchasing power parity). GDP is strongly correlated whit GIQ (ρ=0.80). Again, in order to avoid multicollinearity problems we controlled three levels of income countries (low income, middle income and high income) based on tertiles of GDP[35]. Moreover we control economic growth considering the change in GDP from previous year to current year (Livie, Autio 2011). In gender analysis across countries it is important to consider macro variables that may incentives female entrepreneurship. According to Estrin and Mickiewicz (2011) we use data regarding particular country elements that are likely to have a more specific impact on women: adequate protection in combating violence against women. These indicators are reported by the OECD Development Centre. In addition to consider gender-specific measures of welfare we use as Estrin and Mickiewicz variables such as maternity leave and childcare.

[35] Using tertile classification we obtained three level of income of income across countries:
countries with low levels of GDP income: 370.3357 < GDP < 8283.315
countries with middle levels of GDP income: 11376.47 < GDP < 29971.33
countries with high levels of GDP income : 30369.59 < GDP <67009.97

Maternity is a composite policy indicator that assesses the length of maternity leave and benefits coverage. Childcare is related to the availability, affordability and quality of childcare services, as well as the role of the extended family in providing childcare. Both indicators are compiled by the Economist Intelligence Unit (EIU and WB 2009). In the formal sector, actual maternity leave may be more extensive than minimum legal provisions.

Table 4. Correlation Matrix for Variable Used In This Study

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	Age	1																		
2	in employment	-0.168	1																	
3	(At least) post-secondary education	-0.0792	0.2062	1																
4	Higher education	0.0002	0.0836	0.2189	1															
5	Business angel in last 3 years	-0.0245	0.035	0.0254	0.0047	1														
6	Current owner of business	-0.0249	0.2667	-0.0126	0.0166	0.0762	1													
7	Knows other entrepreneurs	-0.2139	0.1091	0.069	0.0227	0.1499	0.1357	1												
8	Fear of Failure Prevent Startup	-0.0562	0.0011	-0.0148	-0.0121	-0.0219	-0.0714	-0.0123	1											
9	Required Skills To start a Business (Skills)	-0.0995	0.1425	0.0874	0.0454	0.1034	0.257	0.2373	-0.1138	1										
10	Involved in Startup activities (young and established)	0.0007	0.0755	0.07	0.1033	0.0273	0.0885	0.0765	-0.0362	0.0744	1									
11	men entrepreneurs rate	-0.0311	-0.0571	0.1023	-0.0084	-0.0261	-0.1175	-0.0236	0.0402	-0.0761	-0.0017	1								
12	%of sits held by men in parliament	-0.0042	-0.0183	-0.0507	0.0551	0.0045	0.054	0.0067	-0.0893	0.0263	0.0321	0.0349	1							
13	GDP growth rate	-0.2731	-0.0338	-0.1648	-0.0982	0.0849	0.17	0.2025	-0.039	0.1401	-0.0241	-0.1821	0.1639	1						
14	Low Income Countries	0.2204	0.0998	0.1006	0.1176	-0.0347	-0.0452	-0.1013	-0.1289	-0.088	0.0849	0.0365	0.1524	-0.54	1					
15	Middle Income Countries	-0.0278	-0.0555	0.0602	-0.0786	-0.0149	-0.0854	-0.0425	0.193	-0.0263	-0.0811	0.1427	-0.5025	-0.1806	-0.6453	1				
16	Childcare	0.0537	0.0935	0.0244	0.0116	0.0313	0.0245	0.0536	-0.0826	-0.0548	0.0719	-0.0638	-0.2628	-0.0003	0.271	-0.1643	1			
17	Maternity Leave	0.1343	0.0258	0.0512	0.0761	-0.0747	-0.139	-0.1262	0.0773	-0.108	0.0071	-0.0551	-0.3555	-0.5861	0.0593	0.378	0.2807	1		
18	No Violence against women	-0.2523	0.007	-0.0998	-0.0917	0.1018	0.1552	0.2045	-0.0189	0.1191	-0.0149	-0.0145	0.011	0.6576	-0.4124	-0.0585	0.0427	-0.4789	1	
19	Governamental Istitution's Quality	0.2747	0.0501	0.1534	0.0958	-0.054	-0.1599	-0.1675	0.0082	-0.1417	0.0386	0.1402	-0.1977	-0.451	0.5941	0.0874	0.2028	0.5078	-0.6064	1

Also, while maternity leave is only available to individuals working in the formal sector, childcare is potentially available to all women, depending on how it is organized (Estrin and Mickiewicz 2011). Informal institutions may mitigate the effect of formal institutions and affect new startup development. This study, therefore, also analyzes whether the potential nascent entrepreneur knows any other entrepreneur. Moreover, bearing in mind that historically entrepreneurship and governmental institutions have been men, we control for male competitiveness and the percentage of seats held by men in parliament. As well as our predictors we use lagged value to avoid endogeneity and to ensure temporal causality. Table 4 shows the correlation matrix for all the variables of our analysis.

3.5. Statistical Analysis

The dataset used for our purposes is based on one year data, with random individual observation[36]. We are interested in testing if social entrepreneurship affects the probability of being a new female entrepreneur.

We adopt a probit model whit standard error clustered by countries as our estimator. First of all we consider WGI variables to understand how institutions affect female social entrepreneurship. Then we focus on the social entrepreneurship effect for women in self-employment entry decisions.

We ran two different analyses respectively to test how institutions affect female social entrepreneurship and to test how social entrepreneurship affects female entrepreneurship.

Our core model to test how institutions affect social entrepreneurship is constructed as follows:

Prob (Female Entry Social) ij = f (Individual Controlsi, Country Level Controlsji, GQIij);

(1)

Our core model to test how social entrepreneurship affects female entrepreneurship is constructed as follows:

[36] The respondent is randomly selected across countries.

Prob (Female Entry Commercial)ij = f (Individual Controlsi, Country Level Controlsij, GIQij, Involved in Social Entrepreneurship);

(2)

Where i denotes individuals, j denotes countries. Entry is a dummy variable and identifies whether or not an individual in a particular country at a particular date is engaged in nascent start-up or start-up activity.

4. Results

In order to test our hypothesis we use separate regressions for Social startup activities and Commercial startup activities. We first examine (4.1) the level of both female social and female commercial entrepreneurship entry decision, and their characteristics. Next, (4.2.1) we examine the empirical evidence for whether governmental institutions' quality (GQI) affect women new social entrepreneurs considering the effectiveness perceived of governmental institutions. Finally, (4.2.2) we examine how Social Entrepreneurship affects women entry in commercial self-employment entry decisions. The last sub-section (4.2.3) shows other interesting results on female social and commercial entrepreneurship.

4.1. Female Social and Commercial Startup Activity across Countries

The sample is drawn from the whole women working age population in each participating countries and therefore captures both entrepreneurs and non-entrepreneurs.

According to the data that we use, about 3.25 % of women are involved in social startup activities while 5.39% of women survived are involved in starting a commercial business. Table 5 shows that on average nascent female social entrepreneurs are older and more educated than nascent female commercial entrepreneurs. Moreover, on average, women that decide to start a social activity seem to have more experience in previous profit and non-profit activities. On the other hand, women involved in nascent commercial activities seem to be more confident (knows other entrepreneurs).

Table 5. Average of Individual Caratteristics of Female Social and Commercial sturtups			
Variables	Commercial Female Nascent entrepren	Social Female Nascent entrepreneurs	t-test for mean differences
Age	37.61164	38.23651	***
in employment	0.6706255	0.5815056	***
(At least) post-secondary education	0.3384798	0.4036752	***
Higher education	0.0364212	0.0480142	***
Business angel in last 3 years	0.087886	0.0657973	***
Current owner of business	0.0847189	0.1600474	***
Knows other entrepreneurs	0.6120348	0.6040308	***
Fear of failure not prevent startup	0.2798892	0.3681091	***
Required Skills to Start a Business	0.8639676	0.7154079	***
Commercial young & estab. bus.	0.0594595	0.1677534	***

4.2. Multivariate Analysis

4.2.1. Empirical evidence for Social Entrepreneurship considering Governmental Institutions' Quality

The conclusions drawn earlier, regarding the relative importance about the perception of governmental institutions quality in female social entrepreneurship across countries, are confirmed. The model 1 in Table 6 shows the effect of Governmental Institutions' Quality on social female entrepreneurship. As it can be seen GQI is directly and positively associated with female social entrepreneurship entry rate ($p<0.001$). It means that when governmental institutions are perceived as good women's probability of being involved in social activities increase.

The Marginal effect of GIQ on probability to enter in female social entrepreneurship is statistically significant and indicates that, ceteris paribus, when Governmental Institutions' Quality increase, the probability of a women to become a social entrepreneurs increase too.

4.2.2. Empirical evidence for Commercial Considering Social entrepreneurship

Finally we test our hypothesis concerning the importance of social entrepreneurship on sub sequential entry in commercial business. Results are reported in table 6 model 2. A strong significant association can be observed for involvement in social entrepreneurship and women entry decisions in self-employment ($p<0.001$). Results confirm our expectations about social entrepreneurship. It means that women can undertake social entrepreneurship as a strategic choice that lead to a sub-sequential entry in female self-employment. Then, social entrepreneurship encourages women to take new business

activities. Moreover female social entrepreneurship may boost female entrepreneurship giving monetary and non-monetary (i.e. knowledge) support to female aspiring entrepreneurs.

Table 6: Estimations' Results		
Model (1): Direct effect of GIQ the probability of being involved in Female social startup activities		
Model 2:Direct effect of being involved in Social entrepreneurship on the probability of being involved in Female Commercial startup activities		
	Model (1)	Model (2)
Variables	Sturtup_Social (Female)	Startup_Commercial (Female)
Age	0.00089	0.0314***
	(.006)	(.006)
Age squared	-0.0000909	-0.0004167***
	(.0)	(.00007)
in employment	0.0182	0.336***
	(.035)	(.032)
(At least) post-secondary education	0.190***	0.0011
	(.033)	(.029)
Higher education	0.150**	0.087
	(.074)	(.074)
Business angel in last 3 years	0.183***	0.273***
	(.065)	(.057)
Current owner of business	-0.117***	-0.745***
	(.045)	(.048)
Knows other entrepreneurs	0.273***	0.324***
	(.031)	(.028)
Fear of Failure Prevent Startup	-0.0860***	-0.200***
	(.031)	(.028)
Involved in Social Entrepreneurship	1.007861***	0.261***
	(.050)	(.062)
Required Skills To start a Business (Skills)	0.4078229***	0.813***
	-0.0325649	(.032)
men entrepreneurs rate	0.6558289***	-1.696***
	(.208)	(.20)
%of sits held by men in parliament	0.012***	0.011***
	(.002)	(.002)
GDP growth rate	-0.0569***	0.0097***
	(.016)	(.012)
Middle Income Countries	-0.564***	-0.219**
	(.090)	(.085)
High Income Countries	-0.554***	-0.309***
	(.075)	(.075)
Childcare	0.226***	0.126***
	(.027)	(.024)
Maternity Leave	-0.094***	-0.061***
	(.029)	(.026)
No Violence against women	0.588***	0.122
	(.109)	(.108)
Governamental Istitution's Quality	0.111***	0.00014
	(.041)	(.029)
Constant	-2.375***	-3.039***
	(.152)	(.265)
Number of Countries	31	31
Number of Observatin	42866	42866
probit model with clustered standard errors per countries		
	Marginal effects	
	Standard errors in parentheses	
	*** p<0.01, ** p<0.05, * p<0.1	

4.3 Other Results

Comparing results of model 1 and results of model 2 we notice that factors such as age and previous work experiences are not statistically significant for the probability of being involved in female social entrepreneurship. However this variable seems to be quite important for female commercial entrepreneurship's entry decisions. Descriptive statistics show that female social entrepreneurs have highest level of education. Multivariate analysis shows that educations has a strong impact on the probability of a woman to be involved in social startup activities, conversely education is not statistically significant in the case of nascent female commercial entrepreneurs. In accordance with previous founding (see Cosentino forthcoming), GQI is not statistically significant.

5. Discussion

This paper is a starting point to understand the relationship between governmental institutions' effectiveness, informal institutions, and female social entrepreneurship. Our research contributes to the theories of female entrepreneurship and social entrepreneurship in two ways. First, we contribute to extend the literature on female entrepreneurship and institutions from a new prospective that concern social entrepreneurship. Second, we highlight institutional involvements in social entrepreneurship: we test how institutions' quality affect the probability to enter in new commercial activities for women

This paper tries to improve researches that omit the importance of the relationship between women issues, institutional context, networks social entrepreneurship and entry decisions in new business. Furthermore, we propose the importance of social capital creation by social entrepreneurship in order to increase the number of women in entrepreneurship. We demonstrate that women undertake social entrepreneurship as a strategic choice; the presence of social enterprises generates some externalities that are positive for women and those externalities are important for subsequent entry in commercial self-employment.

5.1. Governmental Institutions: Consequences on Social Entrepreneurship

Our results therefore provide a more differentiated understanding of institution and entrepreneurship theories, social entrepreneurs and women issues. We found that social entrepreneurship is more likely to prosper in institutional contexts whit high institutional quality. These results are consistent with the general view of the "synergy approach" postulated by Evans (1996), Woolcock & Narayan (2000). Female social entrepreneurship and good governmental institutional variables create positives synergies by which countries' citizen could improve their social life. Even if institutions are perceived as good women may decide to enter in social entrepreneurship in order to cove possible governance inefficiencies and enhance general welfare.

5.2 The Consequences of Social in Female on Commercial Entrepreneurship

Individual social entrepreneurs, in addition of being more likely to start another new social initiative, are also more likely to start up a commercial enterprise. Thus, social entrepreneurship is an empowering experience building skills and confidence, which can be used for further entrepreneurial activity, both social and commercial. Social entrepreneurship also seems to attract people who are not commercial entrepreneurs, notably women and the more highly educated (Estrin, Mickiewicz & Stephan, 2013). Combined with the positive dynamic between the two forms of entrepreneurship, the possibility opened is that social entrepreneurship could increase the diversity of those engaged in entrepreneurship in a nation.

We argued that women can undertake social entrepreneurship as a strategic choice that leads to a sub-sequential entry in female self-employment. Then, social entrepreneurship encourages women to take new business activities. Moreover female social entrepreneurship may boost female entrepreneurship giving monetary and non-monetary (i.e. knowledge) support to female aspiring entrepreneurs. Our findings confirm our expectations and show that female social entrepreneurship facilitates the subsequent entry in female commercial entrepreneurship.

6. Conclusions

The main contribution of this article is to extend female entrepreneurship research with a new prospective based on social entrepreneurship effects on women involved in commercial start up activities. In this article, we have shown that strategic behaviors are influenced by institutional conditions. Using previous research on women, institutions, and entrepreneurial entry theories we underlined the need to provide a common explanatory framework on how perceptions about governmental institutional factors affect female entrepreneurship entry decisions across countries.

After controlling for other countries institutions, we found that perception of good rule of law reduce the presence of female social entrepreneurship. Moreover, networks have a positive and significant effect on both men and women entry decision in self-employment.

Our contribution is two-fold: theoretical and empirical. First, we have enhanced theory on institutions and women in entrepreneurship by considering perception of governmental institutions' quality and networks. Second, our finding on female nascent entrepreneurs across countries contributes a new dimension to a growing empirical literature. We suggest that women participation in entrepreneurship entry may be complete enforcing perceptions that citizens have about institutional context; social entrepreneurship complement governmental inefficiencies generating a better environment where women may operate. This hypothesis is supported by the variable rule of law. Moreover, if we consider gender specific institutional variables, such as violence against women, we notice that our hypothesis is reinforced since there is a positive relation with "violence against women" and the probability that a woman decide to start a new social business.

Our findings are important also for policy makers. We point out the importance of enhance social entrepreneurship by governmental system in order to provide non-monetary incentives to female entrepreneurship to promote employment and economic development.

Specifically, our findings suggest that it is important to consider carefully the likely effect of improving social entrepreneurial capital and institutional environment.

7. Limitations and Further Research

The main limit of this analysis is represented by the time range of the data which covers one year. This study is in fact a cross-sectional analysis, which did not allow us to use more advanced statistical technique. We propose the possibility of using panel data as a guideline for future research and this paper could provide a good starting point to understand women's behavior in social and commercial entrepreneurship.

Another limitation that concerns all analyses trying to investigate national macro-level variables effect on individual behavior is that it is not possible to consider all institutional variables that affect decisions at individual level. However, we are confident about the validity of this analysis because in view of the considerations above we approached our study with rigor and care.

References

Amit, R., Glosten, L., & Mueller, E. 1993. Challenges to theory development in entrepreneurship research. Journal of Management Studies, 30: 815-834.

Aidis, R., Estrin, S., & Mickiewicz, T. (2008). Institutions and entrepreneurship development in Russia: A comparative perspective. Journal of Business Venturing, 23(6),656–672.

Aidis, R., Estrin, S., & Mickiewicz, T. (2010). Size matters: Entrepreneurial entry and government. Small Business.

Acs, Z., Audretsch, D., & Evans, D. (1994). Why does the selfemployment rate vary across countries and over time?Discussion paper 871. London: CEPR. Economics. doi:10.1007/s11187-010-9299-y.

Acs, Z. and Audretsch, D. (1993). Small Firms and Entrepreneurship: An East-West Perspective. Cambridge: Cambridge University Press.

Acs, Z. J.; Arenius, P .; Hay, M., and M. Minniti (2005). 2004 Global Entrepreneurship Monitor. (London U.K. and B abson P ark, MA: London Business School and B abson College).

Birley, S. (1989). Female entrepreneurs: are they really any different? Journal of Small Business Management 27(1), 32. Retrieved October 25, 2003,

Bardasi, E., Sabarwal, S., & Terrell, K. (2011). How do female entrepreneurs perform? Evidence from three developing regions. Small Business Economics. doi:10.1007/s11187-011-9374-z

Brush C (1992). Research on women business owners: Past trends, a new perspective and future directions. Entrepreneurship Theory and Practice, **16**(4): 5-30.

Brush C (1997). Women-owned businesses: Obstacles and opportunities. Journal of Developmental Entrepreneurship, **2**(1): 1-25.

Brush CG (1990). Women and Enterprise Creation. In Enterprising Women: LocalInitiatives for Job Creation. Paris: OECD, pp37-55.

Brush, C. (2006). Women entrepreneurs: A research overview. In M. Casson, B. Yeung, A. Basu, & N. Wadeson (Eds.), Oxford handbook of entrepreneurship (pp. 611–628). Oxford UK: Oxford University Press.

Baumol, W. (1990). Entrepreneurship: Productive, unproductive, and destructive. Journal of Political Economy, 98(5), 893–921.

Burke, B., Arkowitz, H., & Dunn, C. (2002). The efficacy of motivational interviewing. In W. R. Miller & S. Rollnick (Eds.), Motivational interviewing: Preparing people for change (2nd ed., pp. 217–250). New York: Guilford Press.

C. Brander, K. E. Hartman, A. K. Trocha, N. G. Jones, R. P. Johnson, B. Korber, P.Wentworth, S. P. Buchbinder, S.Wolinsky, B. D. Walker, & S. A. Kalams, 1998. Lack of strong immune selection pressure by the immunodominant, HLA-A*0201-restricted cytotoxic T lymphocyte response in chronic human immunodeficiency virus-1 infection. J Clin Invest 101(11):2559–2566. On p. 3.

Buttner, E. H. and Moore, D. (1997). Women's organizational exodus to entrepreneurship: Self-reported motivations & correlates w/ success. Journal of Small Business Management, January, 34-47.

Casson, Mark C. (1982). The Entrepreneur. An Economic Theory. Oxford: Martin Robertson.

Carree, M., van Stel, A., Thurik, R., & Wennekers, S. (2002). Economic development and business ownership: An analysis using data of 23 OECD countries in the period 1976–1996. Small Business Economics, 19(4), 271–290.

Chaganti, R. (1986). Management in women-owned enterprises. Journal of SmallBusiness Management, 24(4), 18-29.

Cliff, Jennifer E. (1998). Does One Size Fit All? Exploring Relationships Between Attitudes Towards Growth, Gender, and Business Size, Journal of Business Venturing vol. 13, no. 6, pp. 523-542.

Chell, E., Baines, S., 2000. Networking, entrepreneurship and microbusiness behaviour. Entrepreneurship and Regional Development 12, 195-215

Cooper, A.C. and W.C. Dunkelberg. (1987): "Entrepreneurial Research: Old Questions, New Answers, and Methodological Issues." American Journal of Small Business 3

Delmar, F. and Davidsson, P. (2000) Where do they come from? Prevalence And characteristics of nascent entrepreneurs. Entrepreneurship & Regional Development12:pp. 1-23.

Davidsson, Per & Honig, Benson L. (2003) The role of social and human capital among nascent entrepreneurs. Journal of Business Venturing, 18(3), pp. 301-331.

Dunkelberg, W.C., Cooper, A.C., Woo, C.Y., and W. Dennis. "New Firm Growth and Performance." Frontiers of Entrepreneurship Research. N.A. Churchill, J.A. Hornaday, B.A. Kirchhoff, O.J. Krasner, & K.H. Vesper, eds., pp. 307-332. Wellesley, MA: Babson College, 1987

Elam and Terjesen (2010) Gendered institutions and cross-national patterns of business creation for men and women European Journal of Development Research; 22(2010)3

Estrin s., Mickiewicz T. (2011) Institutions and female entrepreneurship Small Bus Econ (2011) 37:397–415 DOI 10.1007/s11187-011-9373-0

GražinaStartien, Rita Remeikien, 2008 Gender Gap in Entrepreneurship ISSN 1392-2785 Engineering Economics. 2008. No 5 (60)

Gimeno, J.F.; Folta, T.B.; Cooper, A.C.; and Woo, C.Y. (1997). 'Survival of the fittest? Entrepreneurial human capital and the persistence of underperforming firms.' Administrative Science Quarterly, 42: 750-783.

Greene (2000). The psychological sources of partisan-leaning independence American Politics Research 28 (4), 511-537

Harper, GJ (1998). Reducing stress in life care settings: the challenge of converting researchinto practice. Practicing Anthropology 20:19-20.

Hisrich, R. and C.G. Brush, 1986, The Women Entrepreneur: Starting,

Financing and managing a Successful New Business, Lexington, MA: Lexington Books.

Jack and Anderson 2002. The articulation of social capital in entrepreneurial networks: a glue or a lubricant?' Entrepreneurship and Regional Development, **14** (3), 93-210. Jianakoplos, Nancy Ammon, and Alexandra Bernasek. 1998. "Are Women More Risk Averse?"Economic Inquiry 36: 620-30.

Johnson, S., Kaufmann, D. & Zoido-Lobatón, P. (1998). "Regulatory Discretion and the Informal Economy." American Economic Review, 88 (2): 387–92

Kaufmann D., Kraay A., Mastruzzi M. (2010). Governance Matters: Aggregate and Individual Governance Indicators. 1996-2008 The Brookings Institution World Bank - Development Research Group (DECRG), World Bank Institute June 29, 2009 World Bank Policy Research Working Paper No. 4978

Klapper, Amit,, Guillén ,Quesad, Keefer (1997): Entrepreneurship and Firm Formation Across Countries. Policy Research Working Paper 4313.The World Bank Development Research Group Finance and Private Sector

Kovalainen, A., Arenius, P. and L. Galloway, 2002, Entrepreneurial activity of women in the global economy: analysis of data from 29 countries, paper presented at the Babson Kauffman Entrepreneurship Research Conference 2002, Boulder Colorado.

Knack, S., Keefer, P. (1997). Does Social Capital Have an Economic Payoff? A Cross-Country Investigation. Quarterly Journal of Economics 112 (4): 1251-1288

Kyro, P. (2001). Women entrepreneurs question men's criteria for success. www.babson.edu/entrep/fer/Babson%202001

Kuratko, Donald F . and Hornsby, Jeffrey S. (1997). Developing entrepreneurial leadership in contemporary organizations. Journal of Management Systems, 8. 17-27.

La Porta, Rafael, et al, 1997. "Trust in Large Organizations," American Economic Review, American Economic Association, vol. 87(2), pages 333-38, May.

La Porta,, Lopez-de-Silanes, Shleifer and R Vishn, (1999): "The Quality of Government" (with R. La Porta, F. Lopez-de-Silanes, and R. Vishny), Journal of Law, Economics and Organization,

LaPorta, R. & Shleifer, A. (2008). "The Unofficial Economy and Economic Development." Brookings Papers on Economic Activity 2: 275-364.

Levesque, Minniti 2006 The Effect of Aging on Entrepreneurial Behavior (2006). Journal of Business Venturing, Vol. 21, Issue 2,

Loayza, N. (1996). "The Economics of the Informal Sector: A Simple Model and Some Evidence from Latin America." Carnegie-Rochester Conference Series on Public Policy, 45: 129–62.

Loayza, N., Servén, L. & Oviedo, A. M. (2005). "The Impact of Regulation on Growth and Informality—Cross-Country Evidence." World Bank Policy Research Working Paper, World Bank, Washington, DC.

Maloney, W. (2004). "Informality Revisited." World Development 32 (7), pp. 1159-1178.

Misturelli, F., & Heffernan, C. (2008). "What is poverty? A diachronic exploration of the discourse on poverty from the 1970s to the 2000s." The European Journal of Development Research, 204: 666-684.

Minniti, M., Alllen, I.E. & Langowotz, N. (2005). Global Entrepreneurship Monitor 2005 Report on Women and Entrepreneurship. Babson College and London Business School.

Minniti (2010) European Journal of Development Research (2010) 22, 294–312. doi:10.1057/ejdr.2010.18; Published online 13 May 2010 Female Entrepreneurship and Economic Activity

McClelland, Swail, Bell, Ibbotson, 2005: Following the pathway of female entrepreneurs: A six-country investigation. Emerald Group Publishing Limited

Moss, Saunders (1987) Do Women Entrepreneurs Require Different Training? American Journal of Small Business

Nichter, S., & Goldmark, L. (2009). Small Firm Growth in Developing Countries. World Development, 37(9): 1453-1464.

North, D.C. (1990). Institutions, institutional change and economic performance. Cambridge: Cambridge University Press. Oppenheimer(1970): The Female Labor Force in the United States; Demographic and Economic Factors Concerning Its Growth and Changing Composition. Population Monograph Series, No. 5.

Parker, S.C.(2004) The Economics of Self-employment and Entrepreneurship. NewYork: Cambridge University Press.

Perry, G. et al (2007). Informality: Exit and Exclusion. Washington D.C.: The International Bank for Reconstruction and Development / The World Bank.

Pia Arenius Maria Minniti (2005). Perceptual Variables and Nascent Entrepreneurship Small Business Economics 24: 233–247 _ Springer 2005 DOI 10.1007/s11187-005-1984-x

Reynolds, P., et al. (2005). "Global Entrepreneurship Monitor: Data collection design and implementation 1998–2003." Small Business Economics, 24(3), 205–231.

Reynolds, D., Nicolson, R. I. and Hambly, H. (2003). Evaluation of an Exercisebased Treatment for Children with Reading Difficulties

Robinson, P.B., & Sexton, E.A. (1994). The effect of education and experience on self-employment success. Journal of Venturing, 9(2): 141-156.Schneider, F., & Enste, D. H. (2000). "Shadow Economies: Size, Causes, and Consequences." Journal of Economic Literature, 38 (1): 77–114.

Reimers, C. and M. Honig, 1995, Responses to social security by men and women, The Journal of Human Resources 31 (2), 359-382.

Rebernik M., Tominc P., Duh M., Rus M., Pušnik K., Krošlin T., Bradač B., Močnik D. (2006), Slovenian Entrepreneurship Observatory 2005 (Slovenski podjetniški observatorij 2005), Maribor, Faculty of Economics and Business

Schneider, F., Buehn, A., & Montenegro, C. E. (2010). "Shadow Economies All over the World: New Estimates for 162 Countries from 1999 to 2007." The World Bank Policy Research Working Papers, WPS5356.

Schubert, S., A. Rakin, D. Fischer, J. Sorsa and J. Heesmann, 1999. Characterization of the integration site of Yersinia high-pathogenicity island in Escherichia coli. FEMS Microbiol. Lett., 179: 409-414.

Scott, 1986: Gender: A Useful Category of Analysis.

Sen, A. (1999). Development as Freedom. New York: Alfred A. Knopf.

Shane, S. (2009). Why Encouraging more People to Become Entrepreneurs is Bad Public Policy. Small Business Economics, 33(2):141–49.

Shane, S., & Venkataraman, S. 2000. The promise of entrepreneurship as a field of research. Academy ofManagement Review, 25: 217–226.

Thurik et al. (2002) Gender, entrepreneurial activity and entrepreneurial self-image: new insight into the question: "what is an entrepreneur?", Small Business and Entrepreneurship Development Conference at the University of Nottingham 15-16 April, (European Research Press, Shipley, UK, 2002), 452-463.

Verheul, Stel, and Thurik, 2004, Explaining female and male entrepreneurship across 29 countries, SCALES-paper series.

Verheul, I. and A.R. Thurik, 2001, Start-up capital: does gender matter?, Small Business Economics 16, 329- 345.

Verheul, R. (2005). Clinical utility of dimensional models for personality pathology. Journal of Personality Disorders, 19, 283-302. doi: 10.1521/pedi.2005.19.3.283.

Verheulyz Van Stelyz A Thurikyz R (2006). Explaining Female and Male Entrepreneurship at The Country Level Entrepreneurship & Regional Development, 151–183.

Ward, K. and F.C. Pampel (1985) Structural Determinants of Female Labor Force Participation in Developed Nations, 1955-1975. Social Sciences Quarterly, 66(3).654-667.

Wennekers S, van Stel A, Thurik R, Reynolds P (2005) Nascent entrepreneurship and the level of economic development. Small Bus Econ 24(3):293–309.