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Gender finance literature review

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I. Abstract:

The women play an increasing important role in the entrepreneurship and private equity capital market, however, the gender based gap attract more attention, the private equity investment decision process include pre-investment (search), contract negotiation, post-investment and exit, the most of researchers think this issue is not feminist and focus research on the early stage of process searching and negotiation. There are four major research field: the role of women and gender difference in entrepreneurship, the role of women and gender difference in business angel, the role of women and gender difference in venture capital and the role of gender based gap in both supply and demand perspective. This thesis is to introduce entrepreneurship and private equity market, the role of women in this market, the gender based gap in the market and the summary several literatures from the four major researching stream to find out factors rising the gender based gap.

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1. Introduction:

1.1 Introduction of entrepreneurship:

Entrepreneurship is the cornerstone and core of the free enterprise economy. Entrepreneurship is a business activity that make great efforts to discovery, evaluate and exploit opportunities to introduce new goods and services, ways of organizing, markets, processes, and raw material through organizing approaches that previously had not existed in the business world (Shane and Venkataraman, 2000; Venkataraman, 1997). Schumpeter (1934) figured out the important role of entrepreneurship and small business in the business activity and emphasized that the entrepreneur would be prime cause of economic development and growth. He believed that the entrepreneur, who possess innovation idea and introduce new invention, for example, technology based products or service and novel business model, would challenge incumbent firms and stimulate the development of economy.

In the last two decades of 20th century, the economy, the combined effect of globalization and the technology revolution, such as ICT, has greatly reduced the cost of transferring capital and information from high-cost locations in Europe and North America to low-cost locations worldwide. Business activities in high-cost areas are no longer compatible with conventional tasks. On the contrary, globalization has transferred the comparative advantage of high-cost locations to knowledge-based activities, which cannot be transferred globally without huge costs. Knowledge as an input to economic activities is inherently different from more traditional inputs such as land, capital, and labor. It is characterized by high uncertainty, high asymmetry between people, and high transaction costs. The reaction to the trend of establishing knowledge as the main source of comparative advantage is the re-emergence of the entrepreneurial economy. Before 1980s, the dominant form of organization was the managerial economy. However, the most of developed countries have transferred from the managerial economy to entrepreneurial economy. Economic activity is moving from large, incumbent firms toward small, new ones. (Audretsch and Thurik, 2001). The entrepreneurship is able to increase the diversity of business activities and the variety of enterprise in the location so that stimulate the economic growth and increase employment opportunity. The models of the Managerial and the Entrepreneurial

Economy are compared in the chapter three, distinguishing between different groups of characteristics, including underlying forces, external environment characteristics, internal or firm characteristics and policy characteristics. The shift from the Managed Economy to the Entrepreneurial Economy has many consequences, such as resource allocation, technological innovation, geological location variety or employment rate. The most important is the changing and growing role of entrepreneurship and small firms as drivers of growth. As shown in the figure 1.1, the self-employment rates in six OECD countries is shown the trend of increase and the entrepreneurship will play an increasingly important role in the economic growth and increase the employment rate.

To sum up, entrepreneurship has reemerged as an important element in the organization of economies. Its role has changed dramatically over the last half century. “Entrepreneurship has been acted as the engine of economic and social development throughout the world” (Audretsch and Thurik, 2004).

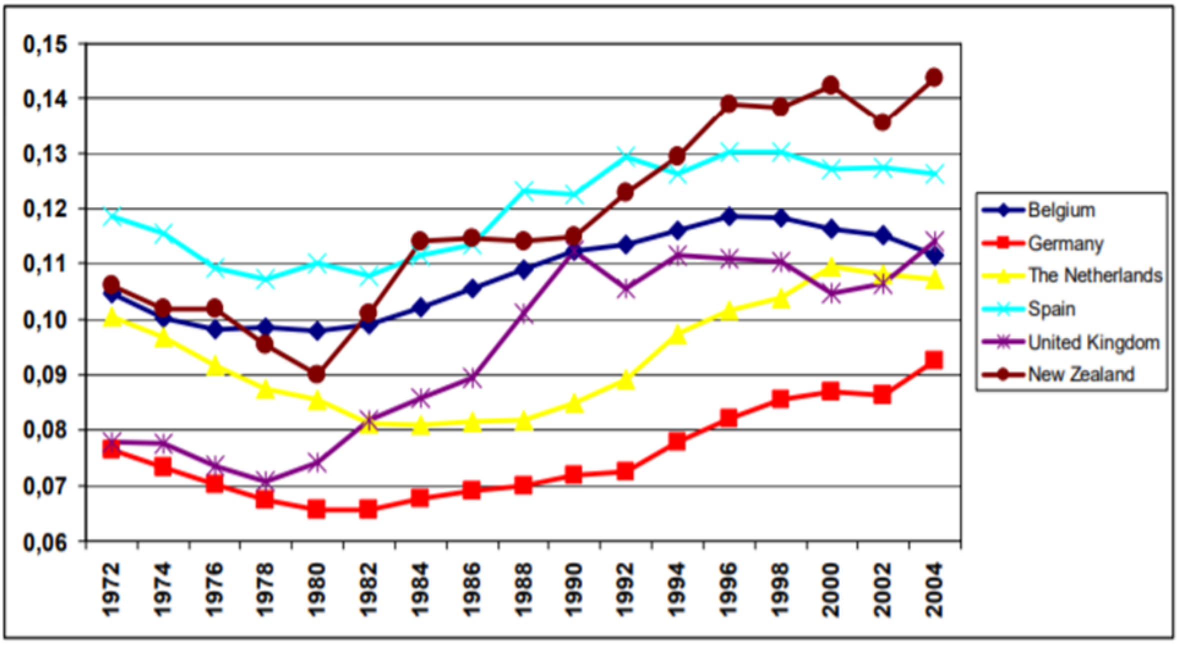

Figure 1.1. Self-employment rates (business owners per workforce) in six OECD countries (Compendia 2004.2; Van Stel (2005))

1.2 External financial resource of entrepreneur:

“Who are the major financing equity suppliers of the entrepreneur and how do entrepreneurs access to them?" The entrepreneurs are usually small and nascent enterprise around the world, if they want to start up and develop their business activities, from the financial market perspective (supply side capitalist and demand side entrepreneur). Because there is a general reluctance on the part of banks to negotiate small loans and insufficient liquidity is a common reason of small business failures and unlike large listed companies, small companies usually cannot access traditional capital markets, the most effective approach is that entrepreneurs have to seek financial resource external private equity which is considered an alternative to debt financing, furthermore, above two questions are key points that the entrepreneurs have to solve in seeking equity capital process.

The major external equity capital suppliers which provide the majority of high risk equity capital for entrepreneurial ventures include the formal or institutional venture capitalists and informal equity capitalist usually known as business angels. Venture capital firms (VCs) supply capital which are invested primarily in the later stage of development of a firm. With the size and stage of funding being the predominant differentiator of VCs from private equity investments. Angel investors comprise of mixture of investors ranging from informal investors, friends and family, individuals, group investors, and accredited and unaccredited investors. With angel investors investing in seed and startup companies requiring small and less sophisticated investments, the overall size of the angel capital market remains small, but packs a significant impact on economies they operate in. Both angel and VC capitalists are complementary and play an important role in the overall development of enterprises. Their investment business activity is able to make enterprise start and expand, thereby generating jobs, as well as developing the economic value of the country.

Over the last decade rapid expansion of the US venture capital industry substantially increased the equity financing available to firms with high growth potential and large capital needs. The National Venture Capital Association reported that venture capital raised in 2000 alone reached $103 billion, an increase of more than 113% from 1999 (Thomson Financial Securities Data 2000). The number of deals increased from 1166 in 1995 to 5380 in 2000 (Taylor 2001). During the last decade high net worth individuals, known as angels, also invested an additional $20 billion to $30 billion (Sohl 1999).

Equity capital promotes the development of emerging industries, promotes the development and diffusion of new innovations, and promotes the vigorous development of the economy (Timmons and Bygrave 1997, Mason and Harrison 1999, Bygrave et al., 2001b). One of the most important results of equity investment in fast-growing companies is the wealth created for entrepreneurs, angel investors and venture capitalists (Brush and Carter 2002). The equity capital investment decision process, developed from the investor (supply side) perspective, is commonly separated into several stages (Tyebjee and Bruno 1984, Fried and Hisrich 1994, Wright and Robbie 1998.) Pre-investment processes involve activities related to the search, the initial screening by potential investors and due diligence. The investment event includes contract negotiation and the determination of the conditions of the term sheet. In the post-investment period, post-investment relationships, future rounds of financing and eventual exits occur. A flow diagram that modifies this process and illustrates these stages from the entrepreneur's perspective is provided in figure 1.2 (Amatucci and Sohl 2004). In particular, early-stage equity financing plays a significant role in the successful start-up and development of entrepreneurial ventures (Wetzel, 1986; Ou, 1987; Gaston and Bell, 1988; Mason and Harrison, 1992). Furthermore, the major external private equity supplier is venture firm and business angel, there are several important factors that entrepreneurs are able to access to external private equity financing successfully, such as human capital and social capital, I will discuss in the following.

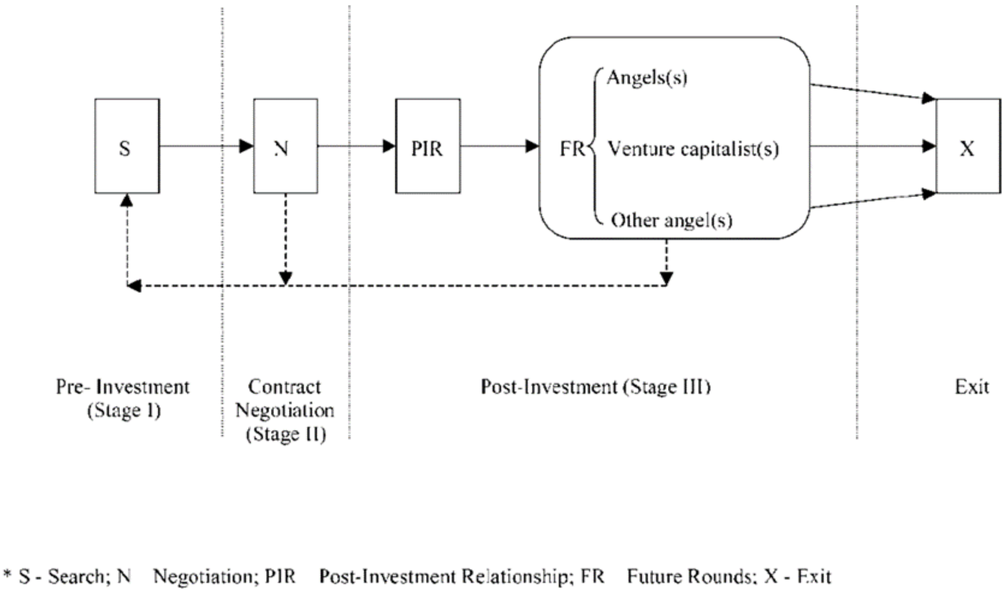

Figure 1.2. Private Equity Investment Decision Process: Entrepreneur's Perspective (Amatucci and Sohl 2004).

1.3 Women in entrepreneurship and financial capitalist and gender disparity:

There is a growing number of women taking participating in the business activities and they are becoming potential financial engine. Women over the age of 15 account for 61% of all labor force participants, and the number of people holding management and leadership positions is increasing (US Census 2001; The Fact Sheet 2000). In addition, the number of female top executives in the U.S. has increased significantly. Among major U.S. corporations in 2005, 7.5% of Chief Financial Officers (CFOs) and 1.5% of CEOs were women, versus 3.0% and 0.5% in 1994, respectively (Huang and Kisgen 2013). Women play an increasingly important role in financial investment activity, for example both the supply (venture capital or business angel) perspective and demand (entrepreneur or small business) perspective of external equity capital investment. From the demand side, it is well shown that women-owned or women-led businesses are the fastest-growing sector of new venture creation in the USA, representing nearly 40% of all firms and an increase of 103% during the 1987 – 1999 period (Gundry et al. 2002). Research from the National Foundation of Women Business Owners (NFWBO) estimates that between 1997 and 2002 the number of women-owned businesses increased at 14%—twice the rate of all US firms. In 2002, there were about 6.2 million women-owned businesses employing 9.2 million people and generating $1.15 trillion in sales (Amatucci and Sohl 2004). From the supply side, Data on women angel participation in angel organizations in the US have been collected since 2000 and from that period to 2005, the median percentage of women angels has ranged from 3.0% to 7.1% and has not exhibited any significant growth or decline (Center for Venture Research, 2002, 2003, 2004, 2005; Becker-Blease and Sohl, 2007). Research indicates that this low participation rate is also evident outside the US (Harrison and Mason, 2007), including New Zealand at 5% (Infometrics Ltd, 2004), Scotland with 8% (Paul et al., 2003), Germany, the UK and Finland at 5% (Stedler and Peters, 2003; Investor Pulse, 2003; Lumme et al., 1998), Norway at 3% (Reitan and Sorheim, 2000) and Canada at 2% (Riding et al., 1993).

It is clear that woman owned businesses (WOB) and female top executives or management are able to make great contribution to economic growth, however, this financial market is still dominated by men as shown in figure 1.3, so that it is revealed that gender financial gap could be existed in the equity investment process. Furthermore, most research on entrepreneurship and venture capital is based on male characteristics and focuses on behaviors that belong to the male domination. Only quite a few studies pay close attention to the characteristics and typical behaviors of female entrepreneurs.

Although there is not much research on gender disparity in the equity capital market, gender difference issue has been drawn more scholars' interest. In this paper, we will review and evaluate the gender finance difference relative literatures to find out the important factors to explain sex based difference in the both demand and supply side.

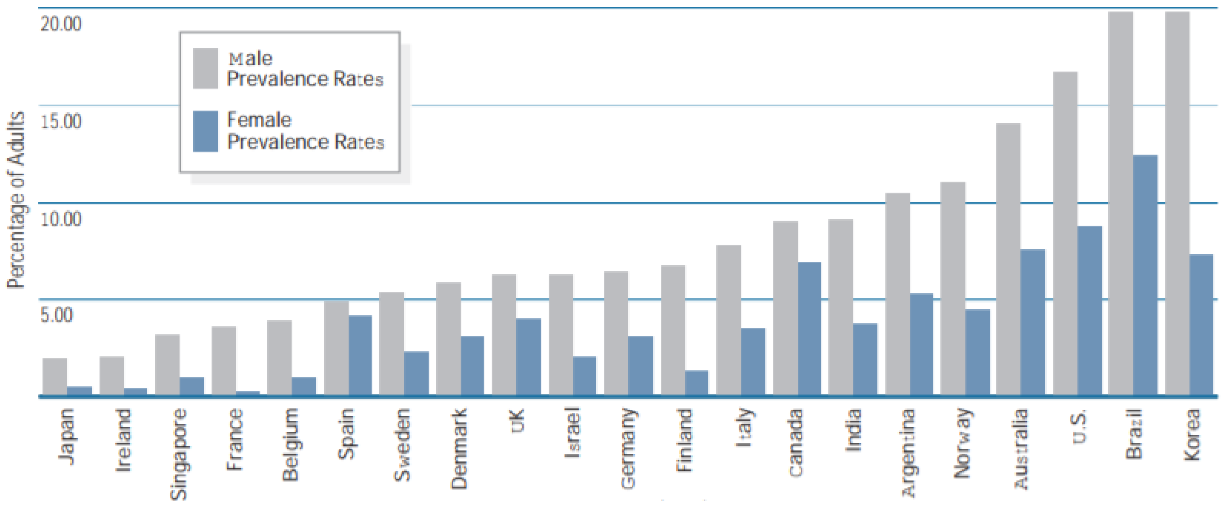

Figure 1.3. Total entrepreneurial activity by country by gender (GEM (2010))

2. Research Methodology:

We will provide a detailed evaluation and analysis of the extant literature investigating the role of women in entrepreneurs, the role of women business angles, access to equity capital, and effect of gender characterization upon female entrepreneurs. The evaluation and synthesis of extant evidence should make this field of research more accessible to scholars, contributing to its diffusion among the scientific community.

In order to select the relevant literatures to be reviewed, we have adopted a three-stage exploration process. First, we have conducted an extensive search in the titles and abstracts of published, peer-reviewed articles in the main electronic reference retrieval service Scopus, using a series of keywords that cover the topics under scrutiny. The selected keywords have been the following ones: entrepreneurs, venture capital, business angels, female entrepreneurship, venture firm, female disparity finance, and gender related finance and equity investment. We have selected all the relevant research published in academic journals. In this phase, we have thus tracked all the articles pertaining to the broadly defined topic on role of social capital and gender in linking financial suppliers and entrepreneurial firms, Women entrepreneurs who break through to equity financing, Access to Capital and Terms of Credit and relative subject from 1980s to the most recent years.

Second, we have performed a manual screening of the papers identified in order to validate the search terms and to filter the preliminary list according to fit and thus remove all the articles that did not fulfil the research topic.

Third, we have classified the selected papers into four major research streams that have emerged in the past three decade years considering from the supply perspective and demand perspective of financial equity investment market:

From demand side:

(i) The role of women and gender difference in entrepreneurship.

From supply side:

(ii) The role of women and gender difference in business angel.

(iii) The role of women and gender difference in venture capital

From both side:

(iv) The role of gender based gap in both supply and demand side.

Finally, we have read and analyzed each selected article to create a detailed database in which we have coded the following information: (1) author name(s), (2) article title and journal of publication, (3) research question(s), (4) data used, (5) research methods, and (6) findings.

3. Literature review:

In the past twenty years, women are playing an increasingly important role and driving force for the growth of economy, they account for 47% of all individuals whose assets exceed $500,000 (US Department of Labor, 1997). From 1996 to 1998, the number of wealthy women defined as having 500,000 or more investable assets increased by 68%, while the number of wealthy men increased by only 36% (Weinberg, 2002). Women now control 51% of private wealth in the United States (Federal Reserve, 2004). Among the top wealth owners in 1995, the average net worth of women was $1.38 million, slightly higher than that of male wealth owners, and women had less debt (National Taxation Bureau, 2001). These data shows that women have gained huge financial resources and therefore have the wealth they need to become major roles in corporate equity financing. However, we am not able to ignore an important issue that the gender disparity existed in the financial market. For example, a study report of the venture capital industry made by Stout (1997) shown that of the 1,200 companies that received venture funding in 1996, only 30 were women-led.

The process of private equity investment market has been studied and documented from the demand perspective (entrepreneur) and the supply perspective (venture capitalist or business angel). Fried and Hisrich (1994) suggested the stages as origination, VC firm-specific screen, generic screen, first-phase evaluation, second-phase evaluation and closing. In their study of women entrepreneurs, Amatucci and Sohl (2004) show three stages of the process-pre-investment, contract negotiation and post-investment. Focusing on business angels, Paul et al. (2007) adopted a qualitative approach to develop an iterative investment process involving familiarization, screening, bargaining, managing and harvesting stages moderated by communities of personal networks and investment objectives. In the past thirty years, although there is not much research on it, the gender disparity in private equity investment market attract more academic attention, the most of scholars focus on the demand and supply side of equity investment market. In the Figure 3.1, Amatucci and Sohl (2004) shows the most research focus on the view of female entrepreneurs and female business angels.

In order to investigate the obvious disconnect between opportunities and resources in equity financing of high-growth female companies, the "Diana Project" was established. Funded by the Kaufman Center for Entrepreneurship and Leadership, the US Small

Business Administration, and the National Women's Business Council, leading investigators on behalf of five universities proposed to investigate the supply and demand of equity capital and compare the growth patterns of men and women-led enterprises. A theoretical model has been developed which includes the industry structure and the actions of three key roles in this process shown in the figure 3.2. In the figure 3.3, Brush and Carter (2002) developed one conceptual framework model based on social capital approach. These two figures shown that strategic choice, human capital and social capital are important factors for explaining the gender gap between male and female.

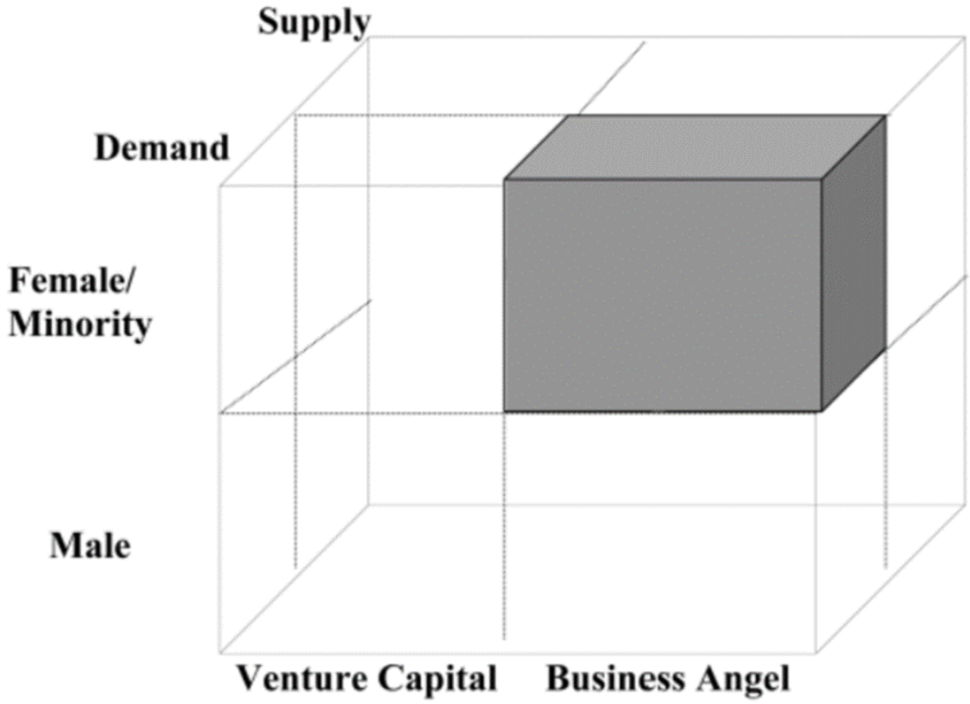

Figure 3.1. Multiple research perspectives of private equity investment process (Amatucci and Sohl 2004)

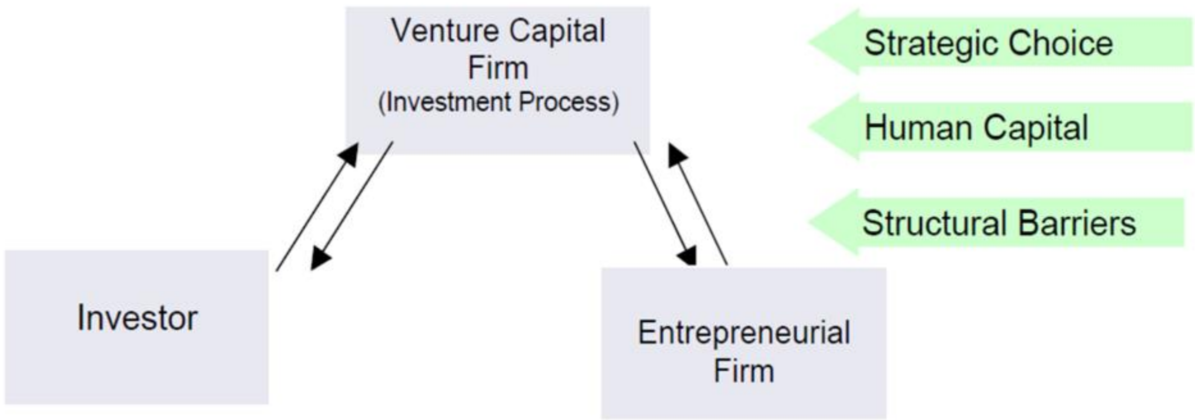

Figure 3.2. Diana project model

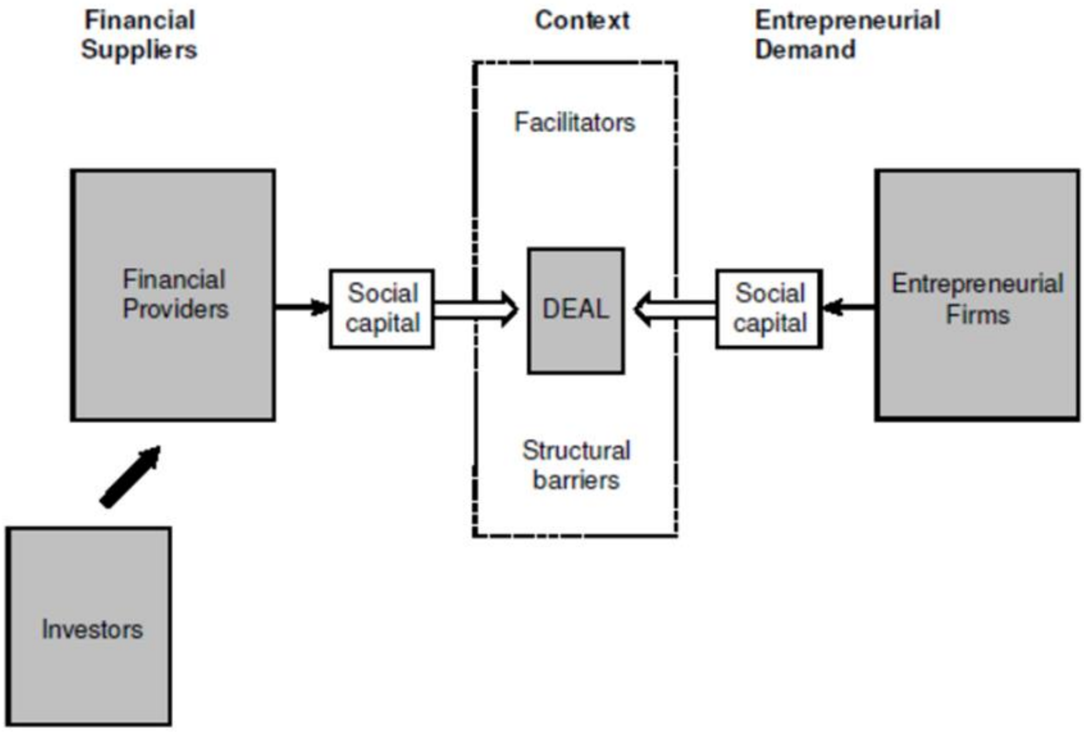

Figure 3.3. Conceptual framework (Brush and carter 2002)

3.1 The demand side - the role of women and gender gap in entrepreneurship:

In the past twenty years, the women entrepreneurs became an increasingly significant engine and role of economic growth, their number, sales growth, employment growth and contribution have all increased significantly. It is a great opportunity for investing in the women owned ventures for private investors. The number of women-owned firms in the US increased by 17.4% between 1997 and 2004, which is almost double the 9% growth rate for all firms during the same time period (Center for Women's Business Research, 2004). In 2004 in the US, it is estimated that there were 10.6 million privately held firms in which women owned 50%, and of these nearly two-thirds (6.7 million) had a woman as the majority owner. These women-owned firms employed 9.8 million people and generated over $1 trillion in sales (Center for Women's Business Research, 2004). However, the GEM report (2010) shown that the entrepreneurial activity was still dominated by men, in addition, the male entrepreneurs are more easily to access to external private equity than Women counterparties. The disparity between female entrepreneurs and male entrepreneurs is particularly evident in high-growth companies, where women make up a much smaller percentage of founders who can achieve high-growth equity outcomes including high-value acquisitions or initial public offerings. In short, it is generally accepted that women's representation in high-growth enterprises is still low. Given that small and medium entrepreneurs (SMEs) are responsible for a large amount of employment, innovation and productivity, policy makers and consultants must fully understand the determinants of SMEs growth, especially the various supply and demand issues surrounding the financing of growth for SMEs (Becchetti and Trovato, 2002). Winborg and Landstrom (2001) argue that financial problems (lack of funds) limit the development and growth of SMEs, because many SMEs cannot obtain the same types of growth funds that are usually available for large enterprises. Marlow and Patton (2005) find that Women entrepreneurs have additional disadvantages associated with gender ascription. Such disadvantage is articulated in a differentiated fashion within the sphere of women's socioeconomic activity; in respect of entrepreneurship it is argued such subordination limits the accrual of social, cultural, human, and financial capital and so places limitations upon women's abilities to amass personal savings, generate credit histories attractive to formal lenders, or engage the interest of venture capitalists. For example, financial constraints will impede the full realization of business potential.

For big companies, growth, geographic expansion, and new product development are commonly funded by the issuance of stocks or bonds, which are usually not used by small private companies. Therefore, the external equity capital is one of the key elements of small business innovation, growth and job creation. However, Cole and Wolken (1995) found that women-leaded enterprises are less likely to use banks as a source of capital than men. The author summarized that women-leaded companies might be less attractive to banks and other potential creditors than their counterparties, precisely that is why they are smaller and considered to be more risky. How to access to the capital and secure the capital from the financial supplier is a significant issue for entrepreneurs, as we known, if without sufficient capital, small enterprises are not able to develop and grow. From the figure 3.3, it is shown that the gender gap existed in accessing to the external private equity capital, especially in relationship with the venture capitalists and business angels. The vast majority of research has focused on gender differences in early stage investment (searching and negotiation) (Canning et al., 2012), negotiation is an important issue for male and female entrepreneurs to access to the capital supplier. Gender-related differences exist for women entrepreneurs as they participate in contract negotiation for equity capital. Gender discrimination in the negotiation process are well documented in the organizational behavior and conflict management disciplines; however, this topic remains unchartered territory in entrepreneurship research. Although women entrepreneurs still obtain only a small portion of total private equity investment, the importance of developing effective negotiation strategies with potential investors cannot be underestimated (Amatucci and Swartz 2011). Amatucci and Sohl (2004) use an exploratory investigation of challenges and effective strategies with regard to women entrepreneurs who have been able to secure business angel equity capital and find there are some of the major challenges including the right knowledge to proceed through a first round without future negative consequences, developing an effective management team and dealing with gender-related bias. Effective strategies include good social capital and human capital and developing trust early in the angel/entrepreneur relationship. However, there were strong statements about the difficulties women encountered due to investor assumptions regarding their management potential, for example knowledge, training and education and experience. As women-owned businesses increase in their importance and as the informal equity market expands as a viable source of funding for high growth ventures, it is important to understand the challenges, processes and solutions for bringing these two powerful economic forces together. Furthermore, Amatucci and Swartz (2011) find that negotiations on private equity investment are a high conflict, high structural ambiguous that women are required to behave contrary to traditional gender stereotypes. Relative to investors, people have a clear understanding of low status and low power positions, which will weaken the transaction method. Women receive a very small proportion of total private equity investment dollars as compared to men. Moreover, term sheet or contract negotiation during the private equity investment process is critical to obtaining badly needed financial resources under reasonable conditions related to relinquishing equity and control.

What factors explain gender based difference between men and women entrepreneurs accessing to external equity funding? For the initial research of gender based discrimination in the entrepreneurship, it found that the women are less likely to become entrepreneurs than men (Kim and Aldrich, 2005; Ruef et al., 2003) and less likely to outperform once a new venture is founded (Yang and Aldrich, 2014). The method is used as follow: first, it compares the differences between male and female-owned companies in using various external credit products. Second, it determines the characteristics or variables of the enterprise, including gender, which predict the likelihood that the enterprise will use these same external credit products. Finally, it reviewed credit conditions, including interest rates and collateral requirements, to determine whether the loan conditions imposed on female business owners are more stringent than those imposed on men. Women-owned businesses are significantly smaller and newer than those owned by men. However, women owned businesses have the same access to the most frequently used credit products as men and women obtain credit under less favorable terms than men. The gender difference is explored by some researchers. Susan Coleman (2000) find out that women business owners have shorter relationships with their primary financial institutions than do men, it suggests a possible strategy for women business owners who tend to have smaller companies and smaller loans-developing relationship with primary financial institutions. In addition, these findings demonstrate that women owned firms do not obtain it on the same terms as do men-owned firms so that it may affect their willingness to seek out external credit as well as their perceptions of its availability. Verheul and Thurik (2001) find that female entrepreneurs may have more problems acquiring financial capital because female entrepreneurs are more likely to work part-time, more likely to work in the service sector, they are more averse to risk, have less financial management experience and spend less time networking, in addition, they suggest that female entrepreneurs have a smaller amount of financial capital when compared to male entrepreneurs but this may imply that they make more efficient use of their relatively scarce resources. Furthermore, Muriel Orhan (2001) analyzed male and female entrepreneurs form three aspects: motivation, business competence and financial patterns based on the French samples. This study finds that women entrepreneurs has lower level of business competence than male counterparties because of professional training, education and experience in top management and interpersonal communication problem between the male dominated finance field and the women entrepreneurs. In addition, there are two main sources of the communication problems: one relates to intercultural bias, tend to consider female entrepreneurs as women first, rather than as persons; the other one is the apparent lack of financial competencies in women entrepreneurs. In conclusion, there are several reason explored this issue including the fact that most women-owned companies are smaller; lack of financial maturity and top management experience; risk aversion and possible discrimination, however, there are still some limitation in the research, such as research method, geography, sample size and so on.

With the more method or approach is used, there are an increasing number of researchers to explore gender difference accessing and securing the external equity finance and summary the following factors to explain this difference. 1. Human capital; in the business competence, it shown that the women entrepreneurs lack of knowledge, skill and experience of technique and executive management comparing with their counterparty. The major human capital affect the gender discrimination include education, years of management experience and training experience (Carter et.al. 2003, Orser et.al. 2006). 2. Social capital: social capital is a form of non-economic knowledge and emerges from the norms, networks, and relationships of the social structure. Carter et.al. (2003) figures out that social capital had no direct effect on increasing the odds of using equity or loans in the financial strategy but did influence certain bootstrapping techniques. The network diversity and the strength of the women entrepreneur's network may contribute more during the deal generation phase of the investment process. The diversity and the strength of the women entrepreneur's network may contribute more during the deal generation phase of the investment process. The entrepreneur's use of her network may get the venture to a point of contact, but the characteristics of the top management team and the firm, its business model and potential, may have a more direct effect on the investment decision. However, Orser et.al (2006) finds that length of relationship with capital supplier plays an important role in apply external equity capital and it rises the gender discrimination, which is consistent with Susan Coleman (2000).

Furthermore, homophily effect also play an important role because risk averse and communication barrier to male dominated equity capital market. Becker-Blease and Sohl (2007) suggests that that the pattern of financing for WOB in the equity capital, where women receive only a small fraction of overall investment dollars. However, the low rate with which women seek financing from angles and low number of women entrepreneurs provide proposal and the difference in seek rates appears to be driven by homophily on the part of entrepreneurs in the angel market. Entrepreneurs demonstrate a strong preference to seek angel funding from angel investors of the same sex. Women entrepreneurs think it is important to find and develop conceive of their business as a cooperative and harmony network of relationships. However, male counterparties more focused on the social status and power. How to solve gender based gap issue? Muriel Orhan (2001) emphasizes role of homophily effect and communication, and on the long term improvement, there are more women in financial institutions dealing with business loans and financial management. 3. Financial patterns: financial constraints will impede the full realization of business potential. Cater et.al. (2003) implied that there is only one self-contained behavior, namely the use of personal resources, which is related to the use of external equity financing. Scale and industry are more important than other financing techniques when explaining models. This may indicate that the women in this sample successfully obtained late-stage capital, rather than seeds or start-ups, and used personal resources to develop the company to this point. After controlling for size and sector, Orser et.al. (2006) finds that women owners are no less likely to seek debt, lease, or supplier financing than their counterparties; however, after controlling for size and sector, women owners are significantly less likely than men to seek equity financing. According to the model, after controlling for systemic factors, women owners are still less likely to seek external equity financing than men which is consistent with Nelson et.al. (2009). Furthermore, Constantinidis et.al. (2006) indicates that for some female entrepreneurs, it seems that there are some specific financing models and obstacles. However, the research results show that female entrepreneurs are not a homogeneous group, and we can distinguish them based on human, social and financial capital variables.

Although there are a lot of research, our understanding of the gender-based gap in high-growth entrepreneurship is still incomplete. We find that women are less likely than men to obtain external capital from investors. However, entrepreneurship is a dynamic process and we currently know very little about how various forces create gaps between male and female entrepreneurs in other aspects of the process. Entrepreneurship involves many stages, from starting a new business, to seek capital, to exit. Furthermore, the research has switched to evaluate the relative importance of each stage for generating less-favorable outcomes for female entrepreneurs. Whether women face greater disadvantages in the entrepreneurial process, or this gender gap will widen later in the entrepreneurial process, it still remains an interesting question. However, from a policy perspective, this understanding is crucial to addressing gender inequality in entrepreneurship and increasing female representation among high-growth entrepreneurs. If the differences between male and female entrepreneurs appear at different stages and accumulate over time, the policy should include many interventions that target multiple actors at multiple stages of entrepreneurship. Carter et.al (2003) suggested that the understanding of female entrepreneurs and access to equity financing are at a very early stage. It is important to understand the factors that lead to successful external funding. Constantinidis et.al. (2006) figure out that there are gender effects, either related to 'separation' (differences in terms of choices, preferences and needs for business financing) or to 'hierarchy' (valorization in terms of the firm's attributes and the entrepreneur's characteristics, as regards financing) phenomena. Subsequent research may study the impact of social networks, human capital, and bootstrapping on the due diligence process, time, investment amount, and capital injection stage. A better understanding of the timing of this process will help to consider when and where the actual value of human and social resources are generated and contributed. Breaking this process down into several steps may show that finding potential footholds for female entrepreneurs and ultimately pointing the way to education and training programs. In the future research, it should include people of different races and ethnicities who do not typically receive equity capital to ensure that our understanding of risk growth and wealth creation is not limited to certain groups.

3.2 The supply perspective:

In recent years, the role of gender in accessing corporate finance has been the subject of extensive research, debate, and policy attention as part of a broader focus on female entrepreneurship and corporate ownership issues (Gatewood et al 2003; Carter et al 2003). Although the laws of the most developed countries guarantee equal rights for both men and women, women's disadvantaged position in the supply side of equity investment market remains a problem. Women are unlikely to climb the career ladder, and even if they do the same work, their salaries are often lower than their counterparties. Gender differences in workplace performance remain an important issue in the economics and management literature, although somewhat controversial. Gender-based differences seem to exist in many attributes, which may affect the tendency, enthusiasm and interest of business activities. When discussing these differences, one must be careful not to assume that they are necessarily inherent; some of these differences are undoubtedly related to different modes of socialization and are therefore endogenous. On the supply side of equity capital market, financial capital is important resource for growing firms, however, only quite few women take participate in the early stage equity investment. There are several features to be explored in gender based gap: risk attitude toward investing money and competence and characteristics. The important role of early stage equity financing in the entrepreneurial economy has been focused by researchers. There are two major private equity capital supplier (business angels and venture capitalists) for the high growth venture, therefore we divide two prospective to do literature review.

3.2.1 The role of women and gender difference in business angels

Business angels provide an important source of venture capital for new companies and play a key role in creating an entrepreneurial atmosphere, representing the largest external source of early venture capital for new companies (Sohl 2003). There is a limited amount of research on the commercial angel market, but it is well known that angels provide most of the seed capital and venture equity capital for high-growth startups in the world. The lack of understanding of early equity financing of high-growth risk companies exacerbates the inefficiency of the angel market and creates a capital gap (Sohl, 2003a). More importantly, despite the increasing position of women in the angel market, there has been little research on the role of women as angel investors (Becker Blesse and Sohl, 2007), and the research sample is focused on the business angel group.

A consistent finding in previous studies of business angels is that there are very few women investors identified (Becker-Blease & Sohl, 2005; Center for Venture Research, 2004) typically fewer than 5% of the total (Harrison and Mason 2007). Does gender matter? Harrison and Mason (2007) think that female business angels are slightly more likely to invest in women-owned businesses, but this is not because they consider gender in their investment decisions. Gender is not a major issue in determining the supply of business angel financing, and there is no difference in gender in the informal venture capital market.

How these women angels organize, their investment practices and their views on funding women entrepreneurs are of importance to both women seeking equity financing and women considering making angel investments? Sohl and Hill (2007) find that women angel groups exist and are active, they could provide support to women angels do not have the appropriate education and experience to be successful angel investors and women entrepreneurs. Women angels rely on social capital to learn about investment opportunities. While women angels may not have the access to traditional networks they need for deal flow, women do have better access to deals when the firms are women-owned. However, the degree to which women angels miss opportunities or deals owing to their lack of a presence within traditional networks may be substantial. Thus, the data suggest that women angels exhibit a partiality for women-owned ventures, but this preference is not overwhelming. Furthermore, women face barriers in the private equity community as a result of investment inexperience and a lack of experience in pricing and structuring the investment deal. In addition, women is often outside of the traditional male dominated network, so that they will lose opportunity to become successful business angels, but it is able to be solved by social capital.

What factor could lead to the effect of gender based gap on business angels? Becker-Blease and Sohl (2011) hypothesize that systematic differences between men and women in confidence, risk tolerance, and social capital will lead to an inverse relation between the proportions of women angels participating in an angel group and the investment likelihood and evidence support these four hypothesis in the certain environment. There are several major factors to be explored in the gender based gap:

confidence, risk attitude, social capital and stereotype threat and these factors generally have a direct impact on investment behavior.

Confidence in investment capacity will be an important factor in determining the investment model and there may be differences in perception and actual abilities. Individuals are overconfident because they overestimate the accuracy of their knowledge or the probability of future favorable events. Overconfidence is usually a calibrated problem, therefore it is special serious for difficult tasks with limited or sporadic feedback, such as investments in startups. Although there is no direct evidence that angel investors have overconfidence, one can discover that angels may exist by understanding that most angels are very successful corporate executives who cash in on entrepreneurship. Entrepreneurs are as susceptible to cognitive biases as overconfidence and other investors. Gender and confidence seem to be related and women could have lower confidence in “man-dominated” tasks.

Risk tolerance is a significant character of human behavior. Individuals must choose based on the number and characteristics of the risks they want to take, there are several factor affect the risk attitude, such as power, status and the role of socialization. Men and women are different in their tolerances for bearing risk, and it leads to occurrence of gender based gap. In addition, different perceptions of risk between men and women are sufficiently material to affect investment behavior and performance. Becker-Blease and Sohl (2011) suggest that women business angels have lower level of risk tolerance toward equity investment than their counterparties.

Social capital can provide access to customers, suppliers, and potential investors and is an important element for value creation. Sohl and Hill (2007) emphasize that social capital is not just important from the demand perspective, but also from the supply perspective. They suggest that social capital may be an important determinant of deal flow. In addition, Becker-Blease and Sohl (2011) figures out that women entrepreneurs, due to homophily, are more likely to understand and seek funding from groups with more women, and these groups invest at rates similar to groups that receive high proportions of proposals from men, then this will help to insure equality of access for women entrepreneurs to vital early-stage capital. To sum up, Becker-Blease and Sohl (2011) suggest that women business angels possess less confidence, less risk tolerant and/or lower levels of social capital than their counterparties.

Furthermore, Becker-Blease and Sohl (2011) and Edelman et.al (2018) suggest stereotype threat plays an important role. Becker-Blease and Sohl (2011) find that stereotypes exist concerning women in business including their lower business acumen, lesser willingness to compete, and low risk tolerance. If the minority status in the angel group activates women's stereotyped threats, this may be manifested by the female angel's lack of confidence in the overall investment and unwillingness to make specific investments. However, stereotype threat could diminish in certain environments. Edelman et.al (2018) finds that role stereotypes of entrepreneurs as masculine will be expected, therefore creating gender biases against women. The author predicts that these prejudices, whether conscious or unconscious, will lead angel investors to evaluate male entrepreneurs more favorably than female entrepreneurs in the process of angel investment. Therefore, for female entrepreneurs in the early stages of investment financing, the author believes that lack of funds is a function of gender identity stereotypes, which may manifest as hidden, often unconscious biases by angel investors.

To sum up, most of researchers think the gender based gap in business angels is real feminist issue, why does this issue rise? One is the market is male dominated, the other reason, there are several factors, social capital, overconfidence, risk tolerance and gender stereotype, and these factors work together to exert effect on this gender based gap.

3.2.2 The role of women and gender difference in venture capitalists

Venture capital companies usually have less than 10 people, mainly men, and invest in portfolio companies within a specific geographic area and technology range. Typical entrepreneurs are difficult to enter (Brush et al., 2004). VCs often enters this industry under the urging of friends and mentors. Individuals with entrepreneurial, technical, and financial backgrounds are often attracted to venture capital. Employment by venture capital companies usually requires the establishment of personal contacts through formal and informal networks. Venture capital usually works in the financial industry to promote financial development and establish new organizations. Venture capital (VC) is an important element for the success of growth-oriented entrepreneurship in several industry sectors. As is the case in many areas of the financial industry, venture capital is still an industry dominated by men. Although the number of female venture capitalists has increased over time, gender differences in performance remain a controversial issue. Aidis and Schillo (2017) show that among the venture capital survey, women's leadership scores are relatively low, especially compared with general American companies. The standardized definitions of women's leadership are introduced: women's leadership, women's creation and women's management. The author also introduces a unified comparison method of venture capital company portfolio company indicators based on the three dimensions of female leadership.

Brush et al. (2014) explores several features rising gender based disparity in the venture capitalist: mentorship, human capital and social capital. The mentorship system plays an important role in arising gender differences. Female mentor support is low in male-dominated graduate programs and gender-balanced graduate programs, which helps explain the gender differences in deal negotiation. Women's guidance to women is more widely related to the discovery that gender inequality is a function of the gender composition of companies and their managers. In addition, it suggest that the availability of same-sex relationships in advertising is important to success of women. Therefore, we expect the emergence of female colleagues to narrow the performance gap between men and women in the venture capital industry.

Human capital: there is a direct relationship between venture investment and the strength of the management team, in terms of capabilities and industry experience. Some studies have shown that women and men could possess similar levels of education, but that the content of their education differed. Venture capital is a niche industry in the financial industry. Participants cited the recruitment managers of venture capital companies as saying that they hope to have experienced executives, management experience in start-ups, target technology, and professional degrees from top business schools. Female venture capitalists usually possess lower human capital than their counterparties.

Social capital: women is excluded from networks and could not establish good relationship with man-dominated network. Venture capital companies rely on formal and informal networks to find new entrepreneurs and recruit venture capitalists.

Participants mentioned that women often do not have access to the VC networks established and maintained by men. At the same time, there are very few vacancies for directors and partners every year. Female participants suggested that women should support and work together instead of competing with each other and dampening morale. Participants believe that because it is difficult for women to enter the established interpersonal network, women should establish their own interpersonal network to praise beauty, rather than compete with male-dominated in vitro fertilization networks (Blum 2015).

More women are needed to participate in venture capital and create opportunities for first-level network connections between male and female venture capitalists and female entrepreneurs. More qualified female IVFs will provide more opportunities for women-led businesses to obtain capital and create wealth, create more jobs, and enhance the economic health of the United States (Brush et al., 2004). A board composed of at least 33% women always surpassed market trends and produced significant positive financial returns. In the market, women tend to know more about what women want than men (Brush et al., 2004). The venture capital industry needs more women to help all entrepreneurs meet the market needs of women. In addition, Mohammadi and Shafi (2017) present evidence regarding risk-averse attitudes in female investors. The results regarding gender-related herding are novel in that we hidden light on the various processes of decision-making for female investors compared with male investors and suggest that women are perhaps biased in their view of the competence of other women in equity investing, interestingly resulting in duplicating men's decisions.

In conclusion, there are several significant factors explaining the gender based gap in venture capital, but in this market, we need an increasing number of women leaders or partners involved in. Blum (2015) suggests that venture capitalists should reduce their bias against women and welcome qualified women to assume decision-making roles. Qualified female entrepreneurs and potential female venture capitalists should be able to obtain mentoring, investment, and networking opportunities in all industry sectors. It is worth noting that in order to maintain the competitive advantage of the US economy and companies, the venture capital industry needs to hire more qualified female partners and directors.

3.3 The role of gender based gap in both perspective:

Investments into early-stage ventures are usually made within a closed network and homophily, or the tendency to interact with the others who have similar social status, race and gender, is an important determinant of the network composition of equity capital investment market. Recently, attention has shifted to the review of several gender-related characteristics of venture capital markets (Carter et al., 2003). According to the evaluation of empirical evidence, in terms of demand, only very few women-owned enterprises raise venture capital. On the supply side, few women participate in investment, either as venture capital fund managers or as business angels. These characteristics may be relevant: women's limited participation as investors may largely help explain the limited use of venture capital by women entrepreneurs as a source of financing. Most of research, research scholars focus on the individual perspective either supply or demand, however, as the Diana project pointed out that "missing in the research is an understanding of the role of gender in interaction between the supply and demand of equity capital" (Brush et al., 2004). This issue will be increasingly drawn attention and be consistent with a long lineage of research.

Brush et.al (2002) finds that some women are making significant contribution on the demand side, especially with regards to early stage financing and qualified women entrepreneurs are leading new venture teams that are receiving both private and early stage institutional investment. However, the proportion of women receiving funding is disproportionate to the number of women owning their own ventures. On the supply side, women's participation in the venture capital industry is extremely small. While women made progress participating as venture capitalists and moved into decision-making roles. On the other hand, the pool of women qualified to be venture capitalists by virtue of entrepreneurial experience appears to be increasing and a significant number of women capable of working in the equity provider role, either as angels or institutional investors, they also suggest that social capital approach is good tools to analyze the gender based gap in interaction between supply and demand prospective, there is disconnected network between women entrepreneurs (capital seekers) and female capital supplier, because the financial market is male dominated. It is speculated that female entrepreneurs have even less education and experience in complex financial arrangements. The terms set by angel investors should be more easily accepted by entrepreneurs, although it usually requires in-depth and extensive negotiations before reaching mutual acceptance. Negotiation of terms may also be broader and accept various definitions of time (liquidity) and company performance. In addition, the development of an organizational culture that supports the interaction of angels / entrepreneurs may provide a relationship that will provide new companies with financial resources in a stricter sense, which will eventually have a positive impact on risk performance and eventually form a more formal or later stage. Companies with attractive form of equity capital. However, it must be noted that if improperly managed, angel investors may also have a negative impact on the company's operations. This is an interactive point and level that must be adapted to the individuals and organizations involved. Their findings suggest a disconnection between venture capitalists seeking investments and female entrepreneurs seeking formal equity capital.

What factors are influence the gender based gap? Abad et.al (2017) and Brush et.al (2002) show that social capital is regarded as a key promoter of resource exchange (especially knowledge) within and between companies, and thus can be an important catalyst for value creation. The social capital approach shows that non-economic knowledge comes from norms, networks, and social relations, all of which can become important resources for new businesses. Social networks provide channels for information exchange and mediate resource exchanges that may affect the success of new businesses. Information benefits can be generated in three ways: time, access and referral. In particular, social networks can promote effective access to financial capital and demonstrate the effective use of professional guidance and support provided by venture capital firms.

Harrison and Mason (2007) suggest that female business angels are slightly more likely to invest in women-owned businesses, although this is not because they consider gender in their investment decisions. In addition, the characteristics, investment risk tolerance and behaviors of female angels and male angels seem to be more significantly different than those between them. Furthermore, it suggest that gender is not a major issue in determining the supply of business angel finance and that the informal venture capital market is not differentiated on gender lines.

Although Watson and Newby (2009) suggest that there is no direct evidence of gender gap in both side. However, this is not mean that focusing on gender issues in future research is worthless. First of all, this research does seem to have some interesting effects on practice, and it is worth exploring further in a broader study using larger samples and more in-depth qualitative research. Second, the sources of transaction streams used by female angels are different (more dependent on business partners and professionals, and less dependent on active personal search), and their social behavior (women are unlikely to invest alone and unlikely only rely on their own due diligence judgment, and or understand other business angels, including female angels, and their value-added contribution after investment (women are more likely to assist in the development of strategies and deal with short-term problems, and recruit suppliers and customers and management teams To contact). Finally, there is a specific opportunity to expand this topic and use more general research on entrepreneurship networks to review women private equity networks in mobilizing capital into women-led enterprises and providing training, encouragement and education. The challenge of entrepreneurship research will be to combine gender with gender as a set of characteristics and transform into a point of view, in a more comprehensive. In the discussion, the concept of agency is connected with the concept of background.

In addition, Huang and Kisgen (2013) suggest that women make different corporate financial and investment decisions than their counterparties. Firms with female executives are less likely to make acquisitions and are less likely to issue debt than firms with male executives. Investors also react more favorably to significant corporate financial decisions made by firms with female executives. Announcement returns are higher around acquisitions and debt offerings when the firm has a female executive compared with when the firm has a male executive. This empirical evidence is consistent with men being overconfident relative to women. Men are overconfident by showing that men provide narrower earnings forecasts and are less likely to exercise options early. Overconfidence in male executives is most consistent with the breadth of the evidence. Regardless of the interpretation, the empirical evidence reveals significant differences between firms with male executives versus those with female executives, implying that models of capital structure and acquisitions that focus on firm characteristics alone miss this important factor for explaining differences in firm behavior. It is possible that male executives are better along other dimensions, such as strategy or compliance. Another explanation is that perhaps the availability of qualified female executives is scarce, due to lower numbers of female MBA graduates or different weights placed on family time for men versus women. The increase in representation over time can then be explained by a greater supply of candidates. This argument, however, implies higher salaries for female executives due to a shortage of these highly qualified executives, but the evidence on female compensation does not seem to support this.

4. Summary literature review data table:

Stream	Authors	Article	Research Question / Hypothesis	Data	Research method	Findings
I	Amatucci and Swartz	Through a fractured lens: women entrepreneurs and the private equity negotiation process. 2011. Journal of Development Entrepreneurship. 16(3), 333-350	1. Are women entrepreneurs' negotiating styles problematic as they participate in term sheet/contract negotiation for private equity investment? 2. What strategies have been effective in closing the deal for women entrepreneurs? 3. What are some of the major challenges to closing a successful deal for women entrepreneurs?	1. Springboard Enterprises Inc. sponsors venture capital forums for women seeking capital, and several women's business networks. 2. Identified potential respondents, and survey addressed to 12 women.	A comprehensive survey with many open-ended research questions for in-depth responses was developed.	1. Personal and professional networks appear to have been the most valuable source of potential investors 2. Rating the importance of negotiation event, amount/valuation was most important, and changes in management team being secondary concerns. 3. Negotiations on private equity investment are a high conflict, high structural ambiguous that women are required to behave contrary to traditional gender stereotypes. Relative to investors, people have a clear understanding of low status and low power positions, which will weaken the transaction method. 4. Women receive a very small proportion of total private equity investment dollars as compared to men. Moreover, term sheet or contract negotiation during the private equity investment process is critical to obtaining badly needed financial resources under reasonable conditions related to relinquishing equity and control. 5. The practical relevance of this research focuses on identifying any gender-related differences that may exist for women entrepreneurs as they participate in contract negotiation for equity capital.
I	Amatucci and Sohl	Women entrepreneurs securing business angel financing: tales from the field. 2004. Venture capital. 6(2/3), 181-196.	1. Examines the challenges women entrepreneurs seeking financing encounter in the various stages of the private equity investment	The primary data collection technique was in-depth telephone interviews with open-ended	The researchers adopted an interpretivist research philosophy by which achieving understanding or Verstehen with the woman entrepreneur is achieved through empathetic identification in an	1. This research was an exploratory investigation of challenges and effective strategies with regard to women entrepreneurs who have been able to secure business angel equity capital. There are some of the major challenges including the right knowledge to proceed through a first round without future

			decision process with business angels, and the successful strategies. 2. How do women entrepreneurs successfully secure financial resources from business angels?	questions. The survey addressed to 5 women samples.	objective fashion.	negative consequences, developing an effective management team and dealing with gender-related bias. 2. Effective strategies include good social capital and human capital and developing trust early in the angel/entrepreneur relationship. However, there were strong statements about the difficulties women encountered due to investor assumptions regarding their management potential, for example knowledge, training and education and experience. 3. As women-owned businesses increase in their importance to the US economy and as the informal equity market expands as a viable source of funding for high growth ventures, it is important to understand the challenges, processes and solutions for bringing these two powerful economic forces together.
I	Becker-Blease and Sohl	Do women-owned businesses have equal access to angel capital? 2007. Journal of Business Venturing. 22, 503-521	H1. WOBs seek angel financing at a lower rate than do MOBs H2. WOBs have a lower chance of receiving angel financing than do MOBs H3. WOBs must surrender a greater proportion of their firm's ownership in exchange for equity investment than MOBs H4. Women and men entrepreneurs (WOBs and MOBs) are more likely to seek financing from angels within their	Focus on angel portals rather than individual angels. These 174 portals represente d the known population of portals in 2001. Subsequen t questionna ires were mailed in 2002 to 170 portals, in 2003 to 101 portals, and in 2004 to 127 portals.	Distributed a comprehensive questionnaire to angel portals identified by the Center for Venture Research.	1. Results suggest that the pattern of financing for WOB in the equity capital, where women receive only a small fraction of overall investment dollars. However, the low rate with which women seek financing from angles and low number of women entrepreneurs provide proposal. 2. Evidence suggests that the difference in seek rates appears to be driven by homophily on the part of entrepreneurs in the angel market. Entrepreneurs demonstrate a strong preference to seek angel funding from angel investors of the same sex. 3. There are very few women investors with the necessary resources and expertise to be effective providers of angel capital. Women angels may perceive or experience barriers to quality deal-flow compared to men angels and thus elect to participate in the market at a substantially lower rate than

			own social networks than across social networks H5. Women and men entrepreneurs (WOBs and MOBs) are more likely to receive financing from angels within their own social networks than across social networks.			do men angels. Women angels may participate more actively than data suggest, but elect to do so outside of organized angel portals.
I	Carter, Brush, Greene, Gatewood and Hart	Women entrepreneurs who break through to equity financing: the influence of human, social and financial capital. 2003. Venture Capital. 5(1), 1-28	Human capital: H1.Women entrepreneurs with higher levels of human capital are more likely to secure outside equity funding than women with lower levels of human capital. Social capital: H2a. Women entrepreneurs with more diverse social networks are more likely to secure outside equity financing than women with less diverse social networks. H2b. Women entrepreneurs with greater reliance on friends and family (strong ties) are less likely to secure outside equity funding than women with lower	A survey of US women business owners conducted by the National Foundation for Women Business Owners (NFWBO)	A survey method was used to administer a questionnaire with 'closed' responses to women business owners via a telephone interview.	1. Only one type of human capital, graduate education, affected the odds of women entrepreneurs using equity capital to fund their firms. No significant effect of prior business start-up/ownership or senior management experience was found on the odds of women entrepreneurs using equity capital to fund their businesses. 2. Social capital had no direct effect on increasing the odds of using equity or loans in the financial strategy but did influence certain bootstrapping techniques. Interestingly, most of those relationships were in a negative direction. 3. The presence of a diverse network of supporters was not associated with loans, equity financing, or most bootstrapping techniques. Only the use of personal sources was associated with the diversity of the woman entrepreneur's network. The network diversity and the strength of the women entrepreneur's network may contribute more during the deal generation phase of the investment process. The diversity and the strength of the women entrepreneur's network may contribute more during the deal generation phase of the investment

			reliance. H2c. Women entrepreneurs with greater reliance on professional business advisors (weak ties) are more likely to secure outside equity funding than women with lower reliance. H2d. Women entrepreneurs with greater reliance on mentors or other business owners (multiplex strong ties) are more likely to secure outside equity funding than women with lower reliance. Debt financing: H3a. Women entrepreneurs with higher human capital are more likely to use outside debt as part of their financing strategy than women with lower human capital. H3b. Woman entrepreneurs with higher social capital are more likely to use outside debt as part of their financing strategy than women with lower social capital. Bootstrap			process. The entrepreneur's use of her network may get the venture to a point of contact, but the characteristics of the top management team and the firm, its business model and potential, may have a more direct effect on the investment decision. 4. Only one type of bootstrapping, the use of personal resources, was associated with the use of outside equity funding. Size and industry sector were more important in explaining the model than other financing techniques. This may indicate that the women in this sample had been successful in securing later stage capital, rather than seed or start-up, and had grown their companies to that point with personal resources. 5. The understanding of women entrepreneurs and access to equity financing is at a very early stage. It is important to understand the factors that lead to successful acquisition of outside funding. Subsequent studies might research the effects of social networks, human capital and bootstrapping on the due diligence process, timing, amount of investment, and stages of capital infusion. 6. This paper addresses the gap in the research by approaching the equity funding issue from the perspective of the demand side-the firms seeking venture capital. Women entrepreneurs in general are more highly educated, and those with growth aspirations for their businesses are increasingly acquiring education and experiences that foster more sophisticated capital structures.

			financing H4a. Women entrepreneurs with higher human capital are more likely to use bootstrapping techniques to finance their businesses than women with lower human capital. H4b. Women entrepreneurs with higher social capital are more likely to use bootstrapping techniques to finance their businesses than women with lower social capital. H5. Woman entrepreneurs that use debt and bootstrapping techniques to finance their early stage businesses are more likely to secure outside equity funding than women who don't use these financing techniques.			
I	Susan Coleman	Access to Capital and Terms of Credit: A Comparison of Men- and Women-Owned Small Businesses. 2000. Journal of small business management. 38(3), 37-52.	1. It compared men and women-owned businesses in terms of their usage of various external credit products. This research examines the effect of explanatory variables, including	Data for the study were drawn from the 1993 National Survey of Small Business Finances (NSSBF). This study included a national	1. This was followed by a telephone survey lasting approximately 50 minutes. 2. Statistical analysis: Univariate tests Multivariate tests	1. It confirms that women-owned businesses are significantly smaller and newer than those owned by men. However, it finds that women owned firms have the same access to the most frequently used credit products as men. 2. The results revealed that higher interest rates are associated with smaller loans and female borrowers and that women owned service firms have higher collateral

			gender, to determine whether women are less likely to use external credit than men. 2. It identified firm characteristics or variables, including gender, that predict the likelihood of a firm using these same external credit products. 3. It examined terms of credit, including interest rate and collateral requirements, to determine whether lending conditions imposed on women business owners are more stringent than those imposed on men.	stratified random sample of privately owned small businesses having fewer than 500 employees. Over 4,000 small businesses were interviewe d representin g a 50 percent response rate.		requirements than men owned service firms, so these findings suggest that women obtain credit under less favorable terms than men. 3. Authors find that gender may be significant only because of its correlation with an important variable that has not been specified. 4. Women business owners have shorter relationships with their primary financial institutions than do men, it suggests a possible strategy for women business owners who tend to have smaller companies and smaller loans-developing relationship with primary financial institutions. 5. Study demonstrates that although women-owned firms have comparable access to credit, they do not obtain it on the same terms as do men-owned firms. This difference may affect their willingness to seek out external credit as well as their perceptions of its availability.
I	Muriel Orhan	Women Business Owners in France: The Issue of Financing Discrimination . 2001. Journal of Small Business Management. 39(1), 95-102.	Women in business often claim they are discriminated against in both overt and subtle ways. Historically in France, the popular expression "women hold the purse strings" held true as long as only small amounts of money were involved. If there was little	1. Two sets of data were used: data on male-owned businesses dating from 1994 and data for female-owned businesses from 1997. 2. Chosen 562 male and 403 female entreprene urs	A general survey with 240 items constitutes the core of this study.	1. Women entrepreneurs think it is important to find and develop conceive of their business as a cooperative and harmony network of relationships. However, male counterparties more focused on the social status and power. 2. It finds that women entrepreneurs has lower level of business competence than male counterparties because of professional training, education and experience in top management. 3. Most of the gender based financial discrimination was the result of problems with interpersonal communication between the male dominated

			money, women were in charge of it; if there was a lot of money, providing access to power and prestige, women were not permitted to manage it.	randomly. The response rates were thirteen percent and eight percent respectively.		finance field and the women entrepreneurs. In addition, there are two main sources of the communication problems: one relates to intercultural bias, tend to consider female entrepreneurs as women first, rather than as persons; the other one is the apparent lack of financial competencies in women entrepreneurs. 3. How to solve gender based gap issue? In the short run, women should be provided professional training to improve their communication of negotiation and competence. On the long term improvement, there are more women in financial institutions dealing with business loans and financial management.
I	Verheul and Thurik	Start-up Capital: "Does Gender Matter?" 2001. Small Business Economics. 16, 329-345	Hypotheses can be formulated relating differences between male and female entrepreneurs to the amount and composition of financial capital from the following perspective: 1. Financial management experience and financial capital. 2. Part-time entrepreneurship and financial capital 3. Networking and financial capital 4. Sector and financial capital. 5. Size and financial capital 6. Risk attitude and	A panel of 2,000 Dutch firms that have started their business in the first quarter of 1994. Approximately 1,500 are male and 500 are female.	The hypotheses formulated are tested using multiple regression analyses to determine the direct and indirect impact of gender on the amount and composition of start-up capital. Single bilateral correlation is used to test whether there is a connection between gender and the other explanatory variables of start-up capital.	1. Authors find that female entrepreneurs have a smaller amount of start-up capital than their male counterparts, but that they do not significantly differ with respect to the composition of financial capital. 2. Female entrepreneurs may have more problems acquiring financial capital because female entrepreneurs are more likely to work part-time, more likely to work in the service sector, they are more averse to risk, have less financial management experience and spend less time networking. 3. Female entrepreneurs have a smaller amount of financial capital when compared to male entrepreneurs and this may imply that they make more efficient use of their relatively scarce resources. 4. Expansion of the number of intermediary variables in the analysis will create better insight in the gender-based differences and the specific nature of female entrepreneurship

			financial capital 7. Direct effect			
I	Orser, Riding and Manley	Women Entrepreneurs and Financial Capital. 2006. Entrepreneurs hip theory and practice. 643-665	Role Investment Theory: 1a. Women and men bring different human capital (education, years of management experience) to the firm. 1b. Women and men bring different social capital (length of banking relationship, whether or not the business banker is the personal banker) to the firm. Hypothesis 1c. Women business owners are less likely than male business owners to pursue growth of their firms. Occupational Crowding: 2a. Women-owned firms are relatively more likely than men-owned firms to operate in the services and retail sectors. 2b. Women-owned firms are relatively smaller than firms owned by men. Socialization Theory: 3a. After	The research drew on data collected by Statistics Canada. The final sample comprised 2,844 firms of which 2,357 were men owned, and 487 firms were owned by women.	1. The survey focused on gathering information about the firms' financing experiences. 2. To test the various hypotheses advanced in this article, several research approaches were used. Each is described in the context of the particular hypothesis being tested.	1. Male and female business owners differ as to education, years of management experience. 2. Statistically significant findings that women and men differ as to length of banking relationship, whether or not the business banker is the personal banker. 3. Women-owned firms are less likely than firms owned by men to have exhibited rapid sales growth. Women-owned firms are less likely to apply for all forms of financing. The reasons business owners cite for not seeking external capital do not differ across gender. 4. Size and sector are not independent of gender of ownership. Women-owned firms are smaller than those owned by men and are more likely to be concentrated in services and retail. 5. Size and sector are not independent of gender of ownership. Women-owned firms are smaller than those owned by men and are more likely to be concentrated in services and retail. 6. After controlling for size and sector, women owners are no less likely to seek debt, lease, or supplier financing than are male owners; however, after controlling for size and sector, women owners are significantly less likely than men to seek equity financing. According to the model, after controlling for systemic factors, women owners are still less likely to seek external equity financing than men. 7. Reasons cited for not seeking financing do not vary across gender of owners to a statistically significant extent. 8. After controlling for systemic differences between

			controlling for firm-level differences (size, sector, growth orientation) and individual differences (human and social capital), women business owners are less likely to apply for all forms of external capital than men. Discrimination: 3b. The primary reason of women for not seeking external capital is a fear that they will be turned down. 3c. After controlling for firm-level differences (size, sector, growth orientation) and individual differences (human and social capital), women business owners are less likely to obtain all forms of external capital than men.			male- and female-owned firms, no statistically significant differences in the rates of turndown were observed for applications for commercial loans, leases, or supplier financing. There were too few observations to test for gender differences in turndown rates for equity financing.
I	Marlow and Patton	All Credit to Men? Entrepreneurship, Finance, and Gender. 2005. Entrepreneurship Theory	1. Women entrepreneurs will experience barriers related to their gender characterizatio	Four main sources: 1. Personal savings (including contributions from	This article explores various approaches to funding entrepreneurial ventures then link these approaches with issues relating to gender.	1. Women will experience additional disadvantages associated with gender ascription. Such disadvantage is articulated in a differentiated fashion within the sphere of women's socioeconomic activity; in

		and Practice. 717-735	ns when seeking appropriate and adequate source of funding for their ventures. 2. Barriers of this nature will impede a female entrepreneur's ability to realize the full potential of the business. 3. Liberal feminist policy implementation can only ever provide a partial solution to the alleviation of such barriers. 4. Future critical debates around the notion of female entrepreneurship must establish a conceptual foundation from which to establish viable analyses in order to contribute to explanatory theory.	family and friends); 2. Debt financing (including hire purchase and leasing), normally through a commercial bank; 3. Soft loans supported by central government; 4. Equity funding via venture capital and informal investment		respect of entrepreneurship it is argued such subordination limits the accrual of social, cultural, human, and financial capital and so places limitations upon women's abilities to amass personal savings, generate credit histories attractive to formal lenders, or engage the interest of venture capitalists. 2. Financial constraints will impede the full realization of business potential. 3. Women are free to engage with entrepreneurship but in fact, not upon equal terms as this liberal approach fails to address socialization issues, persistent stereotypes which devalue women, and the continuing inequality in the distribution of domestic and caring labor. The outcome is equal access from a position of disadvantage. 4. The point of this article has been to use the example of finance to draw attention to the need to recognize that the consideration of discrete areas must be analyzed in wider conceptual terms—only by recognizing and incorporating inter-disciplinary arguments can the manner in which issues such as the effect of gender upon funding entrepreneurship be understood more clearly
I	Nelson, Maxfield and Kolb	Women entrepreneurs and venture capital: managing the shadow negotiation. 2009. International Journal of Gender and Entrepreneurship. 1(1). 57-76	Why women entrepreneurs access only a small percentage of venture capital (VC) investment in the USA?	We recruited our interviewees via a snowball sample technique through researcher contacts, interviewee contacts, and	Through interviews with women who have been successful or are in the process of accessing VC for their businesses, patterns of women's awareness and strategic responses that illustrate this phenomenon are identified and their implications discussed.	Women are actors with agency, taking control over situations that may be stacked against them. The analysis suggests that women entrepreneurs vary in the degree to which they identify the gendered landscape they are navigating, and the level of attention and care that management of this landscape demands.

				outreach to two women's entrepreneurship venture finance networks headquartered on the East Coast (NY-CT-MA) and the West Coast (Northern California). Our interviewees were from these areas plus one from the Midwest.		
I	Constantinidis, Cornet and Asandei	Financing of Women-owned Ventures. The Impact of Gender and Other Owner- and Firm-Related Variables. 2006. Venture Capital. 8(2). 133-157	1. How can we explain the choices made by women about business sector, size, type of association and their impact on their behaviours regarding financing? Can gender theories contribute to better explain this? 2. How can we explain the characteristics of women entrepreneurs and the impact of these characteristics on the women's representations and behaviours regarding financing? Are	Approximately 1100 questionnaires were distributed, mainly by post, to female entrepreneurs randomly selected from the file provided by the National Social Security Institute for the Self-Employed.	Research methodology was a dual one, including both a quantitative and a qualitative study.	1. There still remains a gender effect, playing a role at different levels. 2. It seems that there are indeed some specific financing patterns and barriers for a number of women entrepreneurs. However, results show that women entrepreneurs are not a homogeneous group, and we could differentiate them according to human, social and financial capital variables. 3. Findings show that there are gender effects, either related to 'separation' (differences in terms of choices, preferences and needs for business financing) or to 'hierarchy' (valorization in terms of the firm's attributes and the entrepreneur's characteristics, as regards financing) phenomena.

			women entrepreneurs a homogeneous group? What about the situation of women who have similar characteristics to those of the male entrepreneur? Can we identify gender effect?			
II	Harrison and Mason	Does Gender Matter? Women Business Angels and the Supply of Entrepreneurial Finance. 2007. Entrepreneurship Theory and Practice. 445-472	1. Are women business angels different from their male counterparts in terms of their backgrounds and demographic features? 2. Do male and female business angels have the same approach to investment? 3. Are women business angels more likely to invest in women-led ventures?	1. Women business angels were identified and contacted through BANs—organizations 2. Obtained 21 completed questionnaires from women and 19 from men.	The survey instrument was developed to collect data through both closed and open-ended questions	1. Women business angels are slightly more likely to invest in women-owned businesses although this is not because they factor gender into their investment decision. 2. Findings suggest that gender is not a major issue in determining the supply of business angel finance and that the informal venture capital market is not differentiated on gender lines. 3. There is still value in focusing on the gender issue in future research. First, there do appear to be some interesting implications for practice arising from this study, which warrant further exploration in more extensive research using both larger samples and more in-depth qualitative research. Second, there are differences in the sources of deal flow used by women angels (greater reliance on business associates and professionals and lower reliance on active personal search), their networking behavior (women are less likely to invest alone, less likely to rely solely on their own judgement in due diligence and less well connected with or knowing other business angels, including women angels) and their post-investment value-added contribution (women were more likely to assist on strategy development and with

						short-term problems, making contacts with suppliers and customers and management team recruitment). Finally, there is a specific opportunity to extend this research, and draw on more general research on networks in entrepreneurship into an examination of the role of women's private equity networks in mobilizing capital into women-led businesses and in providing training, encouragement, education and support for their members.
II	Sohl and Hill	Women Business Angels: Insights from Angel Groups. 2007. Venture Capital. 9(3). 207-222.	How these women angels organize, their investment practices and their views on funding women entrepreneurs are of importance to both women seeking equity financing and women considering making angel investments.	1. A postal questionnaire was distributed to 25 organizations. 2. 11 organizations participated. 3. For the women angel groups, the average size of the group is 45 members, of which 27 are women.	Data were gathered using a postal questionnaire.	1. Women angel groups exist and are active, they could provide support to women angels do not have the appropriate education and experience to be successful angel investors and women entrepreneurs. 2. Women angels rely on social capital to learn about investment opportunities. While women angels may not have the access to traditional networks they need for deal flow, women do have better access to deals when the firms are women-owned. However, the degree to which women angels miss opportunities or deals owing to their lack of a presence within traditional networks may be substantial. Thus, the data suggest that women angels exhibit a partiality for women-owned ventures, but this preference is not overwhelming. 3. Women face barriers in the private equity community as a result of investment inexperience and a lack of experience in pricing and structuring the investment deal. In addition, women is often outside of the traditional male dominated network, so that they will lose opportunity to become successful business angels, but it is able to be solved by social capital.
II	Edelman, Donnelly and	Gender stereotypes in the angel	1. Female entrepreneurs receive more	Data come from the venture	The ideas are tested on a sample of 358 entrepreneurs who	1. The findings suggest that, in the context of angel investing, there is a subtle bias that

	Manolova	investment process. 2018. International Journal of Gender and Entrepreneurship. 10(2), 134-157	negative than positive comments from angel investors as compared to male entrepreneurs. 2. Female entrepreneurs receive more negative than positive comments from angel investors about their individual characteristics as compared to male entrepreneurs. 3. Angel investors interpret signals of new venture quality less favorably for female entrepreneurs than for male entrepreneurs.	proposals submitted by entrepreneurs to a large angel financing group located in the northeast USA, between 2007 and 2016, and the angel investors' summary sheets following the entrepreneur's presentation to the group.	applied for funding from a northeast angel group using perceptual data from both sides of the investment dyad	follows from the perceived stereotype between being female and the ability to lead a legitimate new venture. Thus, this study tests the tenets of the social identity theory by finding that mostly male angel investors act in accordance to their gender prescribed roles when they evaluate businesses presented by women entrepreneurs providing some evidence of "in-group" and "out-group" effects and stereotypes. 2. The authors contend that within an angel group that is composed of predominantly men, role stereotypes of entrepreneurs as masculine will be expected, therefore creating gender biases against women. The authors expect these biases, whether conscious or unconscious, will lead the angel investors to evaluate men entrepreneurs more favorably than women entrepreneurs as they move through the angel investment process. Therefore, for women entrepreneurs in the early stages of investment funding, the authors posit that the dearth of funding is a function of gender identity stereotypes which may be manifested in hidden and often unconscious biases on the part of the angel investor.
II	Becker-Blease and Sohl	The Effect of Gender Diversity on Angel Group Investment. 2011. Entrepreneurship Theory and Practice. 709-733.	Authors hypothesize that systematic differences between men and women in confidence, risk tolerance, and social capital will lead to an inverse relation between the proportion of women angels participating in an angel group and the	1. The most complete database of angel groups in the United States is collected by the Center for Venture Research (CVR). 2. The data come from a survey completed by either	1. The questionnaire 2. Two-limit Tobit analysis 3. Controls 4. Analysis of nonlinearity 5. robustness analysis 6. Analysis of participation rates	1. Evidence is consistent with these hypotheses 1 and 2 in that in each specification, authors find that the higher the proportion of women angels in a group, the lower is the proportion of proposals receiving funding and the lower is the proportion of angels who make at least one investment. These results are consistent with the evidence that women investors, in general, have less confidence than do men investors, are comparatively less risk tolerant and/or possess lower levels of social capital 2. Evidence is consistent with

			investment likelihood 1. The proportion of women angels in a group is negatively related to the likelihood of a proposal receiving funding. 2. The proportion of women angels in a group is negatively related to the likelihood of member angels funding any proposals. 3. The proportion of women angels will have a negative, nonlinear relation to the likelihood of a proposal receiving funding. 4. The proportion of women angels will have a negative, nonlinear relation to the likelihood of member angels funding any proposals.	the CEO or lead member of the manageme nt team of the group.		hypotheses 3 and 4, and stereotype threat exists but diminishes in certain environments. 3. Evidence suggests that not all angel groups invest in the same manner and the demographic composition of the group, at least as it relates to gender, is important. 4. Evidence suggests that when women angels have a sizeable representation within an angel group, their investment tendency will mirror that of men. As a result, if women entrepreneurs, due to homophily, are more likely to know about and seek funding from groups with more women, and these groups invest at rates similar to groups that receive high proportions of proposals from men, then this will help to insure equality of access for women entrepreneurs to vital early-stage capital.
III	Mohamma di and Shafi	Gender differences in the contribution patterns of equity-crowdfunding investors. 2017. Small Business Economics. 50. 275-287.	Gender-related differences in the behavior of investors in firms seeking equity financing	FundedBy Me, the largest crowdfund ing platform in Sweden	1. Analysis of gender-related risk taking model: ordinary least square (OLS) regression $Y = \beta_0 + \beta_1 Female + \alpha Controls + \varepsilon$ 2. Herding and gender in equity crowdfunding model: $y_{jt} = \alpha Y_{j,t-1} + \beta_1 X_{jt} + \beta_2 Z_j + \beta_3 Y_{j,t-1} Z_j + u_j + v_{jt}$	1. Authors present evidence regarding risk-averse attitudes in female investors. 2. The results regarding gender-related herding are novel in that we shed light on the various processes of decision-making for female investors compared with male investors. 3. Results suggest that women are perhaps biased in their view of the competence of other women in equity investing, interestingly

						resulting in duplicating men's decisions. 4. This study contributes to the literature explicating the role of gender in investment behavior and, more specifically, explores gender differences in herding 5. Authors complement studies that offer insight into the role of risk aversion based on gender and link these perceptions to investment outcomes. 6. Contribute to the nascent literature on crowdfunding
III	David A. Blum	Exploring Gender Disparity In U.S. Based Venture Capital Firms. 2015. Journal of Diversity Management. 10(1). 33-42	what are the factors for gender disparity among directors and partners at independent venture capital firms in the United States	1. Data derived from individual venture capital websites 2. 20 partners and directors from 20 venture capital firms agreed to be interviewe d	Interview survey	1. Four factors contribute to gender disparity in the IVC industry. The factors are limited mentoring opportunities for females, lack of executive management experience of women, female exclusion from niche networks, and male and female IVCs unwilling to address the gender disparity issue. 2. IVCs should reduce bias toward women and welcome qualified women in decision-making roles. Qualified women entrepreneurs and potential female IVCs should have access to mentoring, investment, and networking opportunities across all industry sectors 3. The implications and recommendations for increasing the number of female participation in venture capital were presented. The noteworthy takeaway is greater numbers of qualified female partners and directors need to be hired in the venture capital industry for the United States to maintain an economic and entrepreneurial competitive advantage.
III	Aidis and Sandra Schillo	Gender, leadership and Venture capital: measuring women's leadership in VC firm	1. What is the extent of women's involvement in VC firm portfolios by each of the definitions of	Traditional databases such as Thomson Reuters, PitchBook and Preqin	Drawing on the institutional theory and gender role congruity theory, the authors present dimensions of women's involvement in	1. The authors' findings show relatively low scores of women's leadership in the VC portfolio companies investigated, especially as compared to average USA companies. 2. This paper introduces

		portfolios. 2017. International Journal of Gender and Entrepreneurship. 9(2). 110-135.	women-founded, women-led and women-managed companies? 2. Are the definitions of women-founded, women-led and women-managed companies interchangeable in terms of establishing women's participation in VC firm portfolios? 3. If definitions are not interchangeable, can a composite score be created to comprise all three dimensions?		leadership roles in VC-funded companies. As previous research has not provided standard definitions, the authors clarify the relevant dimensions. In addition, the authors present an empirical analysis of 153 VC fund portfolios and demonstrate women's involvement across the three key dimensions forming the WLEV Index: involvement in leadership, management and founding of portfolio companies.	standardized definitions for women's leadership in terms of: women-led, women-founded and women-managed. This paper also introduces a methodology and constructs an index to uniformly compare VC firm portfolio companies according to all three dimensions of women's leadership. These contributions can be expected to form the basis of future research on gender representation in VC portfolio companies.
IV	Brush, Carter, Greene, Hart and Gatewood	The role of social capital and gender in linking financial suppliers and entrepreneurial firms: a framework for future research. 2002. Venture Capital. 4. 305-323.	This paper addresses this question by exploring women's role in supply and demand of equity capital.	1. Springboard 2000 Venture Forums 2. Pratt's Guide to Venture Capital	Study was conducted in two phases. 1. Phase I was designed to explore the history and context of the venture capital industry by analyzing the investments in women-owned businesses over time, or the demand side of the equation. 2. Phase II focused on women's participation in the venture capital industry, or the supply side, where we mapped the role and participation of women as equity providers.	1. Findings show some women are making significant inroads on the demand side, especially with regards to early stage financing. Qualified women entrepreneurs are leading new venture teams that are receiving both private and early stage institutional investment. However, the proportion of women receiving funding is disproportionate to the number of women owning their own ventures. 2. On the supply side, women's participation in the venture capital industry is extremely small. While women made progress participating as venture capitalists and moved into decision-making roles. On the other hand, the pool of women qualified to be venture capitalists by virtue of

						entrepreneurial experience appears to be increasing. While there are no data showing the percentage of women who tried to get into the industry or would like to get into the industry, the studies above seem to suggest that there are a significant number of women capable of working in the equity provider role, either as angels or institutional investors. 3. The findings reported here suggest a disconnection between venture capitalists seeking investments and female entrepreneurs seeking formal equity capital. 4. Social capital and human capital are important factor for demand and supply side in negotiation process 5. It is the point and level of interaction that must fit with the individuals and organization involved.
IV	Huang and Kisgen	Gender and corporate finance: Are male executives overconfident relative to female executives? 2013. Journal of Financial Economics. 108. 822-839	Male executives exhibit relative overconfidenc e in corporate decision marking compared with female executives.	1. The incumbent executive (CEO and CFO) of a firm-year by searching the 10K filing of the firm through the SECEDG AR system 2. 116 female executive firms for the majority of tests	Empirical methodology: we use a difference-in-differences framework for our empirical tests, comparing activity before and after transitions from a male to a female executive with a control sample of male-to-male transition firms. For robustness, we also conduct more traditional panel data regressions with firm fixed effects with a female executive dummy variable.	Women make different corporate financial and investment decisions than men. Firms with female executives are less likely to make acquisitions and are less likely to issue debt than firms with male executives. Investors also react more favorably to significant corporate financial decisions made by firms with female executives. Announcement returns are higher around acquisitions and debt offerings when the firm has a female executive compared with when the firm has a male executive. This empirical evidence is consistent with men being overconfident relative to women. Men are overconfident by showing that men provide narrower earnings forecasts and are less likely to exercise options early. Overconfidence in male executives is most consistent with the breadth of the evidence. Regardless of the interpretation, the empirical evidence reveals significant

						differences between firms with male executives versus those with female executives, implying that models of capital structure and acquisitions that focus on firm characteristics alone miss this important factor for explaining differences in firm behavior. It is possible that male executives are better along other dimensions, such as strategy or compliance. Another explanation is that perhaps the availability of qualified female executives is scarce, due to lower numbers of female MBA graduates or different weights placed on family time for men versus women. The increase in representation over time can then be explained by a greater supply of candidates. This argument, however, implies higher salaries for female executives due to a shortage of these highly qualified executives, but the evidence on female compensation does not seem to support this.
IV	Abad, Lucas-Perez, Minguez-Vera and Yague	Does gender diversity on corporate boards reduce information asymmetry in equity markets? 2017. Business Research Quarterly. 20. 192-205	Gender diversity on boards is negatively related to the average level of information asymmetry in the equity market	The main sample contains 531 company-year observations of non-financial companies listed on the SIBE	1. RQS_t: $RQS_t = \frac{a_t - b_t}{Q_t}$, 2. PI: $PI_{t+\tau} = (Q_{t+\tau} - Q_t)X_t$, 3. PIN: $PIN = \frac{\alpha\mu}{\alpha\mu + \varepsilon_b + \varepsilon_s}$, 4. Regression Model $InfAsym_{it} = \beta_0 + \beta_1 Gender\_Diversity_{it} + \beta_2 NDIR_{it} + \beta_{3it} PEX + \beta_4 DIROWN_{it} + \beta_5 DIROWN2_{it} + \beta_6 INS_{it} + \beta_7 PVPAY_{it} + \beta_8 SIZE_{it} + \beta_9 TURNOVER_{it} + \beta_{10} VOLAT_{it} + \beta_{11} NANA_{it} + \psi_t + \eta_i + \varepsilon_{it}$,	1. Consistent to the hypothesis stated, our findings suggest that the presence of women on boards is related to lower levels of information asymmetry among market participants after controlling for different board characteristics, as well as other factor related to adverse selection in the market. Gender-diverse boards improve the information environment by ameliorating the adverse selection problems among market participants. 2. Our findings suggest that gender diversity makes economic sense and advances the cause of social equity in European boardrooms. 3. Since this paper provides evidence of greater gender diversity on boards causing information asymmetry to decrease, it could be interesting to examine in depth what the specific

						underlying mechanisms are which lead to this outcome.
IV	Watson and Newby	Gender and the SME “finance gap”. 2009. International Journal of Gender and Entrepreneurship. 1. 42-56	Supply side: 1. SME owners are generally able to obtain sufficient and appropriate debt funding from financial institutions (that is, no finance gap exists). 2. Female SME owners do not differ from male SME owners in their ability to obtain sufficient and appropriate debt funding from financial institutions (that is, there is no sex-based finance gap). 3. Female SME owners are no more discouraged from applying for external funding than their male counterparts. 4. There are no significant differences between female and male SME owners in terms of the conditions attaching to their loans. Demand side: 1. Female SME owners will display higher levels of risk aversion than male SME	1. Western Australian SME owners 2. Focus group data: the total number of participants is 26 3. Survey response sample number is 123	From the results of three focus groups and a review of the literature eight hypotheses were formulated for testing with a mail survey	1. There is no evidence to suggest that a supply side finance gap exists within the Australian SME sector 2. There is little evidence that Australian SME owners (particularly female owners) are being discouraged from applying for loans from a financial institution because they believe their application will be rejected. Results found no evidence that female SME owners were less likely to apply for bank funding than their male counterparts. Results suggest that other demand-side issues (such as risk-taking propensity) play a more important role in the capital structure decision making of SME owners than any concerns about their loan application being rejected 3. This study also failed to find any evidence of actual discrimination by financial institutions against female SME owners in terms of either: the average time taken to approve a loan; the length (term) of the loan; or the interest rate charged. The results also failed to uncover any perceptions of discrimination by financial institutions against female SME owners.

			owners. 2. Owners who have not applied for external funding during the last three years will display higher levels of risk aversion than owners who have applied for external funding during the last three years. 3. Female SME owners will attach more importance to the desire to maintain control than male SME owners. 4. Owners who have not applied for external funding during the last three years will attach more importance to the desire to maintain control than owners who have applied for external funding during the last three years.			

5. Conclusion:

In this paper, we want to review and summary the current gender based financial literatures to find out the major research topics and what reason and factors determine the gender based difference from the demand and supply perspective of equity investment market. In the relative literatures, we find that the most of research of gender based finance is concentrated on the early stage of financial equity capital market (search and negotiation process). There are four major research topics, (i) the role of women and gender difference in entrepreneurship, (ii) the role of women and gender difference in business angel, (iii) the role of women and gender difference in venture capital, (iv) the role of gender based gap in both supply and demand side. In these four research topics, the most of researchers are focused on the role of women and gender difference in entrepreneurship, however there is few literature on the topic three and four.

What reasons and factors determine the gender based difference? The most of researchers think the gender issue is not feminist issue, it is influenced by the several factors. From the demand perspective, the difference between male and female entrepreneurs accessing to equity capital, there are several factors: 1. Human capital: women entrepreneurs usually have lower level of education and managerial experience than their counterparties. 2. Social capital: the venture capital and business angel are usually male dominated, so women entrepreneurs usually have lower level of social network than their counterparties. 3. Negotiation for private equity investment represents a high conflict, high structural ambiguous situation where women are required to behave contrary to traditional female gender stereotypes. There are obvious perceptions of low status, low power positions relative to the investors, which may mitigate negotiation approaches. 4. Financial constraints will impede the full realization of business potential.

From the supply perspective, there are several factors: 1. Human capital and social capital, 2. Overconfidence: women executives usually have lower level of confidence than their counterparties. 3. Risk aversion: women exhibit lower levels of risk tolerance than men. From the both side, including social and human capital, the other important factor is homophily, women-women network, the women are more looking for women. Therefore, the social capital and human capital and negotiation are considered the important and basic factors for exploring the gender based disparity in supply and demand perspective of financial capital market.

In the future research, the discovery of Diana’s plan and financial equity process adds insight in many ways, but it also raises many additional questions. The next phase of research will focus more on the performance of network of female-led companies (demander) and female executives of equity capital (supplier) and the decision-making process, in addition, the focus could be shifted to the post stage of process.

References:

Audretsch, D.B. and Thurik, A.R. (2001). "What's new about the new economy? From the managed to the entrepreneurial economy," Industrial and Corporate Change, 10(1), 267-315.

Audretsch, D. B., & Thurik, A. R. (2004). The model of the entrepreneurial economy. International Journal of Entrepreneurship Education, 2(2), 143–166.

Becker-Blease, J. and Sohl, J. (2007). Do women-owned businesses have equal access to angel capital?
Journal of Business Venturing. 22, 503–521.

Brush CG, Carter NM, Gatewood E, Greene PG, Hart M. (2003). Venture capital access: is gender an issue? In The Emergence of Entrepreneurship Policy: Governance, Start-ups and Growth in the U.S. Knowledge Economy, D Hart (ed). Cambridge University Press: London; 141–154.

Bygrave, W. D., Lange, J., Kotha, R. R. and Stock, W., 2001b, Venture capital investments and the growth of revolutionary new industries. In W. D. Bygrave, E. Autio, C. G. Brush, P. Davidsson, P. G. Greene, P. D. Reynolds and H. J. Sapienza (eds) Frontiers of Entrepreneurship Research. Proceedings of the Babson Kauffman Conference on Entrepreneurship Research (Wellesley, MA: Babson College), 523 – 535.

Candida G. Brush, Nancy M. Carter, Patricia G. Greene, Myra M. Hart and Elizabeth Gatewood (2002). The role of social capital and gender in linking financial suppliers and entrepreneurial firms: a framework for future research. Venture Capital. 4(4), 305-323.

Canning J, Haque M, Wang Y. (2012). Women at the Wheel: Do Female Executives Drive Start-Up Success? Dow Jones and Company.

Center for Venture Research (2002). The angel investor market in 2002: investment activity and growth prospects. Available at http://wsbe.unh.edu/Centers_CVR/2002AR.cfm (accessed 12 October 2005).

Center for Venture Research (2003). The angel investor market in 2003: the angel market rebounds, but a troublesome post seed funding gap deepens. Available at http://wsbe.unh.edu/Centers_CVR/2003AR.cfm (accessed 12 October 2005).

Center for Venture Research (2004). The angel investor market in 2004: the angel market *sustains a modest recovery. Available at http://wsbe.unh.edu/Centers_CVR/2004analysisreport.cfm (accessed 12 October 2005).*

Center for Venture Research (2005). The angel investor market in 2004: the angel market sustains a modest recovery. Available at http://wsbe.unh.edu/Centers_CVR/2005analysisreport.cfm (accessed 9 May 2006).

Center for Women's Business Research (2004) Top facts about women-owned businesses. Available at www.womensbusinessresearch.org/topfacts.html (accessed 26 March 2005).

Colin M. Mason and Richard T. Harrison. (1992). International perspectives on the supply of informal venture capital. Journal of Business Venturing. 7(6), 459-475.

Cole, Rebel A. and John D. Wolken (1995). Source and uses of financial services by small business: Evidence from the 1993 National survey of small business finances. Federal Reserve bulletin. 81, 29-667.

Coleman S and Robb A. (2009). A comparison of new firm financing by gender: evidence from the Kauffman firm survey data. Small Business Economics 33: 397–411.

Federal Reserve (2004) Cited in PBS Online – To the contrary, hot topics, women and philanthropy. Available at www.pbs.org/ttc/society/philanthropy.html (accessed 30 April 2004).

Frances M. Amatucci and Jeffrey E. Sohl (2004). Women entrepreneurs securing business angel financing: tales from the field. Venture Capital. 6(2-3), 181-196.

Fried V, Hisrich R (1994). Toward a model of venture capital investment decision making. Financial Management 23 (3), 28 - 37.

Gaston, R. J. and S. E. Bell. (1988). The Informal Supply of Capital, Washington DC: U.S. Small Business Administration, Office of Advocacy

Gatewood EJ, Carter NM, Brush CG, Greene PG, Hart MM. (2003). Women Entrepreneurs, Their Ventures, and the Venture Capital Industry: An Annotated Bibliography. Entrepreneurship and Small Business Research Institute: Stockholm.

Giovanni Trovato and Leonardo Becchetti (2002). The determinants of growth for small and medium sized firms. The role of the availability of external finance. Small business economics. 19(4), 291-306.

Global Entrepreneurship Monitor (GEM) (2010). Report: Women Entrepreneurs Worldwide. Babson College, and the Global Entrepreneurship Research Association (GERA).

Greene PG, Hart MM, Gatewood EJ, Brush CG, Carter NM (2003). Women entrepreneurs: Moving front and center: An overview of research and theory. Coleman White Paper Series. Available at http://www.usasbe.org

Harrison, R. T., and C. M. Mason. (2007). Does Gender Matter? Women Business Angels and the Supply of Entrepreneurial Finance. Entrepreneurship Theory and Practice 31 (3): 445–472

Investor Pulse (2003). UK Angel Attitude Survey. London, C2Ventures Ltd., www.c2ventures.com

Jiekun Huang and Darren J. Kisgen (2013). Gender and corporate finance: Are male executives overconfident relative to female executives? Journal of Financial Economics. 108(3), 822-839.

John Taylor. (2001). The role of the exchange rate in Monetary-Policy rules. American Economic review 91(2), 263-267.

J. Winborg and H. Landstrom (2001). Financial bootstrapping in small businesses: Examining small business managers' resource acquisition behaviors. Journal of business venturing. 16(3), 235-254.

Kim, Phillip H. and Aldrich, Howard E. and Ruef, Martin (2005). Fruits of Co-Laboring: Effects of Entrepreneurial Team Stability on the Organizational Founding Process. Babson College Entrepreneurship Research Conference (BCERC), 2005. Available at SSRN: https://ssrn.com/abstract=1499355

Lisa K. Gundry, Ben-Yoseph Miriam and Margaret Posig (2002). Contemporary perspectives on women's entrepreneurship: a review and strategic recommendations. Journal of enterprising culture. 10(01), 67-86.

Lumme, A., Mason, C. and Suomi, M. (1998). Informal Venture Capital: Investors, Investments and Policy Issues in Finland. Kluwer Academic Publishers, Dordrecht, Netherlands.

Mason, C. and Harrison, R., 1999, Venture capital: Rationale, aims and scope. Venture Capital: An International Journal of Entrepreneurial Finance, 1(1), 1 – 47.

National Venture Capital Association Yearbook 2000, Thomson Financial Securities Data/Venture Economics.

Ou, C. (1987). Holdings of Privately-Held Business Assets by American Families; Findings from the 1983 Consumer Finance Survey. Unpublished report (Washington, D.C.: Office of Economic Research, US Small Business Administration).

Paul, S, G Whittam and J Wyper (2007). Towards a model of the business angel investment process. Venture Capital. 9(2), 107–125.

Reitan, B. and Sørheim, R. (2000). The Informal Venture Capital Market in Norway – Investor Characteristics, Behaviour and Investment Preferences. Venture Capital: An International Journal of Entrepreneurial Finance, 2: 129-141.

Riding, A. L., Dal Cin, P., Duxbury, L., Haines, G. and Safrata, R. (1993). Informal Investors in Canada: The Identification of Salient Characteristics. Carleton University, Ottawa.

SCHUMPETER, J.A. (1934), The theory of economic development: an inquiry into profits, capital, credit, interest and the business cycle, Harvard Economic Studies, Vol. 46, Harvard College, Cambridge, MA.

SHANE, S., & VENKATARAMAN, S. (2000). The promise of entrepreneurship as a field of research. Academy of Management Review, 25(1), 217-226.

Sohl, J.E. (1999). The Early Stage Equity Market in the United States. Venture Capital: An International Journal of Entrepreneurial Finance. 1, 101-120.

Stedler, H. R. and Peters, H. H. (2003). Business Angels in Germany: An Empirical Study. Venture Capital: An International Journal of Entrepreneurial Finance. 5, 269-276.

Stout, H. (1997, November 28). Venture capital finance. Wall Street Journal

Venkataraman, S. (1997). The distinctive domain of entrepreneurship research. Advances in entrepreneurship, firm emergence and growth, 3(1), 119–138.

Van Stel, A. (2005). COMPENDIA: Harmonizing business ownership data across countries and over time, International Entrepreneurship and Management Journal 1(1), 105-123.

Timmons, J. A. and Bygrave, W. D., 1997, Venture capital: Reflections and projections. In D. L. Sexton and R. Smilor (eds) Entrepreneurship 2000 (Chicago, IL: Upstart Publishing), 29 – 46.

Tyebjee T, Bruno A (1984). A model of venture capitalist investment activity Management

Science. 30, 1051 - 1066.

US Labor Department (1997) Reported in Wall Street Journal, 24 November.

Weinberg, R. (2002) Report: number of wealthy women rising. Available at http://registeredrep.com/news/finance_report_number_wealthy.

Wetzel, W. E., Jr. (1986a). Informal Risk Capital: Knowns and Unknowns', in D. L. Sexton and R. W. Smilor (eds.). The Art and Science of Entrepreneurship. Cambridge, MA: Ballinger, 85–108.

Wright, M. and Robbie, K. (1998). Venture capital and private equity: A review and synthesis. Journal of Business Finance and Accounting, 25(5) and (6), 521 – 570.

Yang T and Aldrich H (2011). All organizations were once new: revisiting stinchcombe's liability of newness hypothesis University of North Carolina-Chapel Hill.