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Gender-related Differences in Venture Capital

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Abstract

Venture capital, business angels and private equity has expanded rapidly over these years. And financial capital is of vital importance for a firm to grow and develop. However, statistics show that female-owned businesses only account for a small portion of the whole financial market capital. What's the difference between women entrepreneurs and men entrepreneurs, and between female business angles and male business angels? This study aims at finding gender-related differences in venture capital market from both the demand and supply perspective through studying existing documents and literatures. Women are facing more challenges despite equal access to capital comparing with men. And female angels invest less frequently than their male counterparts. The study is designed for summarizing different researchers' opinions and findings about gender-related differences in venture capital market.

Keywords: female entrepreneurs, women angels, venture capital, business angels, private equity, debt finance, equity finance, gender

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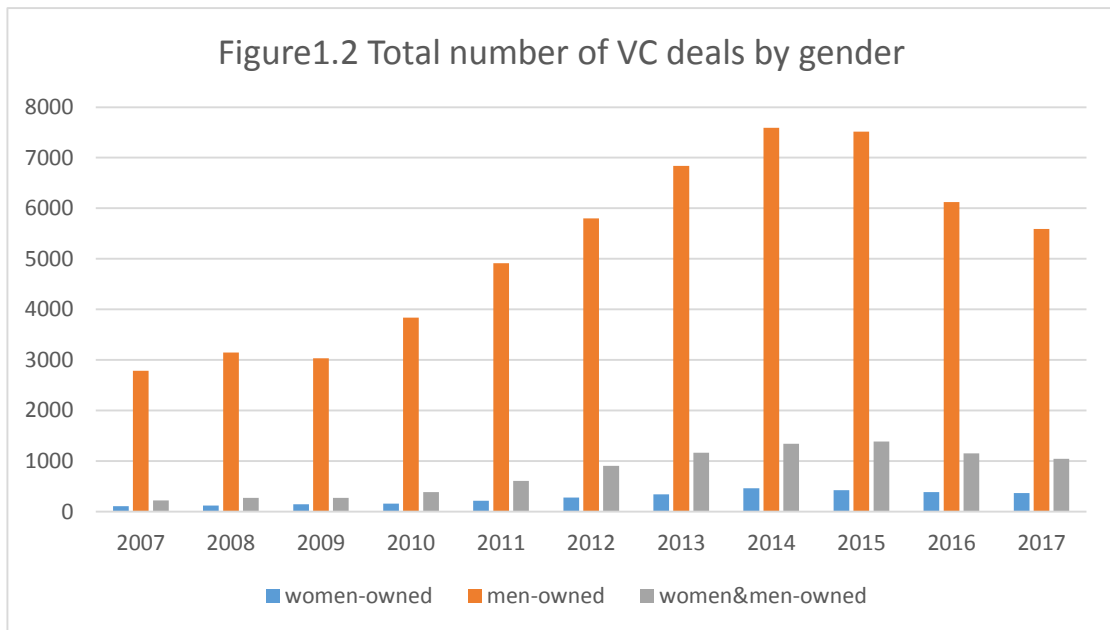
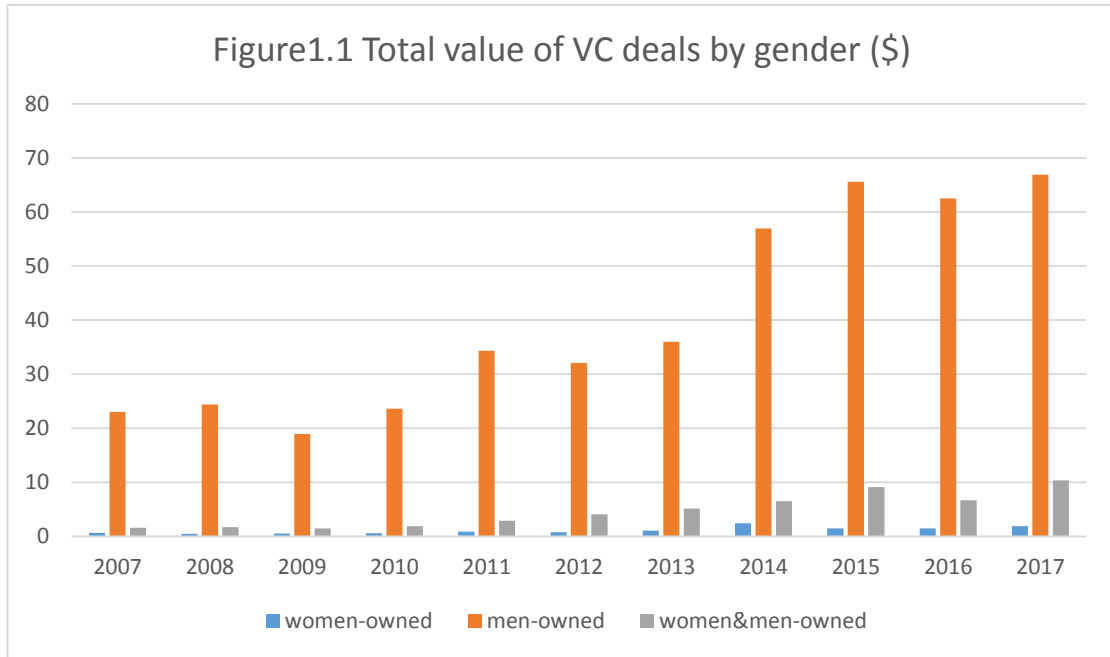
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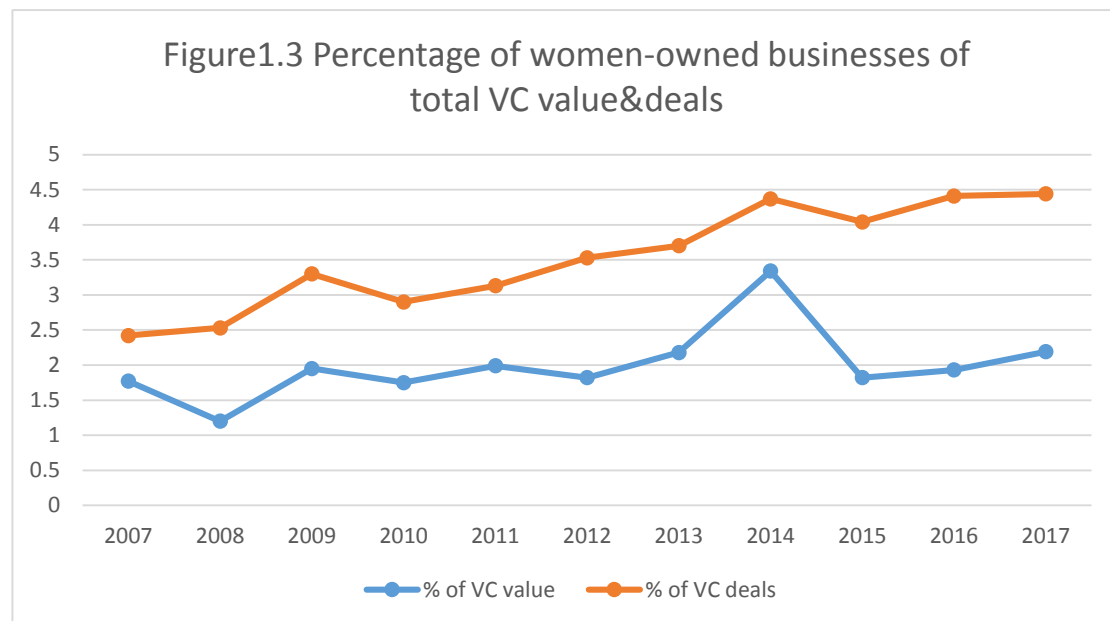
1. Introduction

It is known that funding could be obtained mainly from four sources: individual assets, debt funding, loans of government and equity financing through venture capital (formal) and business angels (informal) investment (Jarvis, 2000). There are two major sources of private equity capital for firms: venture capitals and business angels. Formal venture capital, including banks and venture capital companies and organizations, make investment mainly in the later development stage of a business to exchange for a quite large share of the firm's ownership (Meyer et al., 1995; Timmons & Bygrave, 1997). Informal business angels mean that individuals with personal assets invest in businesses, in exchange for an agreed capital return when the ventures realize certain development and targets. This paper would mainly focus on gender-related differences in equity financing.

Female-led businesses are one of the fastest developing part of private equity market, but they usually get limited support from capital financing. According to research published by Fortune Magazine in 2017, female entrepreneurs received 2.2% of total venture capital funds (Valentina Zarya , 2018). Data shows that all-women businesses received only \$1.9 billion in venture capital financing in 2017 with contrast to all-men businesses received about \$66.9 billion. In 2016, male entrepreneurs received nearly \$58 billion invested by venture capitalists, while female entrepreneurs received only \$1.4 billion, which is 1.9% of total venture capital funding.

The following Figure1.1, 1.2, 1.3 are drawn according to FORTUNE, despite the whole increasing trend in VC financing for both female and male entrepreneurs, it is obvious that the value and number of VC deals received by women entrepreneurs are much smaller than men.





Financial support is critical to the start-up of a business or a firm, but apparently, women-owned or women-led businesses don't receive much financial support from venture capital. The explanation of VC industry is that women tend not to involve in high-tech market, which VC industry has most interest in. And common sense is that women don't pursue venture capital as desperately as men, so the possibility of women receiving financing capital is much lower than men. If women can take the most advantage of venture capital, then there is no need for them to bear financial risk by using personal capital. Stereotype for women is lack of independency and adventurous spirit, women are relatively subjective and conservative, and are likely to be influenced by others relatively. According to a survey, women as decision makers in the US-based venture capital firms is 7% and they control only 4.7% of the venture capital invested in the market during the past five years.

So, what's the specific representation of gender-related differences in private equity market, and what caused gender gap from the demand and supply perspective? What can be concluded from the existing documents and researches? These are the focusing points of the thesis.

The main structure for the thesis is:

After introduction, chapter 2 describes gender differences in access to capital. This chapter will focus on two issues: Is there equal chance accessing to financing capital for both women and men? What causes the gender-related differences?

Chapter 3 finds determinants of female entrepreneurs' financial decisions and analyzes characteristics of female entrepreneurs.

Chapter 4 studies gender-related differences from the perspective of supply, that is, from female and male angel investors' side, to find their attitudes towards female entrepreneurs and their investing tendency.

Chapter 5 presents some challenges women face during their entrepreneurial activities.

The last part gives a summarization and comparison of all the literatures through a summarizing table, to help understand gender-related differences in private equity better.

2. Gender differences in access to capital

This part would study first about whether women and men have equal chance in access to capital. And if they have equal possibility to obtaining capital, are there any different requirements for both parties?

2.1 Overall opinion

There is evidence showing that self-employed female entrepreneurs are in a disadvantaged position due to their gender (Susan Marlow & Dean Patton, 2005). It is generally known of the presence of gender-related differences in access to equity funding, the ownership of firms, development pace and performance, social networks (Ahl, 2004). What's more, female entrepreneurs don't have enough access to debt financing than their male counterparts (Riding & Swift, 1990; Orser & Foster 1994; Coleman, 2002).

It is also hard for females to obtain debt financing when they start new businesses (Riding & Swift, 1990; Fay & Williams, 1993; Coleman, 2000). In addition, it was indicated that female entrepreneurs considered primarily about how to obtain start-up funding (Brush, 1997; Carter et al., 2003). There are statistics showing that female entrepreneurs start their businesses with less funding capitals comparing with men (Brush, 1997; Carter & Rosa, 1998). It was pointed out that female entrepreneurs received merely 2% of the \$33 billion venture capitals from 1991 to 1996 (Stout, 1997).

2.2 Diverse aspects about differences in accessing capital

Following are some in-depth analysis about previous researches on gender differences in access to capital.

2.2.1 Access to formal capital

Access to formal sources of capital funding was analyzed theoretically to check whether female entrepreneurs starting their own businesses are disadvantaged due to their gender (Susan Marlow & Dean Patton, 2005). Susan Marlow & Dean Patton (2005) studied this issue in U.K., with 9% - 12% of small ventures owned by female (Federation of Small Business, 2002).

Stereotypes and presumptions are necessary to state this issue. Females still burden most caring work in a home and segregation of occupation has a disadvantageous influence on the accomplishment and status of women (Maushart, 2001). Females have to exercise their businesses in a market generally formed by male-dominated values and norms and females face different levels of barriers to gain resources and capitals if they want to engage completely and equally in the market (Susan Marlow & Dean Patton, 2005). It was suggested that females had more obstacles in accessing to individual savings than men (Carter & Kolvereid, 1997). This may lie in that females tend to have a lower waged work or work part-time, which reflects that previous work experience of entrepreneurs is of vital importance to access potential capital funding (Deakins, 1996; Storey, 1994). It is obvious that lower waged work of women will greatly affect their experience when starting their own businesses (Marlow, 2002).

Not only individual savings are the sources of initial capital for small firms, but also traditional bank funding is another important source of external capital. Females have to face more problems than male entrepreneurs in access to bank capitals. Sometimes women have to undertake more collateral requirements to increase the possibility of applying loans successfully (Susan Marlow & Dean Patton, 2005). It is usually easier to enter service industry because of lower start-up capital requirements. As a result, female entrepreneurs are facilitated to start their businesses in this sector (Carter et al., 2001). Business owners in small-sized industries often have unstable relationships with banks, which has nothing to do with the gender of the entrepreneur (Susan Marlow &

Dean Patton, 2005).

It is concluded that for females, there are three obstacles upon access to capital (Greene et al., 2000). The first one is structural constraint. Most venture capitalists are male and they build social networks closely, it is crucial to know how to access and negotiate appropriately in these networks. Human capital constraint is the second obstacle. On average, females with lower waged work are limited to develop powerful managerial competencies (Halford & Leonard, 2001). The last one is strategic Choice. Rapid growth is usually accompanied with loss of ownership, which is not acceptable especially for many female entrepreneurs. It is found that females are not reluctant to firm growth, but they are less tolerant towards uncontrollable development speed and risks (Cliff, 1998).

To conclude, women still experience disadvantages in access to finance than men, which is likely to lead them to running businesses in sectors of poor performance. Then the negative image of female entrepreneurs is strengthened and goes into vicious circle (Susan Marlow & Dean Patton, 2005).

2.2.2 Access to informal capital

John R. Becker-Blease & Jeffrey E. Sohl (2006) examined whether females have access to angel capital fairly and equally comparing with males, by checking whether differences exist in the rate of seeking angel capital between male and female entrepreneurs and the rate of angel capital are provided. Annual statistics of angel organizations from 2000 to 2004 was analyzed to research from the supply perspective, the percentage of deals led by women financed by angel organizations and from the demand perspective, the rate of female entrepreneurs seek capitals from angel investors (John R. Becker-Blease & Jeffrey E. Sohl, 2006).

Questionnaires were responded by 47 angel investing organizations in 2000, 47 angel investing organizations in 2001, to 45 angel organizations in 2002, to 36 organizations in 2003, and to 33 organizations in 2004. More than 5000 angel investors were included in the angel investing organizations in 2000 and 2001, nearly 3000 individual angels in 2002, 2000 angels in 2003 and 2600 angel investors in 2004. According to the study, 91.14% of the proposals seeking for angel capital were applied by men-owned businesses and 8.86% were applied by women-owned businesses. It shows that females seek angel capital less frequently than their male counterparts, which would probably lead to the phenomenon that females receive fewer angel capital comparing with men (John R. Becker-Blease & Jeffrey E. Sohl, 2006).

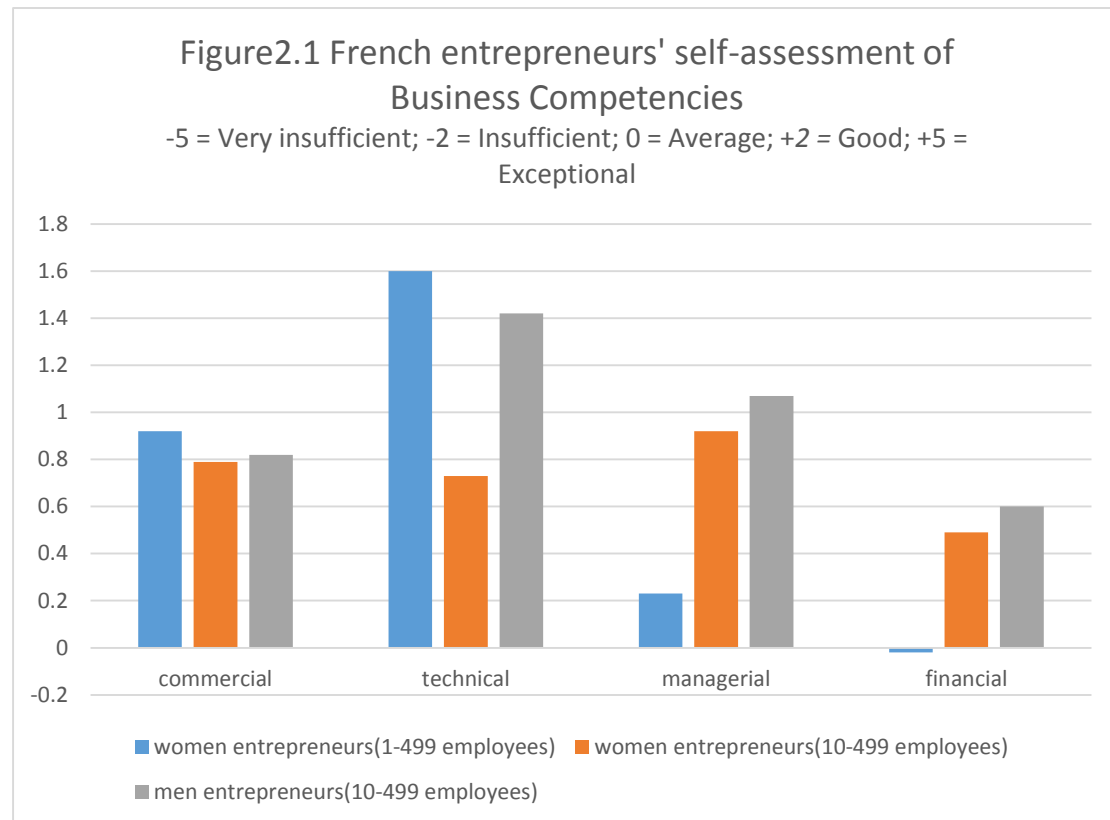
The percentage of proposals receiving capital support for female-led businesses and male-led businesses is similar so it means that females have an equal opportunity to obtain angel capital comparing with men. It is concluded that female entrepreneurs do not need to give up more equity to exchange angel capital comparing with men. In addition, there is evidence indicating gender homophily in seeking angel capital for both women & men-owned businesses, that is, entrepreneurs tend to seek capitals from investors of same gender (John R. Becker-Blease & Jeffrey E. Sohl, 2006).

2.2.3 Higher collateral requirements

Muriel Orhan (2001) delivered questionnaires randomly to entrepreneurs from Institut National de la Statistique et des Etudes Econotniques and get response from 562 men entrepreneurs and 403 wmoen entrepreneurs. Data for female-owned businesses was from 1997 and data for male-owned businesses was from 1994. Apart from the questionnaires, there were also 30 interviews for female entrepreneurs from Brittany, Paris, and Lyon of France.

According to the results of the questionnaires, when referring to business competencies

in Figure 2.1, both women and men entrepreneurs classified financial competencies as the most insufficient (Muriel Orhan, 2001).



The female-owned businesses with 1-499 employees gave a negative assessment of their financial competencies. This is consistent with the finding of Mahot (1997): in most EU countries, female entrepreneurs are more likely to suffer from lack of financial and managerial competencies. The reasons may lie in that entrepreneurs usually regard prior work experience to be the major source of their competence no matter what the level of education they have. However, female entrepreneurs lack financial and managerial experience in general (Hisrich, 1985). As women's previous experience is usually about administration or sales, thus they have little access to decision networks, especially informal financing chances (Olm, Carlsrud and Alvey 1988).

When comes to financial patterns, former researches have noted that initial capitals of women's businesses was fewer than their male counterparts. One explanation for the situation is that women possess smaller personal property on average because of their smaller wages or earnings before (Muriel Orhan, 2001). Women are more likely to run

retail and services businesses, which need less capital than manufacturing and transport. Women is more risk-averse than men so they prefer getting financial support from personal, relatives' or friends' property rather than going into debt (Sexton and Bowman 1990). According to the reports of EU, 60 percent of men-owned businesses in France after five years was supposed to survive while for women-owned businesses is only 54 percent. The research of Buttner and Rosen (1992) indicated that bankers are unwilling to provide funding for projects which they expect to have a low return but accompanied with high risk, regardless of the gender of the entrepreneurs. In the additional interview, none of the female entrepreneurs felt that there is apparent gender discrimination in access to finance. They considered their young age, generally less than 30-35 years old, as the cause of unsuccessfully receiving capital from bankers (Muriel Orhan, 2001).

In conclusion, the only found discrimination against female was a higher collateral demand in access to finance. In most cases, gender discrimination was due to communication problems, as the majority of bankers are male and they tend to regard women entrepreneurs as females first, rather than as individuals. Another obstacle for female entrepreneurs is obviously lacking financial competencies (Muriel Orhan, 2001).

To create a more equal environment in finance, one solution in the short term is to offer training for females who start or run businesses. The solution in the long term is more women involving in financial organizations dealing with capital loans, which has already started (Muriel Orhan, 2001).

2.2.4 Higher interest rate

It was estimated by National Women's Business Council (1996) that firms owned by females constitute 33% of all the firms and the number of businesses owned by females expands twice as fast as firms in total. Susan Coleman (2000) used statistics of the National Survey of Small Business Finances in 1993 to compare female and male

entrepreneurs' access to financial capital. Also, the authors researched differences between credit, for example, interest rates and collateral, as well as the influence of the relationship between supplier and demander. Cole and Wolken (1995) indicated that female entrepreneurs tend not to use bank loans as a source of capital comparing with male entrepreneurs. The authors wanted to find whether female entrepreneurs have similar access to debt capital as their male counterparts. If so, do they need to receive the capital under less favorable terms? And will it make women unwilling to use debt equity? (Susan Coleman, 2000).

Some researchers pointed out that it is difficult for female entrepreneurs to obtain capital support and dealing with financial suppliers. The following causes were proposed: relatively smaller size of women-owned businesses (Coleman & Carsky 1997; Fabowale, Orser & Riding 1995; Riding & Swift 1990); risk aversion (Chaganti 1986; Olsen & Currie 1992); and potential discrimination (Brush 1992; Neider 1987). Researches showed that women-owned ventures may be less attractive to financial suppliers or investment banks because they are small and regarded as being more risky than men-owned businesses (Coleman & Carsky 1996, 1997). In the studies of Riding & Swift (1990), it is found that female entrepreneurs were required to provide more collateral than men. All these previous researches seem to suggest that maybe there is no obvious gender discrimination during the process of investment, women's relationships with investment banks and other financial suppliers were quite different from that with male entrepreneurs (Susan Coleman, 2000).

From the perspective of suppliers, the most important task of capitalists is to minimize risk and maximize profit. They need to consider about getting back money as quickly as possible before investing money. If women are viewed as riskier and uncertain borrowers than men, they may probably refuse to invest money or offer the capital under less favorable terms. Collateral requirements develop long-term relationships are often used to help capitalists reduce risk and uncertainty. These all put women at a disadvantage (Susan Coleman, 2000).

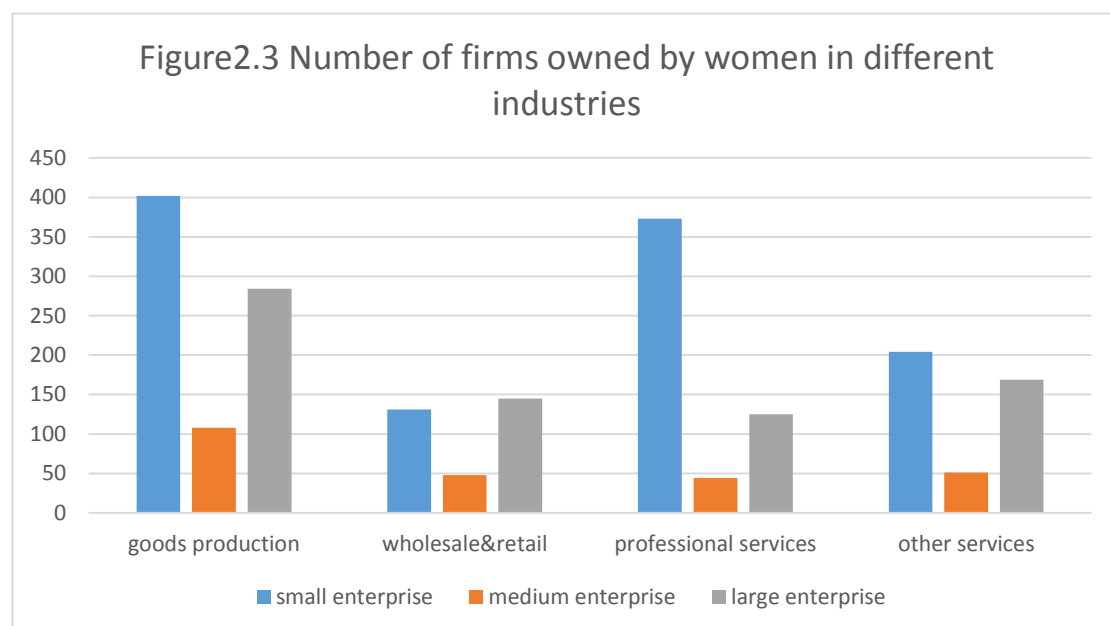
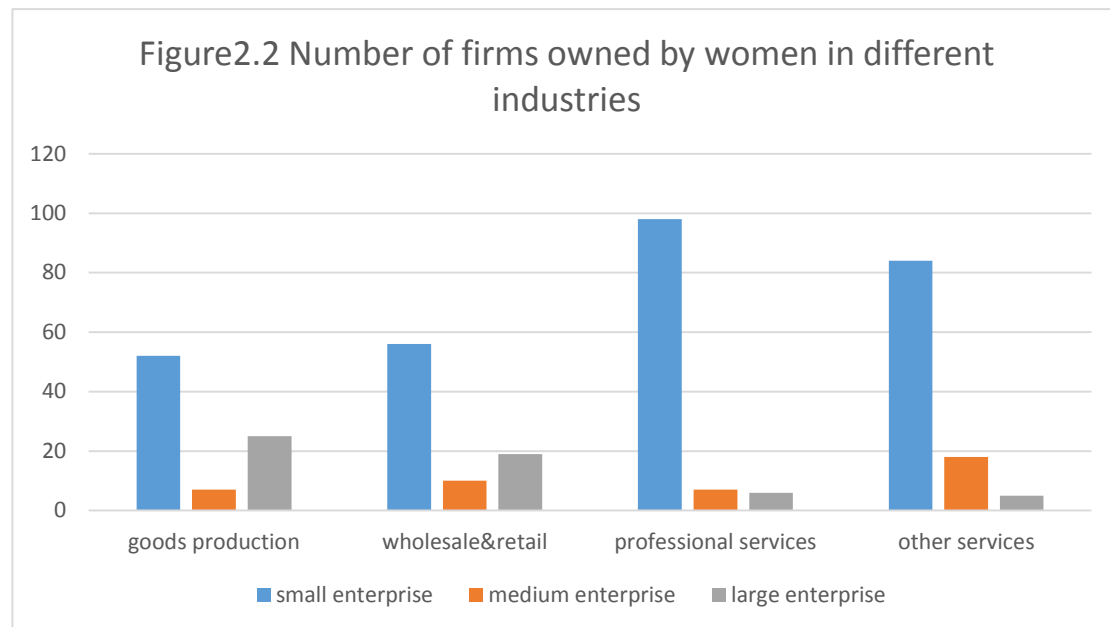
It was found that women-owned ventures were relatively younger and smaller-sized than the men-owned firms. In addition, female entrepreneurs have shorter relationships with suppliers of capital than their male counterparts. And it was concluded that women-owned ventures are relatively smaller and newer than male-led businesses (Susan Coleman, 2000). And women are less likely to use external financing as a source of capital, which again confirms the results of prior research (Cole & Wolken 1995; Coleman & Carsky 1996, 1997). And there is no evidence shows that financial suppliers have gender discrimination when providing women access to capital. There is only evidence shows that financial suppliers have preference over larger and well-established businesses (Susan Coleman, 2000). However, considering that women-owned businesses are usually much smaller than men-owned businesses, this preference put females at a disadvantage when acquiring financial capital. In addition, women-owned firms have the same chance to get credit products as men-owned firms, which is consistent with the opinion of Fabowale, Orser & Riding (1995). The authors also found that female entrepreneurs receive financial capital with less favorable conditions than their male counterparts because women applied for generally smaller loans, which coincides with the findings of Riding & Swift (1990). Statistics showed that firms owned by women usually paid higher loan rates because of smaller amount of loans (Susan Coleman, 2000).

2.2.5 Low application rates for external capital

Barbara J. Orser, Allan L. Riding & Kathryn Manley (2006) tested gender-related differences in access to capital funding of small and medium enterprises in Canada. There are 2357 ventures led by male and 487 ventures led by female in the sample. They also examined gender-related differences in entrepreneurs' application rates and business angels' turndown rates. It was found that female and male entrepreneurs contribute different human capital to the firm, including education background and managerial experience. In addition, they contribute different social capital such as

banking relationship (Barbara J. Orser, Allan L. Riding & Kathryn Manley, 2006).

Figure 2.2 and 2.3 showed that women-owned firms tend to run in the services and retail industry than men-owned firms. And women-owned firms are relatively smaller than men-owned firms (Barbara J. Orser, Allan L. Riding & Kathryn Manley, 2006).



Firm size and sector influence gender-related differences in applications for external financing. Female entrepreneurs are less likely to seek external capital. Male and female entrepreneurs that apply for financing were likely to have equal chance to receive

financial capital. And there is no evidence showing significant gender-related differences in turndown rates of applications for loans and business angels financing (Barbara J. Orser, Allan L. Riding & Kathryn Manley, 2006).

2.3 Summarization

It is true that female entrepreneurs obtain a small proportion of capital comparing with their male counterparts. However, women and men have equal access to financial capital and there is no obvious discrimination due to gender. The only discrimination may be that female entrepreneurs are often required higher interest rate or tend to put up collateral, as a result of their smaller and newer firms as well as lack of experience. In addition, women are more likely to start their businesses in service or retail sector while men are more active in transportation, wholesales and manufacturing industry. Therefore women demand less capital to run their businesses and thus they are less likely to seek external capital, which again decreases the amount of capital they received.

3. Determinants of female entrepreneurs' financial decisions

This part tries to find what factors will influence female entrepreneurs' financial decisions and what are the differences between female and male entrepreneurs' characteristics. Are these characteristics differences that lead to gender gap?

3.1 General characteristics of female entrepreneurs

Evidence showed that men are more rational and women are more emotional in low-conflict negotiation (Halpern & Parks, 1996). It was easier for female entrepreneurs to accept less optimal results and they are less likely to ask for more favorable terms. Women tend not to seek negotiation actively, are less confident and more co-operative (Kolb & Williams, 2003; Babcock & Laschever, 2003). The phenomenon 'women don't ask' may lead them unable to capture opportunities negotiating for better outcomes (Babcock & Laschever, 2003). Gender stereotypes indicated that females are regarded as more subjective and co-operative while males are seen as more objective and try to fight for their own interests, thus males are more effective in negotiations (Kray, 2007). Gender bias exist partly due to female entrepreneurs may be not as powerful as men in quite competitive market (Richard T Harrison & Colin M Mason, 2005).

Capabilities, management team and the existence of potential funding providers, for example, business angels, venture capitalists, investment banks and organizations, constitute the power of the entrepreneurs during negotiation (Wasserman & Robinson, 2000). Female entrepreneurs tend to avoid negotiating about terms of compensation while male entrepreneurs are more active (Bear, 2009). It is suggested that female entrepreneurs tend to participate in a more collaborative management way in the USA, Finland and Ireland (Riebe, 2003), which is consistent with previous researches of

Bryans & Mavin (2003) and Powell & Graves (2003).

Statistics have proved that previous work experience in the similar industry would add to the possibility of running firms successfully (Cooper et al., 1988; Bruderl et al., 1992; Carter et al., 1997). However, researches indicated that female entrepreneurs had less relevant experience comparing with men (Carter et al. 1997). Previous studies has concluded that social networks of female entrepreneurs are not as effective as men's network (Aldrich, 1989; Brush, 1992). Knowledge, capabilities such as human capital and social capital, as well as effective networks have been proved to be the key to equity financing (Nancy M. Carter, Candida G. Brush, Patricia G. Greene, Elizabeth Gatewood and Myra M. Hart, 2003).

3.2 Certain specific determinants

This chapter wants to find some specific determinants of women's financial decisions and what's the difference comparing with men.

3.2.1 Risk-averse vs Overconfidence

Jiekun Huang & Darren J.Kisgen (2013) suggested that male executives show overconfidence in making important corporate decisions with contrast to female executives. It was examined whether the gender-related differences have any influence on the value of the company and whether female executives make different decisions of investment or financing in contrast with male executives. And it was tested whether corporate decisions made by female executives are better for net value of the company (Jiekun Huang & Darren J.Kisgen, 2013).

The way testing for overconfidence is to compare earnings forecasts of firms managed by male and female. Stock purchase exercise is also examined. Transformations were

compared from a male executive to a female executive. In contrast, a sample of male-to-male transformation ventures was studied. It was required that the executive in the sample had to be in charge continuously for no less than three years (Jiekun Huang & Darren J.Kisgen, 2013).

It was found that male executives tend to make value destroying acquisitions than female, which again confirms overconfidence of male executives. Female executives make different financial and acquisition decisions comparing with male executives. Women tend to make less acquisitions and issue less debt than men (Jiekun Huang & Darren J.Kisgen, 2013).

Overconfidence of male executives may indicate that decisions finally made by female executives are more favorable in the market. Male executives take more transactions because they are too optimistic about net present values. Prior researches suggested that female executives are more risk averse comparing with male. Prior statistics showed that female executives are likely to invest in assets under smaller risk (Bernasek & Shwiff, 2001; Agnew, Balduzzi & Sunden, 2003). Usually, investors show more favor to important corporate financing decisions made by women executives. Male executives are overconfident because their earnings forecasts were narrower and they tend to exercise options late than female executives. One reason for women executives making better decisions for company value was that the study tested only some corporate decisions of company executives, maybe men executives behave better in other aspects, for example, strategy or compliance (Jiekun Huang & Darren J.Kisgen, 2013).

3.2.2 Human and social capabilities

Nancy M. Carter, Candida G. Brush, Patricia G. Greene, Elizabeth Gatewood & Myra M. Hart (2003) carried out a research studying the factors related to seeking of equity

capital in businesses owned by females. The survey delivered questionnaires through telephone interviews and research data was from a research of 235 female entrepreneurs in 2000, which was collected by the National Foundation for Women Business Owners in the US. The study indicated that social capital didn't have direct influence on increasing possibility of using equity or debt capital. It was suggested that female entrepreneurs with higher education degree would increase possibility of acquiring capitals. The study aimed at finding whether obtaining equity capital has any relationships with higher degrees of human and social capital (Nancy M. Carter, Candida G. Brush, Patricia G. Greene, Elizabeth Gatewood & Myra M. Hart, 2003).

Figure 3.1 shows the potential impacts of human, social and financial capital (Nancy M. Carter, Candida G. Brush, Patricia G. Greene, Elizabeth Gatewood & Myra M. Hart, 2003).

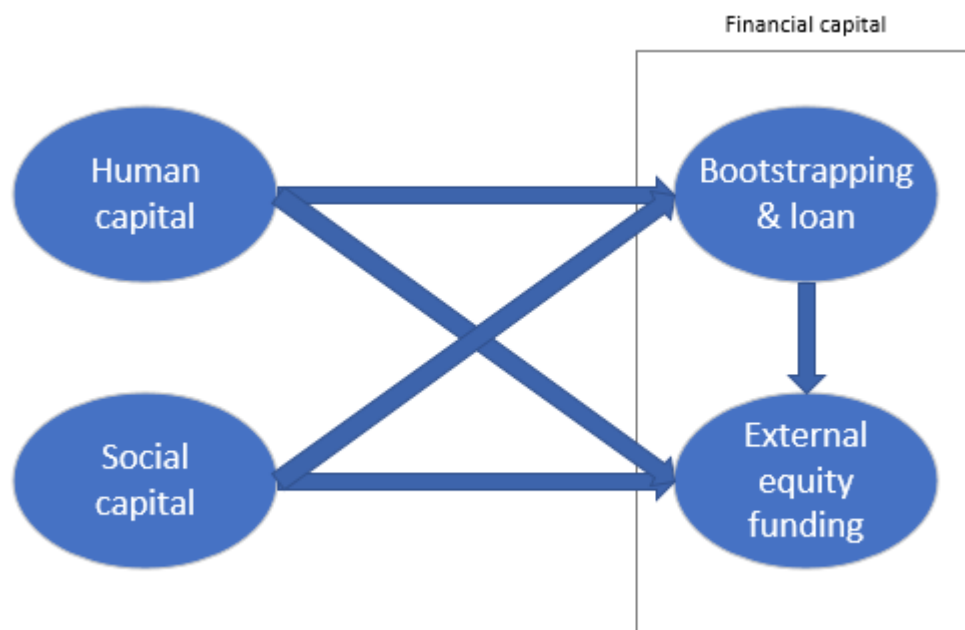


Figure 3.1. Accessing financial equity (Nancy M. Carter, Candida G. Brush, Patricia G. Greene, Elizabeth Gatewood & Myra M. Hart, 2003)

Some experts point that human capital is the most important in the investment of venture capital. Human capital consists of education, training and work experience, etc. However, females are more likely to have arts education rather than training in business (Brush 1992, Carter & Allen 1997). As for work experience, the experience of start-up,

management and industry are particularly important. Female entrepreneurs seemed not to have enough experience of industry comparing with male. Personal social network is a crucial source of social capital. Social networks provide a way for entrepreneurs to have access to different resources and exchange information, meanwhile time can be saved. Data shows that females accounted only a small proportion in the social networks of venture capital market (Nancy M. Carter, Candida G. Brush, Patricia G. Greene, Elizabeth Gatewood & Myra M. Hart, 2003).

Following conclusions can be concluded: Higher degrees of human capital and broader social networks of female entrepreneurs increase possibility to secure from equity funding. Female entrepreneurs with higher levels of human capital tend to use external debt capital (Nancy M. Carter, Candida G. Brush, Patricia G. Greene, Elizabeth Gatewood & Myra M. Hart, 2003).

3.2.3 Unwillingness towards negotiation

Deborah A. Small, Michele Gelfand, Linda Babcock & Hilary Gettman (2007) explained the causes of gender-related differences in starting negotiations and different effects in different situations. Asking rather than negotiation is much easier for women, as this is more polite. The authors aimed at checking about gender-related differences in the tendency to start negotiations and the psychological influences leading to such differences. People who participated were asked to exchange for cash and were offered the minimum possible payment. Authors studied whether participants asked for more payment from the experimenter. Possible mechanisms that result in gender differences in starting negotiations were also researched. Authors found that although women tend not to negotiate comparing with their male counterparts, it is possible that women are aware of negotiation opportunities (Deborah A. Small, Michele Gelfand, Linda Babcock & Hilary Gettman, 2007).

An experiment was first made aiming to examine gender differences in starting negotiations. It was explored whether participants asked for more money in the situation with inexplicit options of negotiation. Among all the 74 participants, 12.2% (9 participants) asked for more money. 23% of men requested more money, while only 3% of women asked for more money. Then the authors examined how asking rates would be influenced when men and women were suggested about initiating negotiation. 22.4% of participants asked for more money. It showed a 13% gender difference in the willingness to initiate negotiation and a 42% gender difference in the negotiation condition. The rate of participants initiate negotiations increased obviously when they were explicitly suggested to do so (Deborah A. Small, Michele Gelfand, Linda Babcock & Hilary Gettman, 2007).

Gender-related differences in the initiation of negotiation seem to rely on suggestion to ask for greater compensation. In other words, cuing to negotiate increased rates of starting negotiations for women and men, but the gender gap still existed. When women are prepared to experience power, their reluctance to negotiation is reduced so much that they behave more like their male counterparts usually do. Female reluctance to negotiating compared with asking may be a result of the significant role of power played in their minds related to negotiating (Deborah A. Small, Michele Gelfand, Linda Babcock & Hilary Gettman, 2007).

In summary, gender differences exist in the initiation of negotiation. Cuing to negotiating about compensation raised the rate of initiation of negotiations. Female had a more negative opinion towards negotiating comparing with asking for things while male did not differ much in reaction to the two situations. Gender differences exist when suggested to negotiate but diminish when suggested to ask. The findings suggest that interventions that would be useful to help women to relabel negotiating and opportunities to ask may help improve women's willingness to ask for things. When women are confident about power possession in the situation, they will be more willing to initiating negotiation. Therefore, negotiation training may be important for women

to build confidence and power (Deborah A. Small, Michele Gelfand, Linda Babcock & Hilary Gettman, 2007).

3.3 Summarization

Female entrepreneurs are less likely to initiate negotiations, make acquisitions and issue debt than their male counterparts. Male executives show relatively confident in significant corporate decision making while female entrepreneurs are more risk averse. Higher education level increase the possibility of female entrepreneurs using equity capital to fund their firms while prior experience nearly has no impact on equity capital use. Social capital such as network diversity and network tie strength has no direct influence on using equity capital or loans. The wider of the social network, the less possible will entrepreneurs use individual savings. Women have to show more self-confidence to gain competencies in the market.

4. Gender differences in supply of capital

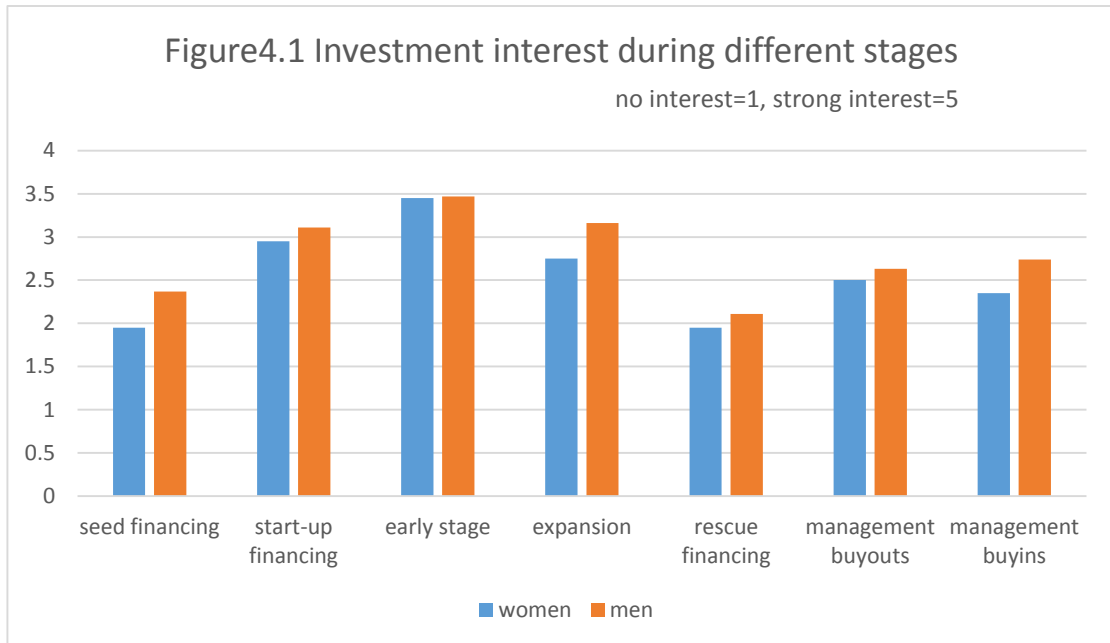
Female-led angel organizations are more attractive than men-led angel organizations to businesses owned by women, however, female angel organizations make less frequent investment comparing with men angel organizations (Jeffrey E. Sohl & Laura Hill, 2007). Female entrepreneurs will benefit if the terms set by business angels should be more easily to be accessed to entrepreneurs and the range of negotiating terms should also be broader (Van Osnabrugge & Robinson, 2000).

4.1 Impact on capital supply by gender

Richard T Harrison & Colin M Mason (2005) found gender has little influence on the supply of business angels. Their study aims at concluding critical factors related to the relationship between angel capital and gender; analyzing behaviors of female angel investors and investigating whether female angel investors are more willing to invest in female entrepreneurs. Female angel investors were recognized and touched via business angel networks in the study. 21 questionnaires were completed by female and 19 by male (Richard T Harrison & Colin M Mason, 2005).

Female business angels among the respondents are generally younger than men. Both of female and male groups receive good education. Among the respondents, nearly 62% of women and over 63% of men having formal experience of running one or more businesses. And sources of capital funding were quite different for female and male business angels (Richard T Harrison & Colin M Mason, 2005).

Figure 4.1 proved that angel investors have more interest in investing in start-up and early stage businesses, which is consistent with other researchers' findings (Richard T Harrison & Colin M Mason, 2005).



Not surprisingly, in Figure 4.2 and 4.3, business angel networks act as a major source of investment opportunities (Richard T Harrison & Colin M Mason, 2005).

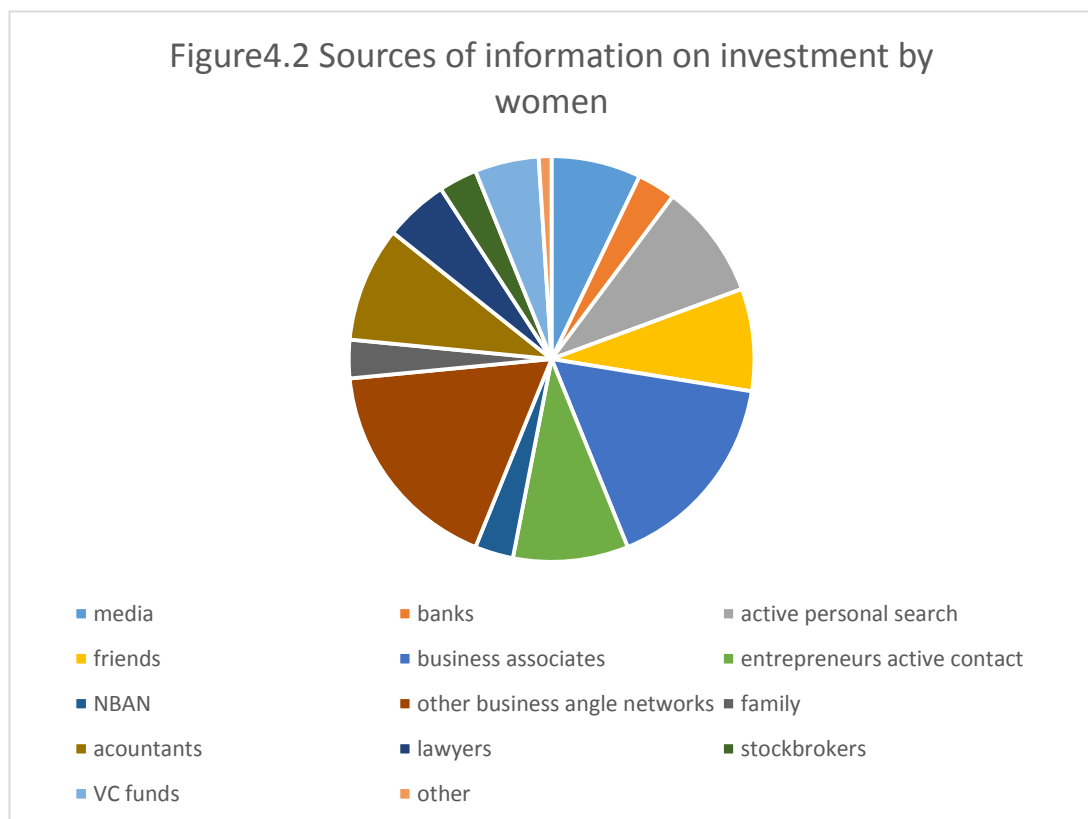
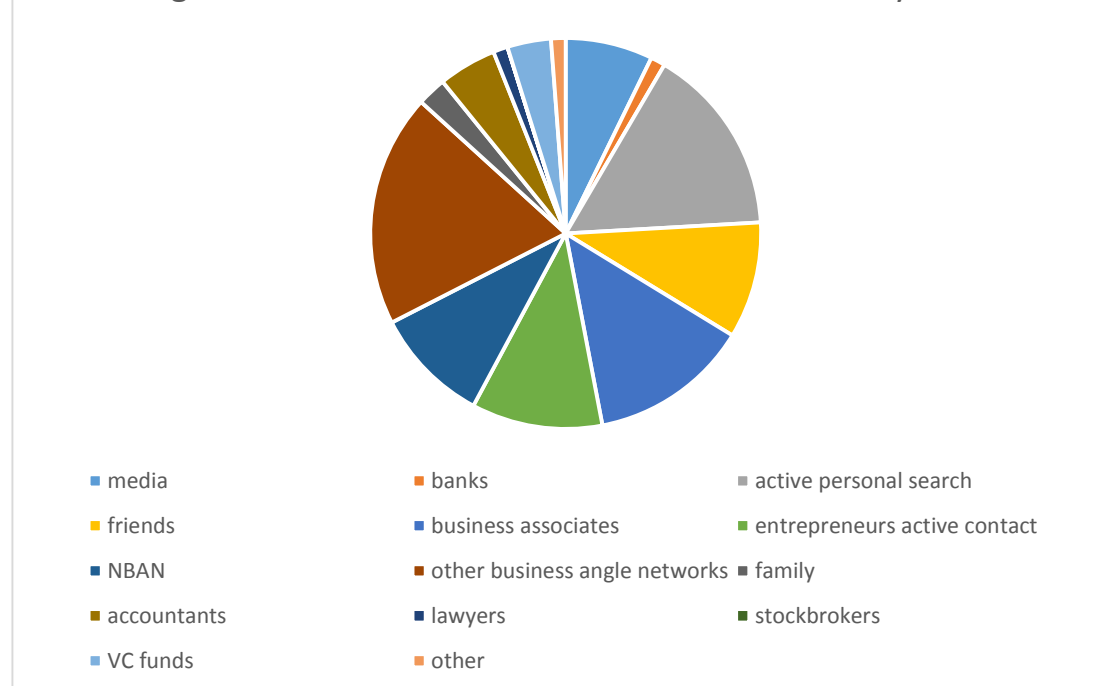


Figure 4.3 Sources of information on investment by men



Data showed that the women in the sample seemed to have more interest in investing in female-owned businesses (37%) comparing with 21% of men showing interest. In addition, the respondents were acquainted with few of other women business angels, and men business angels acquainted slightly more female business angels, which may be contributed to their broader social networks (Richard T Harrison & Colin M Mason, 2005).

It was concluded that gender is not a main factor affecting the supply of angel capitals. Women business angels only have limited differences comparing with men (Richard T Harrison & Colin M Mason, 2005).

4.2 Low participation rate of women angels

Candida G. Brush, Nancy M. Carter, Patricia G. Greene, Myra M. Hart & Elizabeth Gatewood (2002) examined the role of female play in demand and supply of private equity capital from the perspective of social capital. The authors tried to study the

history of women receiving investment in the venture capital industry. The study was based on statistics collected from formal equity providers by the National Venture Capital Association. As equity providers, what's the role female play in venture capital industry? This is another part that the study also examined. For this part, the authors studied data in Pratt's Guide to Venture Capital from 1995 to 2000, which they believed is the most efficient and useful information (Candida G. Brush, Nancy M. Carter, Patricia G. Greene, Myra M. Hart & Elizabeth Gatewood, 2002).

Companies acquire financial support from private venture capital, investment banks, and corporate venturing programs, etc. before receiving venture capital. Start-up and growth phases are usually supported by bootstrapping, business angels and private equity (Mason and Harrison 1999; Brophy 1997). Successful receiving of angel capital is a key point to a venture's survival (Freear and Wetzel 1992).

A social capital view combines the funding supplier and funding seeker together. Social capital is of vital importance for exchanging resources among the firms (Aldrich 1999, Maula et al. 2001). It is indicated that non-economic knowledge arises from social networks and all that is likely to turn into resources for new firms (Coleman 1988, Nahapiet & Ghoshal 1998). Social networks offer a channel to exchange information and resources which may have an influence on running businesses. Social networks can increase the opportunity for entrepreneurs to obtain capital funding and are regarded as a good way to provide support to businesses (Aldrich 1989).

In Figure 4.4, a deal is the negotiated result for both financial suppliers and demanders. Several factors can encourage or discourage the relationship between suppliers and demanders in a deal (Candida G. Brush, Nancy M. Carter, Patricia G. Greene, Myra M. Hart & Elizabeth Gatewood, 2002).

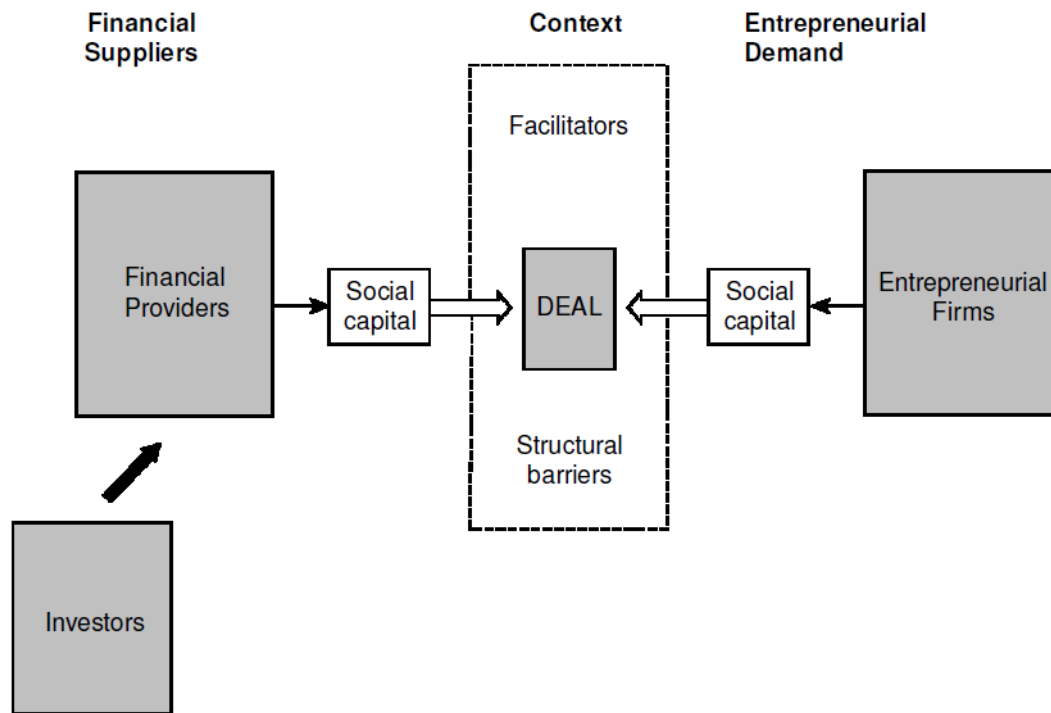


Figure 4.4. Conceptual framework (Candida G. Brush, Nancy M. Carter, Patricia G. Greene, Myra M. Hart & Elizabeth Gatewood, 2002)

From the perspective of demand, social relationships, for example, access to investing organizations, are critical for successfully obtaining equity capitals. Diversity of social networks of a firm's executives is of vital importance in searching for financial support (Aldrich 1989). The private equity industry is based on traditional male norms (Bygrave 1992). Female entrepreneurs might be regarded to have different targets, values or actions than men when they are searching for equity capitals, leading to an opinion that investing in women-owned firms are more risky (Brophy 1997, Greene et al. 2001). The percentage of female entrepreneurs obtaining financial capital is not proportional to females running their own firms (Candida G. Brush, Nancy M. Carter, Patricia G. Greene, Myra M. Hart & Elizabeth Gatewood, 2002).

Through analyzing the investment process in venture capital industry, it is shown in Figure 4.5, 4.6, 4.7 and 4.8 that most investments happen in early stage for both women-owned and men-owned businesses, from 1957 to 1998. There exists significant differences in acquisition of venture capital by gender and stage (Candida G. Brush, Nancy M. Carter, Patricia G. Greene, Myra M. Hart & Elizabeth Gatewood, 2002).

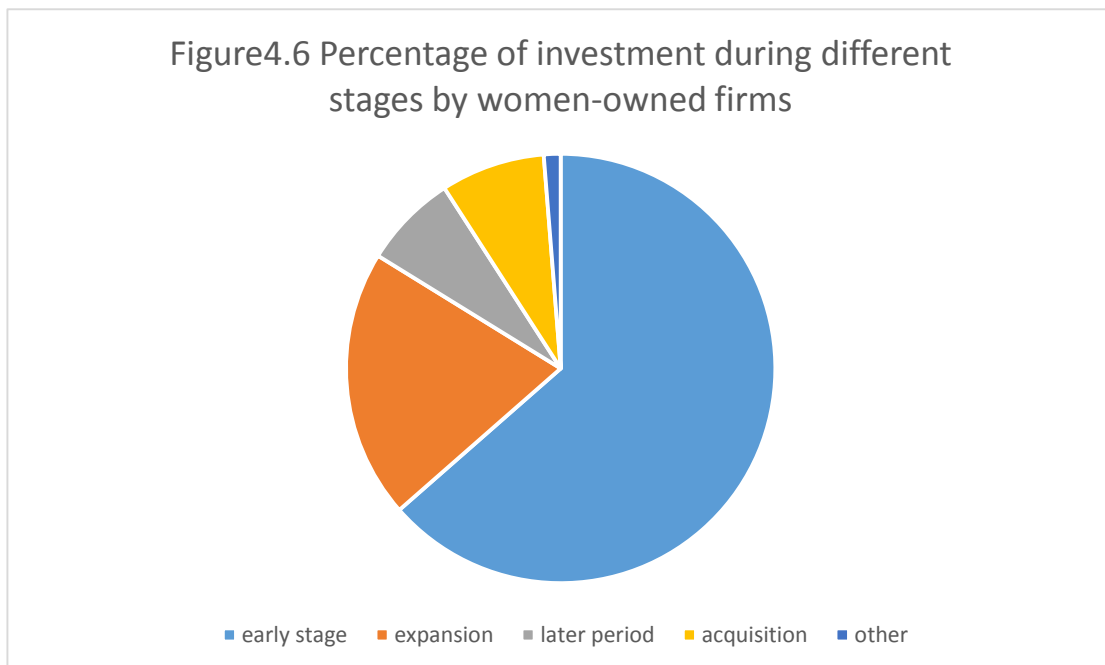
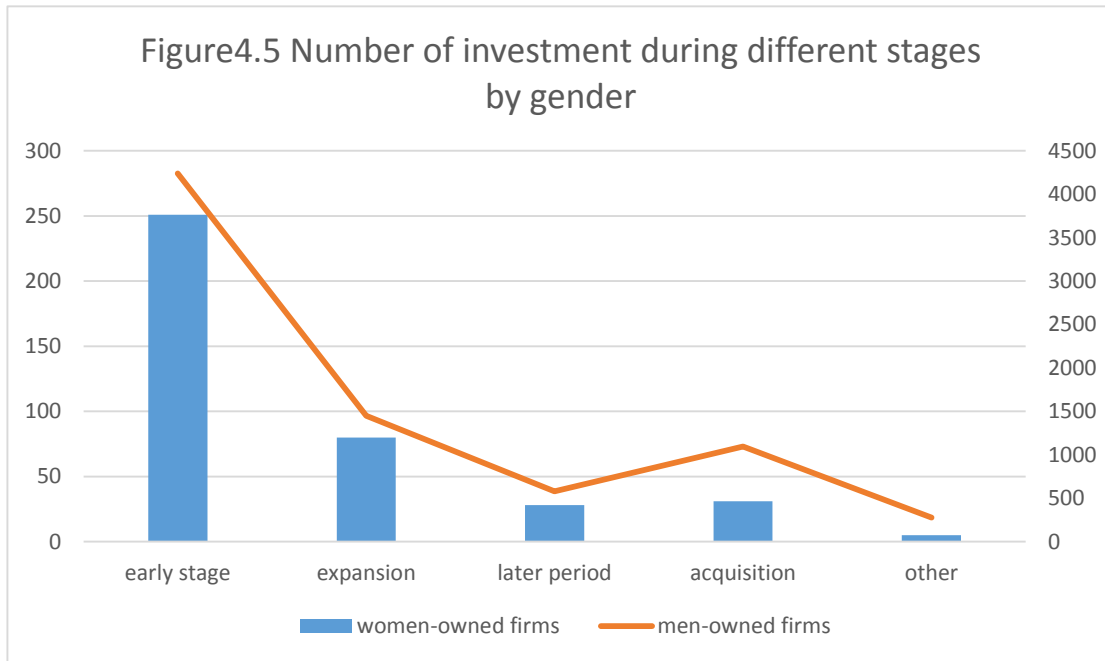


Figure4.7 Percentage of investment during different stages by men-owned firms

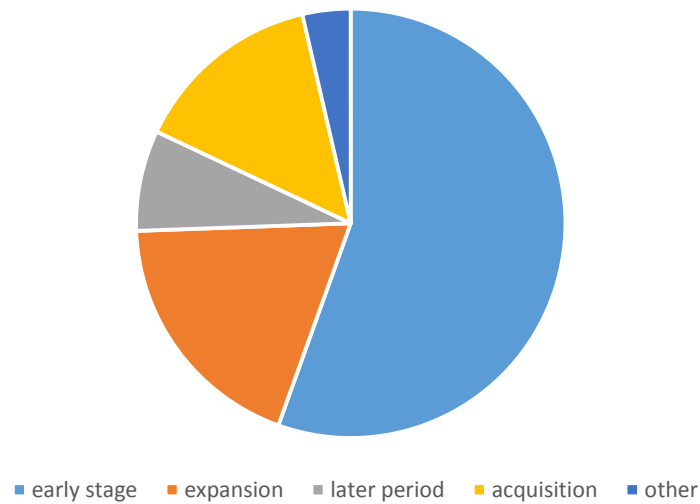
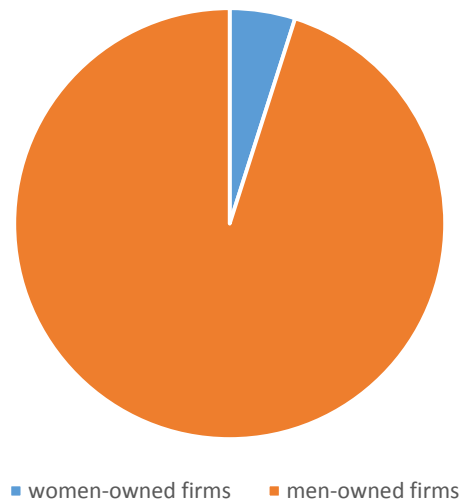


Figure4.8 Percentage of receiving investment by gender



It is also suggested that fewer women played the role of decision-making despite the industry expanded, women only account a small proportion of decision-makers in venture capital industry. Data in Center for Women's Business Research of 2002 showed that 28% of US ventures were owned by females and women were main shareholders in 38% of the firms. But women-owned enterprises received no more than 5% of financial investments in the US during the past 40 years (Candida G. Brush,

Nancy M. Carter, Patricia G. Greene, Myra M. Hart & Elizabeth Gatewood, 2002).

From the supply perspective, only a small proportion of females participates in capital investing activities. It was found that women entrepreneurs searching for equity capital and venture capitalists searching for investments are disconnected to some degree (Candida G. Brush, Nancy M. Carter, Patricia G. Greene, Myra M. Hart & Elizabeth Gatewood, 2002).

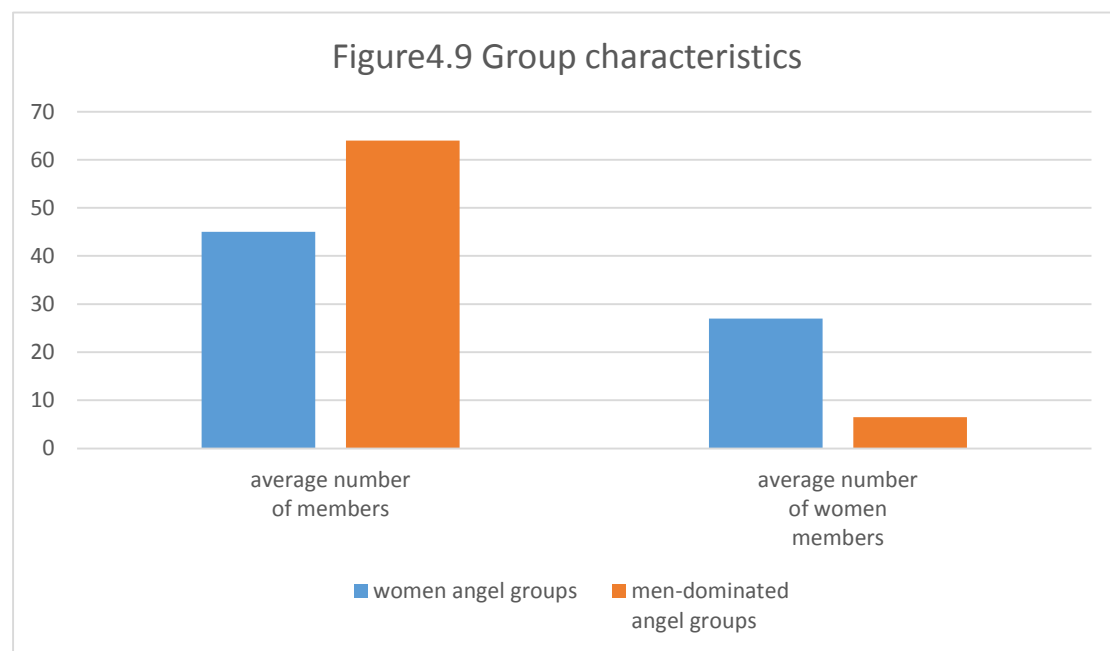
4.3 Gender preference of women angels

Jeffrey E. Sohl & Laura Hill (2007) made a research whether female angels are more likely to invest in female entrepreneurs. Data indicated that female entrepreneurs tend to obtain financing from angel investors (73%) comparing with 15% from venture capital firms according to Center for Women's Business Research of 2004. And angel investors' social capitals, such as social networks, guidance in angel investments and co-investing chances are of vital importance as well (Freear et al., 1994).

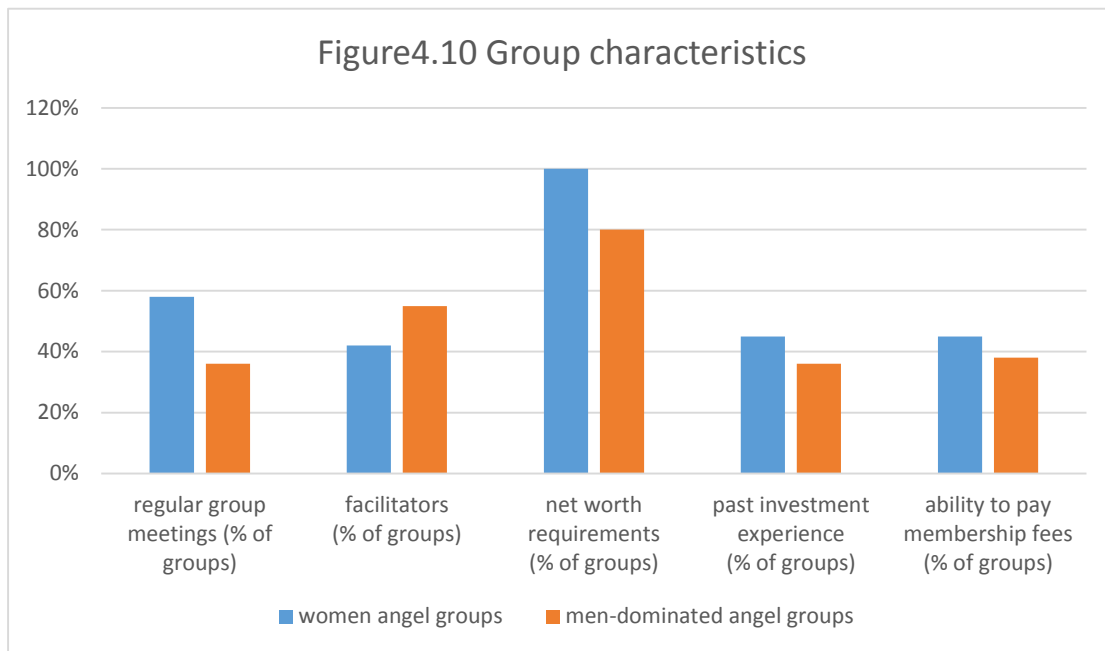
Prior studies showed that female angels are more risk averse in investment than their male counterparts (Whelan, 2001). However, angel investment is full of risk. Angel investors need to have professional business experience to reduce investment risk, particularly at the start-up process. On average, women angels have rather disadvantageous experience than men, which may lead to participation frequency differences of women and men angels (Boden & Nucci, 2000). Participation rate of women angels in angel organizations in the US between 2000 and 2005 changed from 3.0% to 7.1% (Becker-Blease & Sohl, 2007). Statistics show that participation rate of women angels is also low in other countries (Harrison & Mason, 2007), 2% in Canada (Riding et al., 1993), 3% in Norway (Reitan & Sorheim, 2000), 5% in New Zealand (Infometrics Ltd, 2004), 8% in Scotland (Paul et al., 2003) and 5% in Germany, the UK and Finland (Stedler & Peters, 2003; Lumme et al., 1998).

The research was carried out through questionnaires, which were distributed to women angel organizations in the US. The responding women angel organizations differed in organization size, geographic location and experience of their members. Meanwhile, similar questionnaires were distributed to male dominated angel organizations as a contrast (Jeffrey E. Sohl & Laura Hill, 2007).

In Figure 4.9, about structure of the angel organizations, it is obvious that women angel groups have fewer members than men-dominated angel groups on average (Jeffrey E. Sohl & Laura Hill, 2007).

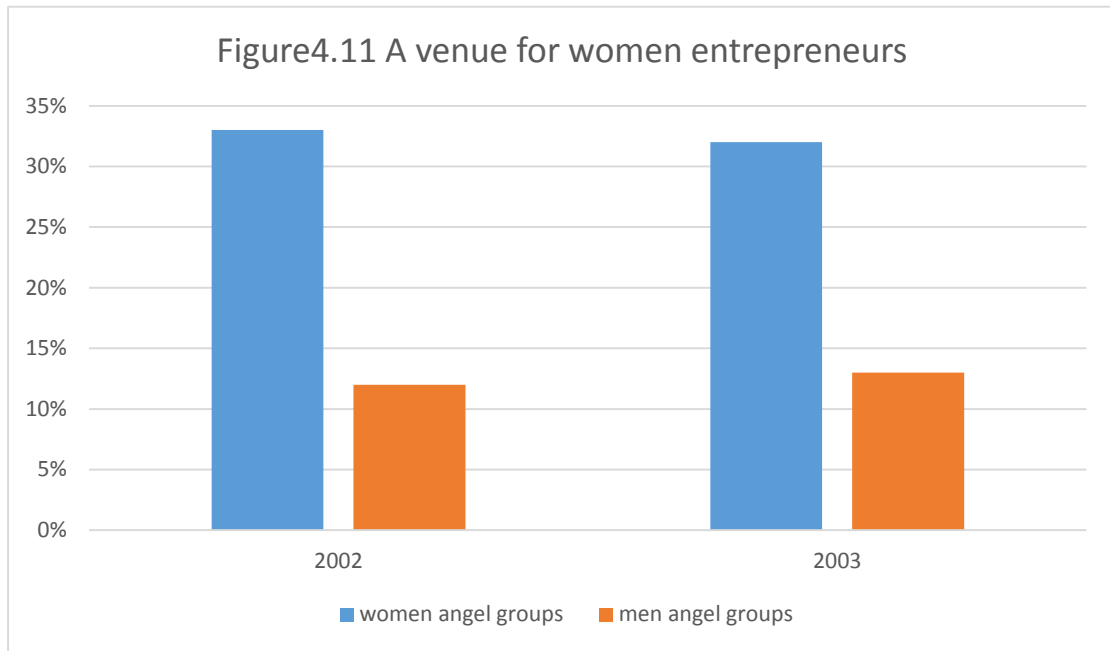


Many angel groups have requirements for their members. Figure 4.10 indicated that angel groups pay more attention to human capital such as financial condition and past investment experience of their members rather than education backgrounds. A majority of women angel groups organize educational seminars for their members or entrepreneurs, which reflects that women angel groups are trying to solve the potential problem that females do not have appropriate and enough education and experience, which discourages them from turning into good-behaved angel investors (Jeffrey E. Sohl & Laura Hill, 2007).

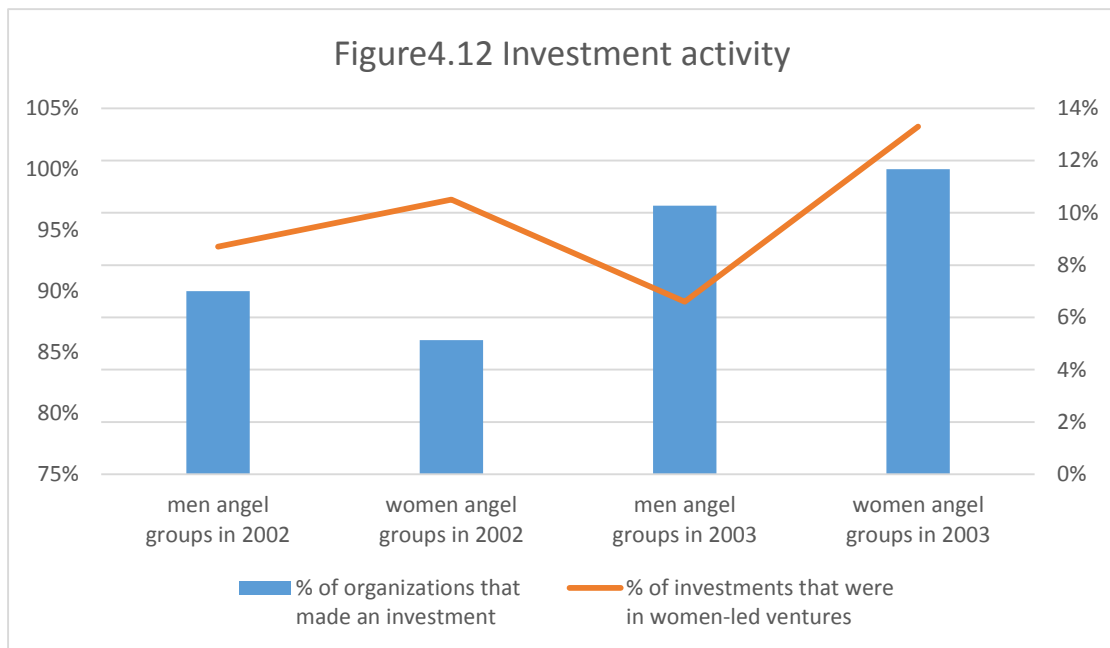


Women and men-dominated angel organizations have some little difference on the sources of investment funds. 64% of women angel organizations and 58% of men-dominated angel organizations get investment capital personally (Jeffrey E. Sohl & Laura Hill, 2007).

When coming to investment screening, most women angel groups noted that networking is their primary source to find investment opportunities. Proportion of female entrepreneurs who are searching for financial funds from women angel organizations was more than double than from men angel organizations in Figure 4.11. Women angel organizations seem to be more attractive to women entrepreneurs comparing with men angel organizations. This is consistent with the prior findings that women angel groups have advantages in social network contacting with female entrepreneurs. Women angel organizations play an important role in providing a venue for female entrepreneurs (Jeffrey E. Sohl & Laura Hill, 2007).

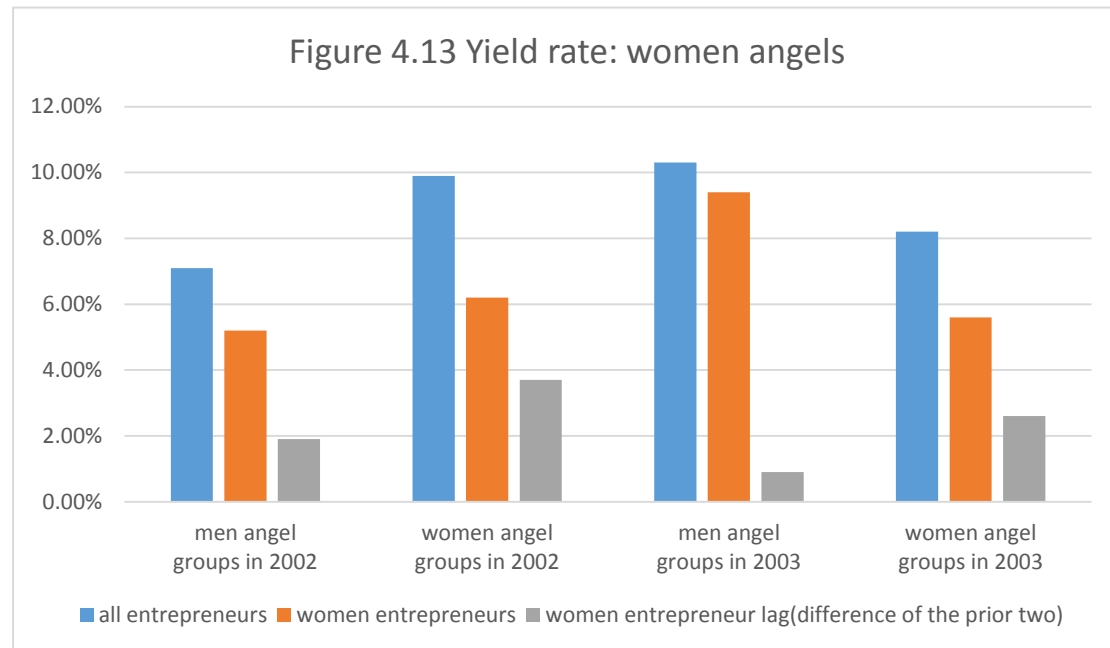


Investment activity includes the number and the percentage of women angel groups that made investments, and the proportion of investments in women-owned businesses. Figure 4.12 showed that women angel organizations are active in investment and they show a slight preference for investing in women-owned businesses comparing with men-dominated angel groups (Jeffrey E. Sohl & Laura Hill, 2007).



In Figure 4.13, the yield rate measures the possibility of realizing an investment.

Positive women entrepreneur lag means women-owned businesses are in disadvantageous position (Jeffrey E. Sohl & Laura Hill, 2007).



The positive women entrepreneur lag suggests that female entrepreneurs have more difficulties to secure angel capital than their male counterparts (Jeffrey E. Sohl & Laura Hill, 2007).

Gender differences and bias may be a reason why female angel investors are less skilled at present. Female investors count on social capital to seek chances of investment. They use co-investment strategy to gain investment experience from their social network so as to reduce risk in early stage investment. It is suggested that if women-owned businesses meet women angel investors' requirements, they are willing to help women entrepreneurs to develop their businesses. Although women angel investors may not have enough access to social networks nominated by men, they have better access to business if the firms are owned by women. Women angel organizations attract more women-owned businesses than men-dominated angel organizations. However, obstacles exist in private equity market because women lack experience in investing than their male counterparts in general. Frequency of women angel groups make investment is also less than men angel groups (Jeffrey E. Sohl & Laura Hill, 2007).

4.4 Negative effect of high proportion of women angels

John R. Becker-Blease & Jeffrey E. Sohl (2011) made a research about the influence of gender diversity on the activities of angel investment organizations. They observed a sample of 183 group in the United States collected by the Center for Venture Research, from the year 2000 to 2006. They found gender diversity is an important forecast of the activities of angel investment organizations, and the percentage of female angels in the organization has a negative nonlinear influence on investment possibility. The authors focused on the issue from situational and dispositional perspective. Situational perspective declares that women and men start with equal potential and differences are attributed to unfairness in education, employment opportunities, experience and social networks (Fischer, Reuber, & Dyke, 1993; Liou & Aldrich, 1995; Brush, 1997; Carter & Allen, 1997; Cliff, 1998). Dispositional perspective indicates that different social experiences cause women and men developing different but equally valid self-perceptions, motivations and values (John R. Becker-Blease & Jeffrey E. Sohl, 2011).

There exists evidence indicating that women and men have dispositional differences in the level of confidence, social capital and risk aversion, which will influence their propensity to invest in new ventures. Lower level of confidence is related to less willingness to invest. Fellner and Maciejovsky (2007) suggested that less risk tolerance of individuals has negative association with investing activities. It was indicated that social capital is associated with the quality and quantity of deal flow to angel investors (Brush et al., 2002; Carter et al., 2003; Harrison & Mason, 2007). Composition of angel groups can influence situational forces in the form of stereotype threat, which is the pressure people feel when facing the risk of building negative stereotypes (Inzlicht & Ben-Zeev, 2003; Steele & Aronson, 1995). Stereotypes of female in business include their lower business minds, lower risk tolerance and less willingness to compete. Statistics show that female entrepreneurs often have social networks which are constituted with disproportionate members of the same gender (Aldrich, 1989; Brush, 1997). This gender homophily tendency seems also to extend to seeking

for angel capital. Another explanation for differences in investment frequency lies in the motivation of joining in an angel organization. Although the majority of angels join in angel groups for seeking potential investment opportunities while some angels join for social purposes (John R. Becker-Blease & Jeffrey E. Sohl, 2011).

It was concluded that the higher percentage of female investors in an angel group, the lower is the percentage of proposals obtaining capitals and the lower is the percentage of angel investors making more than one investment. This again confirms the finding that female angels are less confident than male angels in general, are relatively more risk averse and have lower degree of social capital. It was suggested that the research favors a situational comparing with dispositional explanation, that is, gender differences are attributed to inequalities in education, employment opportunities, experience and social networks (John R. Becker-Blease & Jeffrey E. Sohl, 2011).

4.5 Summarization

Women entrepreneurs are more likely to seek capital funding from women investors and angels. Female investors are investors first, they show preference to invest in firms owned by women only if the firms meet their requirements and standards. Meanwhile, statistics show that women angels invest less frequently than men in private equity market. Female investors provide a significant venue for women entrepreneurs while their less activeness may be another reason why women entrepreneurs obtain small capital amount. Although women investors have relatively better access to female entrepreneurs, their less effective traditional social network may result in much loss to them.

5. Challenges women face in venture capital market

There exists evidence supporting that female entrepreneurs tend to face more challenges than their male counterparts. For example, females start their firms with fewer resources on average and limited access to business partners than men (Carter & Allen, 1997; Boden & Nucci, 2000; Bates, 2002).

It is indicated that female entrepreneurs still receive a small proportion of the whole private equity funding (Frances M. Amatucci and Ethné Swartz, 2011). Also, they obtain a small amount of the whole angel capital. It appears to be a result of female entrepreneurs seeking capital less frequently and female business angels making investment only account for a small amount. However, there is no significant gender difference with respect to the proportion of the number of deals financed to the number of proposals applied, women-owned ventures are funded at the rate of 13.33% comparing to men-owned ventures at the rate of 14.79% (John R. Becker-Blease, Jeffrey E. Sohl, 2006).

In the US private equity market, firms owned and managed by females develop at the fastest speed, however, women business owners receive rather small amount of private equity funding (Frances M. Amatucci & Jeffrey E Sohl, 2004). Venture capital investment for firms owned by females in the US still accounts a small proportion of the whole capital although more and more equity financing is available (Nancy M. Carter, Candida G. Brush, Patricia G. Greene, Elizabeth Gatewood & Myra M. Hart, 2003). The National Foundation of Women Business Owners made a research in 2001 indicating that female business owners get merely 9% of equity financing deals and the money they received was only 2.3% of all the amount. It is apparent that females have much difficulty in receiving capital funding to develop their businesses (Frances M. Amatucci & Jeffrey E Sohl, 2004).

It is noted that the general characteristics of females will have a negative influence on financial market (Aldrich, Elam & Reese, 1997; Carter & Rosa, 1998; Marlow, 2002). It was pointed out that there is evidence showing the existence of gender discrimination in finance (Carter et al., 2001). It is argued that female business owners usually have more problems when searching for bank funding than their male counterparts (Susan Marlow & Dean Patton, 2005).

The business model is designed to be performed in male standard, which gives disadvantages on women (Susan Marlow & Dean Patton, 2005). It is a general case that women are likely to be younger than men when they start their businesses and female entrepreneurs tend to run service and retail firms as a result of lower initial capital requirements (Carter et al., 2001). Women tend to suffer more from lack of capital but initial capital is of vital importance at the start-up stage of business and thus female entrepreneurs' performance is not as good as their male counterparts in general. Statistics show that males use three more times funding in start-up stage than females, which has a positive influence on sales turnover, net value of firm assets and the size of firms (Carter, 2000). Small and new firms are regarded by bank lenders to have more investment risks and therefore they are more careful about providing loans to female entrepreneurs and women are often charged higher interest rate (Susan Marlow & Dean Patton, 2005).

To eliminate bias related to gender in finance, a feminine view should be generated during the business process which highlights caring, interconnectedness and trusting relationship (Bird & Brush, 2002). Gender-related differences could be decreased by balancing the relative power of the women and men during the negotiation process (Small et al., 2007).

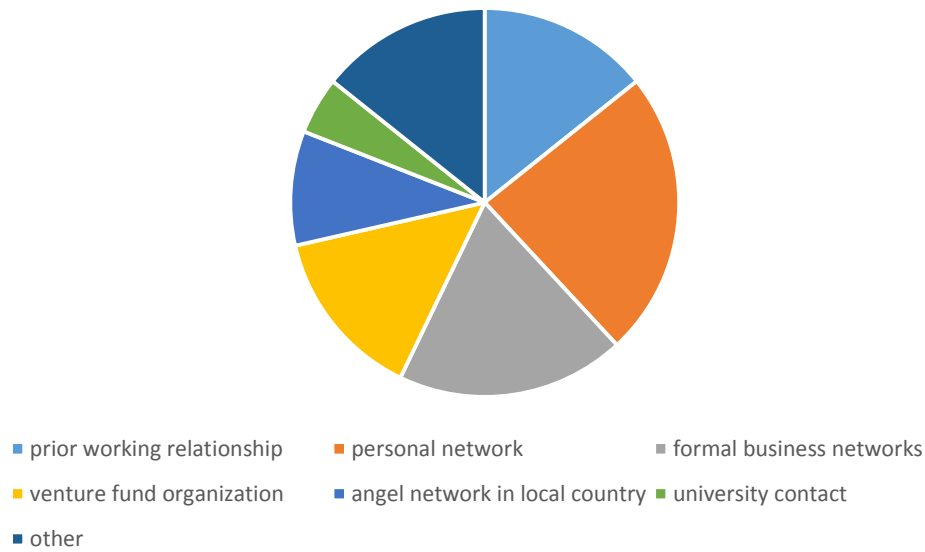
5.1 Negotiation challenges

Frances M. Amatucci & Ethné Swartz (2011) made a research about gender and negotiation strategies used during the investment stage in private equity market. Questionnaires were delivered to women who had taken part in private equity negotiation process. The survey was divided into three parts, including the pre-negotiation stage, the negotiation activity and the post-negotiation stage. Potential respondents were recognized through Springboard Enterprises, Inc and authors' own personal social networks (Frances M. Amatucci & Ethné Swartz, 2011). 12 female entrepreneurs answered the questionnaire in total. And 10 of them had participated in the negotiation stage and received private equity capital successfully. It was found that most respondents in the sample had formal marketing experiences before starting a company and many also has prior experience in R&D (Frances M. Amatucci & Ethné Swartz, 2011).

Pre-negotiation process involves most preparation work. Female entrepreneurs emphasized previous working experience would release them during private equity negotiation. This is because previous experience increases their confidence (Bandura, 1997; Gist, 1987).

The Figure 5.1 shows the range of sources of investors (Frances M. Amatucci & Ethné Swartz, 2011).

Figure5.1 Ways of meeting potential investors



Personal networks seem to be most important source to seek potential investors. When it comes to source of information about negotiating terms, data shows that approximately 75% of women entrepreneurs will choose to ask ones with prior experience. Also, Internet is a good way to help gather data (Frances M. Amatucci & Ethné Swartz, 2011).

In the process of negotiation activity, the amount of investment is of vital importance. It was showed that more than half of the women entrepreneurs in the sample receive the whole investment money while a large part of them only raise less than 50% of the amount. A common phenomenon among the entrepreneurs in the sample is that rather small number of female entrepreneurs had previous legal experience. When negotiating with male investors, almost all these women entrepreneurs felt they have negotiations equally and fairly. It is important for these respondents to build a strong relationship with the investors where they can trust each other. It is usually known that firm executives often negotiate with two venture investment organizations at the same time, and the angel investors obviously possess more power in the negotiation stage. When being asked whether they are treated fairly in negotiation process, those reflecting unfairness in negotiation considered more about status and outcomes, instead of gender

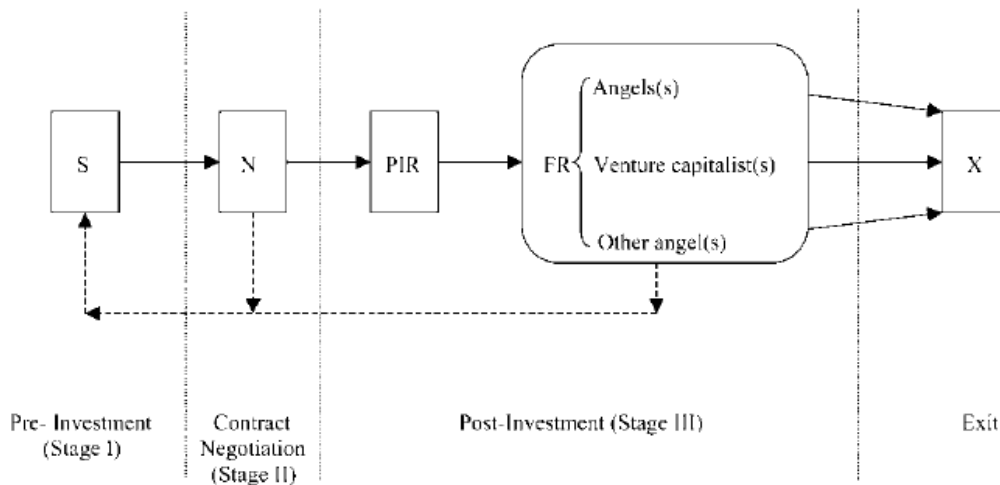
(Frances M. Amatucci & Ethné Swartz, 2011).

In post negotiation process, although there are some concerns about contract terms, most respondents were quite satisfied with the contract terms. It was implied that negotiation process is crucial to seeking capital funding during the investment. Females need to break down traditional stereotypes to gain advantageous position in negotiation process (Frances M. Amatucci & Ethné Swartz, 2011).

5.2 Challenges in investment decision process

Frances M. Amatucci & Jeffrey E Sohl (2004) researched the investment decision stage from the demand side of female entrepreneurs. Pre-investment and post-investment activities by gender are especially studied (Frances M. Amatucci & Jeffrey E Sohl, 2004). Researches on private equity investment may use various perspectives, the authors' perspective is from how can female entrepreneurs secure financial resources from angel investors (Frances M. Amatucci & Jeffrey E Sohl, 2004).

There are three stages of the process — pre-investment stage including search and screening activities, investment stage including negotiation of contract terms and post-investment. Figure 5.2 displayed these three processes from the demand side (Frances M. Amatucci & Jeffrey E Sohl, 2004).



* S - Search; N - Negotiation; PIR - Post-Investment Relationship; FR - Future Rounds; X - Exit

Figure 5.2. Private Equity Investment Decision Process from the Entrepreneur's Perspective
(Frances M. Amatucci & Jeffrey E Sohl, 2004)

Statistics were collected through telephone interviews of five female entrepreneurs. The respondents in the sample ran different businesses and had different education backgrounds (Frances M. Amatucci & Jeffrey E Sohl, 2004).

Most cases of the investment happened in the start-up stages, which is consistent with previous researches. And trust was highly important in majority of the sampling. Most respondents expressed not asking for more during the negotiation process. A majority of respondent reflected business angels always brought non-financial resources besides money in post-investment activities (Frances M. Amatucci & Jeffrey E Sohl, 2004).

The results indicated some significant problems faced by female entrepreneurs in the start-up process and in the negotiation with business angels, such as lacking knowledge to expand in the first round with positive future earnings, develop a powerful management team and deal with gender bias properly. Some useful strategies are: open, trusting and direct communication, use social networks and develop trustful relationship with angel investors. (Frances M. Amatucci & Jeffrey E Sohl, 2004).

5.3 Amount and composition of start-up capital

Ingrid Verheul & Roy Thurik (2001) made a research whether gender has an influence on amount and constitution of start-up capital, that is, proportion of equity and debt capital. They used a panel of 2000 Dutch starting entrepreneurs in 1994, including 500 female entrepreneurs and 1500 male entrepreneurs. They found that female entrepreneurs generally have a smaller amount of start-up funding comparing with men while constitution of start-up capital is the same between them (Ingrid Verheul & Roy Thurik, 2001).

A majority of entrepreneurs use their own savings to support their business when starting their own firms. Usually, they don't have enough equity to finance their firms when starting up a business, and meanwhile debt capital is difficult to obtain. Banks are often unwilling to provide capital to small firms due to low predicted profit returns, high risks and asymmetrical information (EIM, 1998). Previous studies noted that the size of starting businesses owned by women is usually smaller than their male counterparts (Carter and Rosa, 1998; OECD, 1998; Stigter, 1999). This may be explained by a smaller amount of equity capital owned by female entrepreneurs on average partly due to lower wage payments and discontinuities of their previous jobs. Also, women often run businesses demanding low capital, such as the service industry. These industries are of high mobility, leading to banks more reluctant to lend money to female entrepreneurs. 'Restricted Pecking Order Theory' (Holmes and Kent, 1991) suggests that small firms are usually not capable to issue shares and the owners also want to control and lead their firms. As a result, small ventures tend not to use external equity. In addition, male entrepreneurs are more likely to have better access to debt funding, for example, banks and financial investment organizations (OECD, 1998).

Regarding to experience and education, male entrepreneurs tend to have a technical education background while female entrepreneurs usually have training backgrounds of administration, economic, etc. In addition, female entrepreneurs generally are more

professional in services sector than their male counterparts (Van Uxem and Bais, 1996). On contrast, male entrepreneurs are likely to have more working experience and usually have relevant former experience before starting their business (Van Uxem and Bais, 1996; Welsch and Young, 1982). Male entrepreneurs tend to work full-time in their businesses while female entrepreneurs usually work part-time, nearly half is due to household activities. Male entrepreneurs work part-time in their own firms is often due to having another business or employment (Stigter, 1999), only a small proportion are because of household activities.

Aldrich (1989) noted that female entrepreneurs are more likely to have smaller social networks mainly consisting of women. Male entrepreneurs spend more time expanding and maintaining their networks (Cromie and Birley, 1990). It should be noted that members of formal as well as informal networks are not always willing to accept female members (Ingrid Verheul & Roy Thurik, 2001).

Female entrepreneurs are more active in retail and service industry, especially in personal services (OECD, 1998). Male entrepreneurs are contrarily more active in manufacturing, wholesale and financial services industry (Van Uxem and Bais, 1996). In general, female entrepreneurs have smaller business size than their male counterparts. Firm growth is the main business target for male entrepreneurs while it is only a secondary target for women business owners (Van Uxem and Bais, 1996).

It was concluded that female entrepreneurs tend to work part-time and run in the service industry. They spend less time on networking, have less management experience on finance and are more risk averse. Women entrepreneurs usually have a smaller amount of start-up funding, which may be on account of lacking confidence in their personal capabilities of running businesses. Also, female entrepreneurs have lower percentage of equity capital and higher percentage of loans, and this is may result from their less personal ownings. It can be concluded that gender does have an impact on the amount and the constitution of financial capital (Ingrid Verheul & Roy Thurik, 2001).

5.4 Summarization

Female entrepreneurs receive only a small proportion of venture capital in total. Women are usually younger and their firms are generally smaller than men when they start their own businesses. Thus females have to face the bias of lacking experience in negotiation process and it is more difficult for them to receive bank loans. Women spend less time networking and their social network is less effective comparing with men. It becomes a greater challenge for female entrepreneurs to seek, approach and convince investors of the value of their firms from their limited social network. Also, in the venture capital market currently dominated by men, sometimes people tend to view female entrepreneurs as women first, then as individuals. And females have to behave following male norms. Women have to increase their financial competencies to survive in the market.

6. Conclusion

Female and male entrepreneurs differ in actual business practices despite they share many characters in common. Access to capital is of vital importance for all firms. Ventures cannot launch new products and service or expand its size without sufficient capital. It is supported by many researches that education and prior experience, social capital, as well as firm size and sector have influences on women entrepreneurs' obtaining venture capitals to different degrees.

To help understand previous literature better and more straightforward, summarizing table is drawn as follows.

6.1 Summarizing table

The summarizing table is divided into 4 streams:

Stream (i) Gender differences in access to capital

Stream (ii) Determinants of female entrepreneurs' financial decisions

Stream (iii) Gender differences in supply of capital

Stream (iv) Challenges women face in private equity market

Stream	Authors	Article	Research question	Data	Research method	Findings
i	John R. Becker-Blease & Jeffrey E. Sohl	Do women-owned businesses have equal access to angel capital? 2006. Journal of Business Venturing, 22(2007), 503–521.	Do women-owned businesses have equal access to angel capital than men?	Data of angel investing organizations recognized by The Center for Venture Research from 2000 to 2004: 47 organizations in 2001, 47 organizations in 2001, 45 organizations in 2002, 36 organizations in 2003, 33 organizations in 2004	Chi-square test of 1. Equality of the percentage of proposals submitted by men- (women-) owned businesses that receive capital. 2. Homophily in seeking angel capital.	Women and men have equal access to obtain investment. Women receive only a small proportion of total investment because they seek angel capital at a lower frequency than men. Female entrepreneurs tend to seek funding from women angels.
i	Susan Marlow & Dean Patton	All Credit to Men? Entrepreneurship , Finance, and Gender. 2005. Entrepreneurship : Theory and Practice, 29(6), 717–735.	Are female entrepreneurs starting their own businesses disadvantaged due to their gender?	Literature examples of accessing venture capital and angel capital.	Theoretical and literature analysis.	Women experience more challenges in obtaining venture capital than men, which is likely to lead females to running businesses in sectors of poor performance. Then the negative image of female entrepreneurs is strengthened and goes into vicious circle.
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.	What's the difference between women-owned and men-owned small businesses in access to debt capital?	2318 small firms with fewer than 500 employees from the National Survey of Small Business Finances in 1993.	Chi-square test of differences between males and females in the use of loans. Logistic regression analysis of the use of different loans and firm characteristics. Dependent variable: (1) lines of credit; (2) financial leases; (3) commercial mortgages; (4) motor vehicle loans; (5) equipment loans; (6) other loans.	Women-owned firms are usually newer and smaller and they tend not to use external capital as a source of financing. Larger ventures tend to use external capital. Loan providers do not have discrimination on gender about access to capital. Female entrepreneurs get funding with less favorable terms than men--higher interest rates and higher collateral requirements.

Stream	Authors	Article	Research question	Data	Research method	Findings
i	Muriel Orhan	Women Business Owners in France: The Issue of Financing Discrimination. 2001. Journal of Small Business Management, 39(1), 95-102.	Does gender discrimination exist in financial market?	562 men entrepreneurs dating from 1994 and 403 women entrepreneurs from 1997 chosen randomly from national statistics provided by Institut National de la Statistique et des Etudes Econotniques.	Descriptive statistics on questionnaire responses.	The only found discrimination against female was a higher collateral demand in access to finance. In most cases, gender discrimination was due to communication problems. Another obstacle for female entrepreneurs is obviously lacking financial competencies.
i	Barbara J. Orser, Allan L. Riding & Kathryn Manley	Women Entrepreneurs and Financial Capital. 2006. Entrepreneurship : Theory and Practice, 30(5), 643-665.	What are the gender-related differences among Canadian SMEs owners seeking external financing?	Dataset of 2,844 firms in total, consisting of 2,357 firms owned by men and 487 firms owned by women, collected by Statistics Canada.	t-test of 1. Rates of seeking funding by gender. 2. Turndown rates of financing. Logistic regression analysis. Dependent variable: application rate for equity capital.	Male and female business owners have equal chance to obtain capital. Businesses owned by women are significantly less likely to seek external capital, partly due to smaller firm size and sector. And there is no evidence showing significant gender differences in turndown rates of applications for loans and business angel financing.
i	Candida G. Brush, Nancy M. Carter, Patricia G. Greene, Myra M. Hart & Elizabeth Gatewood	The role of social capital and gender in linking financial suppliers and entrepreneurial firms: a framework for future research. 2002. Venture Capital, 4(4), 305 – 323.	What's the role women play in supply and demand of equity capital?	Dataset of venture capital investors in a project of the Kauffman Center for Entrepreneurial Leadership for the demand side.	Chi-square analysis of businesses obtaining venture capital by gender and stage.	From the perspective of demand, the percentage of female entrepreneurs obtaining financial capital is not proportional to females running their own firms. The largest proportion of funding is invested in early stage for both women-owned and men-owned businesses.

Stream	Authors	Article	Research question	Data	Research method	Findings
ii	Jiekun Huang & Darren J.Kisgen	Gender and corporate finance: Are male executives over confident relative to female executives? 2013. Journal of Financial Economics, 108, 822–839.	What are the differences of corporate financial and investment decisions made by female and male executives?	116 companies with female executive on the ExecuComp database and NYSE-, Amex- or Nasdaq-listed firm in Compustat from 1993 to 2005.	Difference-in-differences regression. Dependent variable: asset growth, acquisitions and capital structure decisions. 2SLS regressions. Dependent variable: announcement returns of acquisition.	Women executives tend to make less acquisitions and issue less debt than male executives. Usually, investors show more favor to important corporate financing decisions made by women executives. Female executives are more risk averse comparing with male. Male executives are overconfident in making important corporate decisions than females.
ii	Deborah A. Small, Michele Gelfand, Linda Babcock & Hilary Gettman	Who goes to the bargaining table? The influence of gender and framing on the initiation of negotiation. 2007. Journal of Personality and Social Psychology, 93(4), 600–613.	What's the difference on the initiation of negotiation by female and male entrepreneurs ?	Participants were asked to exchange for cash payment between \$3 and \$10 in a game, aging from 18 to 56 years old.	Logit Model. Dependent variable: whether participants asked for more money, 1 if participants negotiated for more money and as 0 if they did not.	Gender differences exist in the initiation of negotiation. Cuing to negotiating about compensation raised the rate of initiation of negotiations. Females have a more negative view of negotiating comparing with males because of their different characteristics. When women are confident about power possession in the situation, they will be more willing to initiating negotiation.
ii	Nancy M. Carter, Candida G. Brush, Patricia G. Greene, Elizabeth Gatewood & Myra M. Hart	Women entrepreneurs who break through to equity financing: the influence of human, social and financial capital. 2003. Venture Capital, 5(1), 1 – 28.	Are higher degrees of human and social capital related to financial strategies female entrepreneurs use to secure equity capital?	235 US female entrepreneurs identified by the National Foundation for Women Business Owners in 2000.	Logistic regression analysis. Dependent variable: possibility of women using financing strategies.	Human capital: higher education degree increases the possibility of female entrepreneurs using equity capital to fund their firms. Previous experience nearly has no impact on equity capital use. Social capital: no direct influence on using equity capital or loans. The wider of the social network, the less possible will entrepreneurs use individual savings.

Stream	Authors	Article	Research question	Data	Research method	Findings
iii	Jeffrey E. Sohl & Laura Hill	Women Business Angels: Insights from Angel Groups. 2007. Venture Capital, 9(3), 207-222.	Are female angels more likely to invest in women entrepreneurs ?	11 angel organizations consisting of more than 25% female members in the US, including 236 female investors in 2002 and 292 female investors in 2003.	Descriptive statistics on questionnaire responses.	Women angel groups are willing to provide support to female entrepreneurs if the entrepreneurs meet their requirements. Female angel organizations attract more women-owned businesses than men-dominated angel organizations. Female angel groups make less frequent investment than men angel groups.
iii	Richard T Harrison & Colin M Mason	Does Gender Matter? Women Business Angels and the Supply of Entrepreneurial Finance in the United Kingdom. 2005. Entrepreneurship : Theory and Practice, 31(3), 445 – 472.	What's the role women play in the business angel market? Will gender affect angel investing activities?	21 women and 19 men investors from business angel networks.	Descriptive statistics on questionnaire responses.	Gender is not a main factor affecting the supply of angel capitals. Women business angels only have limited differences comparing with men. Female angel investors tend slightly to invest in firms owned by women despite more money is invested to men-owned businesses.
iii	Candida G. Brush, Nancy M. Carter, Patricia G. Greene, Myra M. Hart & Elizabeth Gatewood	The role of social capital and gender in linking financial suppliers and entrepreneurial firms: a framework for future research. 2002. Venture Capital, 4(4), 305 – 323.	What's the role women play in supply and demand of equity capital?	Dataset of Pratt's Guide to Venture Capital between 1995 and 2000 for the supply side.	Descriptive statistics analysis of dataset.	From the supply perspective, only a small proportion of females participates in capital investing activities. Women entrepreneurs searching for equity capital and venture capitalists searching for investments are disconnected to some degree.

Stream	Authors	Article	Research question	Data	Research method	Findings
iv	Frances M. Amatuucci & Jeffrey E Sohl	Women entrepreneurs securing business angel financing: tales from the field. 2004. Venture Capital, 6(2/3), 181-196.	What's the challenge female entrepreneurs face when seeking capital during investment process and is there any effective strategy can be applied?	5 female entrepreneurs who owned high growth businesses, secured angel capital and their firms developed beyond the start-up stage.	Descriptive statistics on interview responses.	Challenges: lacking knowledge to expand in the first round with positive future earnings, develop a powerful management team, and deal with gender bias properly. Useful strategies: open, trusting and direct communication, proper use of social networks, develop trustful relationship with capital investors.
iv	Ingrid Verheul & Roy Thurik	Start-Up Capital: 'Does Gender Matter?' 2001. Small Business Economics, 16 (4), 329-346.	Whether gender has an influence on amount and composition of start-up capital and in what way?	2000 Dutch starting entrepreneurs in 1994, including 500 female entrepreneurs and 1500 male entrepreneurs.	Linear regression analysis. Dependent variable: 1. Total amount of start-up capital; 2. Percentage of equity in total start-up capital 3. Percentage of bank loans in total start-up capital.	Women business owners have a smaller amount of start-up capital, which may be on account of lacking confidence in their personal capabilities of running businesses. Composition of start-up capital (proportion of equity and debt capital) is similar between women and men.
iv	Frances M. Amatuucci & Ethné Swartz	Through a fractured lens: women entrepreneurs and the private equity negotiation process. 2011. Journal of Developmental Entrepreneurship , 16(3), 333–350.	Whether any gender-related differences may exist for female entrepreneurs in the negotiation process during private equity investment?	12 female entrepreneurs who had prior experience in negotiation for private equity in Springboard Enterprises, Inc and from authors' own personal networks	Descriptive statistics on questionnaire responses.	Female entrepreneurs face more challenges of different degrees in negotiating access to private equity. Females need to break down traditional stereotypes to gain advantageous position in negotiation process.

6.2 Research findings and discussions

Plenty of studies have indicated that female and male entrepreneurs all get quite good level of education. Women are more likely to have education background in administration and economic while men tend to have technical training experience. It should be noted that prior experience is more valued than education in many cases, this does not mean education is not important at all. In fact, higher level of education increases the possibility of obtaining financial capital. Unfortunately, financial and managerial experience is what women lack and female prior experience is usually about administration and sales, which may not be of much help.

Social networks provide a channel to exchange information and resources which may have an influence on obtaining new capital. Social networks can promote efficient access to capital funding. Work of women sometimes show non-continuous tendency due to pregnancy and taking care of the family. Women exit labor market at a relatively higher rate and the duration of work is shorter comparing with men. They spend less time networking and they don't have enough access to traditional network. Female don't have effective social networks as their male counterparts. This is one of the explanations why women account a small proportion of venture capital.

When women run their own businesses, they are more likely to start in the service or retail industry. And the size of firms are relatively small comparing with men. Firms in these industry usually needs a small amount of start-up capital, which decreases the odds of women seeking external capital. And the lower frequency of seeking funding is an important factor that women business owners receive less venture capital. Also, banks are often reluctant to provide capital to smaller and newer firms, thus women usually have to suffer higher interest rates or collateral requirements. Investors have to make decisions rationally and this is not simple gender discrimination, it is the result of minimizing cost and maximizing profit.

Proportion of female investors is also small as female entrepreneurs. According to recent studies in Babson College, proportion of women in venture capital industry presents a decreasing tendency, from 10% in 1999 to 6% in 2014. One explanation for lack of gender diversity in venture capital industry is, females with science, technology, engineering and mathematics (STEM) education background are fewer than men. In addition, women usually lack adventurous spirit. Therefore women are less likely to make venture capital investing. Although a large proportion of money is invested to men-owned businesses by both female and male investing organizations, statistics showed that venture capital organizations with female members have a higher possibility of investing in women-owned businesses than men-dominated investing organizations. Female investors seem to have better access to women business owners, and female entrepreneurs are more likely to seek financial funding from women angels. However, women investors are not as active as male angels, which would decrease the amount of financial capital women entrepreneurs received as well. In addition, social networks of females are not as effective as males, otherwise female investors could have contacted and invested in more women-owned firms.

Although women and men have equal access to financial capital, it does not mean gender gap don't exist. It is possible for some entrepreneurs and investors to regard women as granted stereotype, not to view them as individuals. Venture capital investment is decision-related work, unconscious bias will influence the investment activities. Females in venture capital market tend to be cautious and risk averse, which does not mean capabilities of women are worse than men. Characteristics of women and men are differentiated and complementary. Researches by Catherine C. Eckel and Sascha Füllbrunn (2015) suggest that men-dominated financial market is easier to generate speculative price bubbles while women-dominated market is healthier and more stable. In special period of financial crisis, female executives can help survive in the crisis. High proportion of female executives can prevent over-investment and better for business management.

Researches also show that women are not active in negotiation process. Female entrepreneurs have to be more active to show the value and uniqueness of their firms to survive in the financial market. Female entrepreneurs would create a more effective brand if they could find partners providing sufficient financial capital. Women have to show more self-confidence and expand their social networks to gain competencies in the competitive world.

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