Leadership and education of women entrepreneurs: A Qualitative Research in Chinese Agricultural service industry

Sang Li*

School of Economics and Management, Tsinghua University, Beijing, China

*Corresponding author: grace_li1@sloan.mit.edu

Abstract. With the development of globalization, more and more women entrepreneurs are standing out in the Chinese agricultural service industry. Their leadership is related firmly to their leadership. This paper provides the evaluation of influence of gender inequalities in education on women entrepreneurship leadership in selected Chinese women entrepreneurs in agriculture empirically. Six women entrepreneurs with different educational backgrounds from the Chinese agricultural service industry were investigated separately. The findings of this study show three main important facts. First, six women entrepreneurs have attended advanced education after working. These advanced courses have provided great help to their entrepreneurship. Second, six women entrepreneurs practice unique female leadership when they manage the company. Third, three of them had difficulties in early education at an early age because of family factors. Two of them feel that when they make a choice, their individual choice and needs must be in the second place to their family duties. One of them dropped out of primary school because her family is poor, and the chance of study was provided to her brothers. From a very young age, girls are treated with an unequal share of study opportunities between boys and girls, they are being reported to keep their balance between education and family domestic work within suburban China. Overall, the findings suggest that the higher education women entrepreneurs get, the stronger leadership they have.

Keywords: women entrepreneurs, gender inequality in education, women leadership.

1. Introduction

In recent years, the rising trend in women's participation in the agricultural service industry tends to associate with a rising in women entrepreneurial activities in China. Although this rising, women entrepreneurs are lagging behind men in entrepreneurial activities [1]. More and more women entrepreneurs are involving this industry. According to the 2018 Hurun Women Entrepreneurs List, Chinese women entrepreneurs account for 28.7% of the total global-wide women entrepreneurs, ranked as the highest in 20 years. In addition, Chinese women entrepreneurs make up 60% of the most successful global women entrepreneurs. Among these entrepreneurs, 4 of 5 top women entrepreneurs are from China [2]. In Hurun Richest, the list of Self-Made Women in the World 2020, China accounted for 61 % (61) of the world's self-made billion-dollar women entrepreneurs. The United States was ranked second with 19 women entrepreneurs listed [3]. According to Huren Richest Self-Made Women in the World 2021, China has two-thirds of the most successful women entrepreneurs in the world with 85 nominators on the list, which is more than three times the number of the second place, the United States, with 25 nominators on the list [4].

With the emergence of more and more women entrepreneurs in the world, there are more and more studies that study how women entrepreneurs succeed, what problems they encountered and how they show leadership. Some of the major issues the female entrepreneurs encountered identified are gender inequality, problems of finance, women's family obligations, low risk-taking attitude, and the competitions between male and female [5]. The variables such as skills and knowledge have influenced the success factors in entrepreneurship [6]. In organizational performance, women employ collaboratively to let work teams trust them. Their leadership style yields a lot of progress to enhance outcomes [7]. Female entrepreneurs play a significant role arguably in the Chinese economy to create wealth and new jobs. Although they are important, less ink is spilled on them thus little information is available in the international books about their emergence, motivation, or performance [8]. In general, the world needs to know more about women entrepreneurs' journey of performance. Since

women entrepreneurs present little in the global columns of entrepreneurs, women especially are one group understudied in the world [9].

China is a big agricultural country. The list of cultivated land areas in the world shows that China's total cultivated land ranks fourth in the world [10]. For this reason, it is obvious that there are a great number of vacancy positions in agriculture, so this field require different talents to contribute to this area. Women entrepreneurs are one of the most important human capitals. There is a large population of farmers in China. It is especially important for women entrepreneurs to join agriculture. Some of them have done very well. Most of the women entrepreneurs in agricultural service are successful, however, it is not clear what elements promote their success. There is literature that shows it is also found that the development of enterprises is closely related to the education level of women. Also, a few findings from previous studies illustrate specific programs of entrepreneurship education play a key role for these programs educate participants to become entrepreneurs and support their subsequent success in entrepreneurial process [11]. There is a closely connection between entrepreneurs' level of education with business success and business experience. Entrepreneurs with higher levels of education are likely to be more successful because they are provided higher education and up- to- date managerial skills which make them feel more consciously the reality of the business world and hence they can use what they learn to manage business [12]. To explore how education level influences women entrepreneurs' success, this paper aims to use the qualitative method to figure out the relationship between the level of education and the leadership applied by female entrepreneurs in the agricultural service industry.

This paper purposes to investigate and interview six women entrepreneurs in the agricultural service industry in China to evaluate how education hinders or supports their success. The result of this paper will help the public to get a fuller picture of understanding women entrepreneurs in this field.

2. Method

2.1 Research Objectives and Framework

Because women are given the higher systemic barriers to entrepreneurship and education, a Human Centered Design approach is taken in this research to seek to understand and analyze how women's leadership and ability for entrepreneurship are shaped by their education [13]. This method draws a broader framework and situates entrepreneurship, women's agency and empowerment within it to evaluate various relevant influential factors [13]. The research tries to identify these factors in terms of relational, individual, educational and leadership domains that shape women's capacity and agency for entrepreneurship. Specifically, the research was devised with the following aims:

First, this study aims to draw a map of the journey of women entrepreneurs from the start of business to the present business. The analysis will divide the entire journey into several stages to know the enablers and obstacles at different times.

Second, this study aims to list high-potential interventions related to their educational background that can plan a transformation of the ecosystems around female entrepreneurs, solve gender-related obstacles and improve women's leadership.

2.2 The reason of taking an Ecosystem and Human Centered Method:

Understanding gender inequality in education and women entrepreneurs' leadership needs to shift from analyzing individual women entrepreneur isolated to seeing how educational background interacts with women leadership and shape the general dynamics. Thus, this research adopts a Human Centered Design method to understand women entrepreneurs in a multidimensional viewing angle through their entrepreneurial process [13].

The research provides an application for a gender lens to a variety of leadership and ecosystems around women entrepreneurs. It aims to analyze how different educational backgrounds shape the

process of entrepreneurship for women. This uncovers the interactions between elements across levels of the business, the home, the degree of education, the leadership and beyond.

Several key questions in this study included:

1. What is your highest academic diploma? In your early education, have you been influenced by any external factors that cause difficulty? If so, do you think inequality in education resources has influenced your capacity or limited the development of your business? Please explain.

2. In the process of management of your business, do you think your education level limited the development of your business? If so, please explain.

3. Have you ever engaged in advanced courses? If so, what are they? Are they helpful for the management and development of your business? In the operational management process of your business, what innovation and revolution have you used? What do you think of this idea? Is it related to your advanced courses?

4. As a women entrepreneur, how do you manage your employees? Do you use different ways for different gender? What is the biggest challenge you have ever met?

2.3 Research Locations

Given the high regional variation between the south and the east of China in the agriculture service industry, the research takes the northeast, the capital city and the south of China as its area of focus to make sure the findings have sufficient robustness and internal validity. However, the findings are of broader significance to China and beyond.

2.3.1 Beijing

Beijing is the capital city of China; it has a more developed economy than other areas in China. So the research was conducted in Beijing. Selecting the locations is for diversified economic, socio-cultural and gender equality in education contexts.

2.3.2 Northeast

The research was conducted in Liao Ning province and Heilongjiang province, which both belong to the northeast of China. These two provinces in the northeast of China are famous for rice planting.

2.3.3 South

With the policy of reform in China, the economy in the south of China develops rapidly. The research was conducted in Nanjing city, the capital city of Jiangsu province that lies in the south of China.

2.4 Research methodology

This study focuses on female entrepreneurship in Chinese agricultural service industry. The research followed a mixed approach in-depth interviews with women entrepreneurs aged 30-60.. The whole interviews were completed via an online platform and each of the six women entrepreneurs was interviewed one by one for 45 minutes to one hour. Each of them dug deep to answer 30 questions. The purpose of this research is to analyze the link between education and women entrepreneurs' leadership in Chinese agricultural service industry, examining the factors that demonstrate a set of specific environmental framework conditions, such as entrepreneurial education and training or coaching. Thus, a set of interviews with 30 questions was conducted, seeking to contrast the barriers commonly cited in the literature with the leadership for female entrepreneurship. The interview was grouped into four blocks: profile of agricultural companies founded by females, main characteristics of women entrepreneurs and their companies, the motivations for entrepreneurship, the leadership skills while possessing a team spirit, and main barriers, challenges and needs.

2.4.1 In-depth interviews

The ages of six interviewees are from 37 years old to 58 years old. Two of them are separately 56 years old and 58. Three of them are between 41 to 48 years old. All of them are the founders of a

company. The number of employees in their companies is from 10 to 400. Four of them have 65 to 100 employees. One of their company's sales is 300 million RMB every year, one is 100 million RMB every year, the other four of them are below 1 million RMB every year. The history of their company is from 9 years to 24 years which is separately 9,10,11,12,20,24 years. Five of them have attached bachelor's degrees and one of them has owned a master's degree. Three of them attended advanced courses and got bachelor's degrees after they worked.

The research was supplemented by interviews with women entrepreneurs among the agricultural service industry in the south, the northeast, and the capital city of China. Questions were asked through a line of inquiry as follows:

1. Key barriers to women entrepreneurs' leadership and education and how these barriers manifest when they manage the company.
2. Role of education ecosystem, family factors, and socio-cultural factors in shaping women entrepreneurs' education
3. How different educational backgrounds influence women's leadership for entrepreneurship
4. Key enablers and recommendations for interfering-strategies

These interviews were carried out with 6 women entrepreneurs in the agricultural service industry who have run their businesses from 9 to 24 years. These interviews displayed standpoints from a deeper angle on access to management of the company, leadership, communication with employees, and resources to exercise abilities.

3. Results

3.1 Several common characteristics were revealed from the response to the interview:

3.1.1 Similarity 1:

Women entrepreneurs in the agricultural service industry attributed their success to their own perseverance in agriculture and attached importance to the effect of external factors beyond their control. Six of the interviewees indicated they could insist on being engaged in agriculture for years since they began to work. The longest time of working experience in this industry is 24 years, the shortest one is 9 years. Five of them have been working in this field for over 10 years. They indicated it is very important to keep on working in the same industry and if only setting up a goal, it is easier to be successful to move toward the aim. Six of the interviewees reported that the rapid development of the business depends on the effectiveness of macro-policies to the national agriculture from the government, which cannot be controlled by themselves. If the authority takes agriculture seriously, it is less difficult to move the business forward. Two of them expressed high technological agriculture skills and innovation have achieved a dominant position during the pioneering of enterprises. One of the interviewees emphasized opening the high-tech industrial chain and establishing a circular economy is the latest mode for developing the economy and achieving harmoniousness among resources and environments.

3.1.2 Similarity 2:

Women entrepreneurs claimed that their personal education and choices have to come second to family duties and highlighted stereotypes for gender inequality in education. From a young age, girls reported being expected to keep a balance of their choice in education and ambitions with an inequal share of family duties. Among the six interviewees, three claimed that their early education were limited by external factors. Family factors, social norms, and gender inequality have affected their education. The three interviewees used to live in suburban China, where the stereotype of gender inequality existed widely. One of them had to drop out of primary school when she was at young age because the family was so poor that parents gave the opportunity for education to her brothers while she was required to stay at home and help the family do household chores and farm work. She is the one who is most eager to learn among the six interviewees later. Two of them had to give up their needs and choose a major they do not like because of family's intervention. Interviewee A gave up

her favorite art major and had to follow the hope of her family to work in the medical industry. Interviewee B had to choose a technical school which was not her favorite high school because the family was so poor after her mother died when she was two years old and the whole family could not afford her tuition while her brother could keep on studying. In the area she lived, there was a traditional stereotype that shows a marked preference for sons over daughters.

3.1.3 Similarity 3:

While education is essential in entrepreneurship, interviewees did not think the founder's educational background plays a key role when they started the business. They are viewed as inadequate in their first record of formal schooling. After they set up the company, interviewees all had attended various advanced courses in developing entrepreneurial skills and professional skills, such as the executive masters of business administration. These helpful advanced courses are further compounded for their business when there is a demand to reform, revolutionize and innovate.

In the interview, six women expressed their first degree of formal schooling would not have a negative effect on the start of their business. All of them had attended all kinds of advanced management courses such as Master of Business Administration and professional high-tech agricultural skills which are related to entrepreneurship. There are two types of courses for their further study, one is about business management, the other is about professional agriculture knowledge and innovation. Two of them think practice and working experience are more important when the company grows up, in their opinion, their educational background does not limit the growth of the company because they continued to learn. Four interviewees think their educational background limited the growth of companies thus they keep on learning so that they can meet the needs of the development of business. Five women entrepreneurs were selected and participated in Goldman Sachs 10000 global excellent women entrepreneurs' program which help female entrepreneurs manage businesses. All of them have attended the management training courses in the top universities of China such as Peking university and Tsinghua university. These courses gave a lot of help for their entrepreneurship and five of them gain knowledge related to agricultural technical innovation and one of them gains information about products positioning and accurate target customer group positioning. One of them used 5G new agricultural technology first to plant strawberries in Beijing from 2009 and made an innovation.

3.1.4 Similarity 4:

Unique women leadership, adequate access to understand employees, and attentive communication on time-underpinned by continuous advanced training are the most remarkable factors that women face in growing business. In the management process, all the six women entrepreneurs reported to use women-unique leadership styles to communicate with employees prudentially.

In the process of management of businesses, six interviewees explained they took advantage of women's delicate features to gain insight into the mindset of employees timely. Thus, they can communicate with the employees in time when they counter the problems to enhance team cohesion. Five interviewees set up a fixed plan to communicate with employees face to face every month one by one; with this method, team spirit has been attached much importance to. As most of the employees are farmers who are fit for this style of communication, they are willing to follow the team to service for the company. At the same time, this repeated communication is also supervision for the employees, which is beneficial to improve work efficiency. When they get higher education every time, they can make better use of this women unique leadership.

3.2 Apart from several similarities shown in the interviewees' responses, a few differences were presented as well:

3.2.1 Difference 1:

The higher level of education employers gets, the more effective way the employers can use to analyze and solve problems, and the more the chances of innovation they can get. Conversely, the

employers with an insufficient level of education prefer existing working modes with low flexibility to innovation.

The one who owned the highest education qualification among them, with a bachelor's degree, used the latest technology and make an innovation to change traditional agriculture into new agriculture as well as the annual sales of her company reached 300 million RMB in 2021. Before the pandemic, the annual sales were about trebled at the 2021 level. The one who has the lowest level of education among the six interviewees has the longest working experience, 24 years, her annual sales of the company are the lowest among them. She prefers using traditional ways such as writing a lot to modern methods such as big data to analyze the problems when cooperating with the company.

4. Discussion

4.1 Result overview

From the result, there are four similarities and a difference which shows the relationship between education and women's leadership and the barriers the women encountered for entrepreneurship. In similarity 1, female entrepreneurs felt powerless for the policies to their companies. The government should pay more attention to women entrepreneurs involved in this arduous industry. This is not the only phenomenon happened in China. In Asian developing countries, many problems faced by women stop them from detecting their full potential as entrepreneurs. In Bangladesh, plenty of women's businesses are running informally, and they are not recognized in the country's economy [13].

In similarity 2, gender inequality in education referred to is a big barrier for women entrepreneurs. It is not unique for such disparity to the six women entrepreneurs; around the world, in almost all countries, such a phenomenon persists. Across the Pacific and Asia, gender inequalities keep on constraining women even girls and preventing them from realizing their full potential and their rights [1]. Importantly, in women's adulthood barriers to female's empowerment do not suddenly jump out. At the age of seven, girls and boys are affected by gender socialization. The girls' dreams, the traits which they are encouraged to display, and the choices of access to education and opportunities are all depended on gender norms. Gender equality is essential to human rights; for inclusive growth it is, no doubt, also one of the firmest driving forces for inclusive growth. Currently, women and girls are impacted disproportionately by the COVID-19 pandemic. Inversely, it is expected to take action right now and thereby enhance gender equality to recover, and global GDP would add US$13 trillion by 2030 [14].

In similarities 3 and 4, there is a close link between education and women's leadership. When women entrepreneurs get higher education, they can optimize women leadership better which helps them solve problems and manage the companies for entrepreneurship. The result shows that in the most eloquent and lived way that continuous education is especially important for starting a business. Educational practices and policies do not go in any one unidimensional direction [15]. Thus, it is better to provide a series of learning systems with mentors for women entrepreneurs.

4.2 Recommendation

This section introduces recommendations of strategic entry points for women entrepreneurs in agriculture to reinforce the ecosystem in China, provide more opportunities and advantaged policies for women's businesses, and unlock the full inclusion of courses and lectures related to entrepreneurship for females.

The recommendations are based on key systemic change and presented proposals for strategies to promote gender equality in education and leadership. Gender and education-responsive strategies ai m to close gender education gaps and provide for female entrepreneurs in access to resources. Also, a few genders education transformative projects go beyond gender responsive strategies for changing gender power in education and reducing gender gaps in education resources.

4.2.1 Recommendation 1:

The authority can engage community members and families as agents of gender transition.

According to UNICEF's research, in the absence of relational and institutional changes, it is insufficient to provide capacity building or resources directly to young women [14]. The government should take full account of the determinative effect of social norms, families and community system structures on women's education and business; it is crucial to cooperate with the closest stakeholders to women entrepreneurs to help to grow their businesses and provide opportunities and access to resources.

The public should eliminate gender inequality in education and social stereotypes, converting parental harmful gender stereotypes in the suburb into parental support.

Given the significant impact on family beliefs on young women's education and subsequent choices, stakeholders should seek chances for community and media-based means to change campaigns that target harmful stereotypes of gender inequality in education.

The community can show the case of successful women.

Governments, communities, local institutions, and Women Union should give chances to spotlight and advertise the contributions of female entrepreneurs. They can share women entrepreneurs' stories who have challenged gender gap through mass media, including audio and video. There is a need for cooperate entrepreneurial training to foster a desire for achievement among young people in society, especially girls. This strategy can be achieved by introducing and/or imitating successful female entrepreneurs [8].

The government should build a bridge between women entrepreneurs and advisors or mentors.

Mentors play a vital role for women entrepreneurs. It is particularly vital to redress shortcomings that women set up a company to reduce more obstacles. The research underscores the importance of mentors for women's leadership. Public and private benefactors should seek to ensure that mentoring is a fixed part of business support services for women entrepreneurs. It can be facilitated through the acceleration of business as well as through peer-to-peer support groups. Meanwhile, learning from experienced advisers and mentors is vital.

4.2.2 Recommendation 2:

The government should reengineer professional skills into the education system as an effective platform by adding learning opportunities in on-campus and off-campus settings to train professional skills in the career.

Policymakers, local society organizations, educational practitioners and private providers ought to support occupational skills-building launchpads that centers on practical vocational skills such as how to encourage teamwork, package farm products, design attractive products and practice leadership among young women from an early age.

The government can strengthen gender equality in education and provide learning channels for girls.

Policymakers should notice that the dropout rate among girl students is rising especially in areas with low-quality or limited education opportunities. In these areas, local Women Unions, and civil society organizations play an important role in boosting girls' access to information, particularly to prevent school dropouts. In all cases, provision must be offered to dismantle the harmful gender stereotypes and policymakers should focus on addressing the capacity and information gap that females face. Building the capability as well as the capacity of women entrepreneurs is therefore a requirement to sustain socioeconomic outcomes and achieve gender parity [16].

5. Conclusion

This paper has sought to examine the participation of female entrepreneurs in the Chinese agricultural service industry. The main issue of women entrepreneurs' leadership and education are discussed in this paper and there exist some constraints facing women entrepreneurs to sustain or

grow. Women entrepreneurs play an imperative role in making a nation progressive in the agricultural service industry and guiding it toward comprehensive development. Thus, giving education to them must be a powerful tool to enhance leadership and operate the business better. The implementation of education needs the participation of the government and the public elimination of gender discrimination. This is vital currently when it is easy to overlook what is indispensable for an education worthy of its name.

Given the in-depth interviews and in-depth nature of Human Centered Design research, the number of women entrepreneurs driving the results is relatively small. By design, the research aims to dig into depth rather than breadth of perceptiveness based on the lived experiences in the common life. The COVID-19 pandemic prevented the face-to-face interviews from travelling to the research sites and visiting the interviewees' businesses. The interviews therefore were conducted by video phone. This may have contributed to the difference in research facilitation in China. Like any other research paper, this paper also has some implications for future research. First, in the future, comparative empirical research can be conducted either in different industries or between agriculture industry and other industries to see if the impact of education is similar on women entrepreneurs. Next, a longitudinal study can be conducted in the future after some years to see this post-Covid effect. Lastly, exploratory research can be conducted in China to identify the leadership and the barriers which women entrepreneurs face in their entrepreneurship journey.

References

[1] Dennis B. III, Yassaman Saadatmand, Jonathan Pierce. Does gender inequality matter for female entrepreneurial activities? An investigation of selected OECD countries. Small Business Institute® Journal, 2019, 15(1): 104-124.

[2] Li J. A survey report on Chinese women's entrepreneurship in the new economic era [J]. Technology and Finance, 2019(3): 4.

[3] Hurun Research Institute. Hurun Richest Self-Made Women in the World 2020, Hurun Report, 16 March 2020.

[4] Hurun Research Institute. Hurun Richest Self-Made Women in the World 2021, Hurun Report, 19 May 2021.

[5] Siddiqui A. B. Problems Encountered by Women Entrepreneurs in India. International Journal of Applied Research &Studies, 2012, 1(2).

[6] Sazali I. L. A study of women entrepreneurs in Pontian, Johor: Key factors of success. University of Malaysia, 2012.

[7] Moore D. P, Jamie L. Moore J., Moore, W. How women entrepreneurs lead and why they manage that way. Gender in Management, 2011, 26(3):220-233.

[8] Ajuna A., Ntale, J. Ngui T. Impact of training on the performance of women entrepreneurs in Kenya the case of meru town. International Academic Journal of Innovation, Leadership and Entrepreneurship, 2018, 2(2):.93-112.

[9] Marlow, S. Women, and self-employment: A part of or apart from theoretical construct? Entrepreneurship and Innovation, 2009, 3(2): 83-91.

[10] Liu D. Kong Q, Yang W. Evolution and optimization of cultivated land protection policy in China in the past 40 years of reform and opening up. Zhejiang Land and Resources, 2019, 189(1):21-22.

[11] Dickson P. H., George T., Solomon, K. Weaver M. Entrepreneurial selection and success: Does education matter? Journal of Small Business and Enterprise Development, 2008,15(2): 239-258

[12] Wanigasekara W.M.S.K., Surangi H.K.N.S. Imapact of level of education and business experience on business success among small retail owner managers in Sri Lanka, 2010.

[13] Tambunan T. Women entrepreneurship in Asian developing countries: Their development and main constraints. Journal of Development and Agricultural Economics, 2009, 1(2): 27-40.

[14] UNICEF, UNDP. Addressing gender barriers to entrepreneurship among girls and young women in South-East Asia. United Nations Children's Fund, March 2021.

[15] Michael W. Apple. Doing things the 'right' way: Legitimating educational inequalities in conservative times. Educational Review, 2005, 57(3).

[16] Olarewaju T., Fernando J. Gender inequality and female entrepreneurship in developing Countries. Decent Work and Economic Growth, 2020: 1-9.