

Association for Information Systems

## AIS Electronic Library (AISeL)

---

UK Academy for Information Systems  
Conference Proceedings 2024

UK Academy for Information Systems

---

Spring 7-10-2024

### Factors Influencing The Career Decisions Of Women Software Entrepreneurs: Perspectives From India and Ireland

Aditi Singh

University College Cork, singhaditi0812@gmail.com

Ciara Heavin

University College Cork, c.heavin@ucc.ie

Brian O'Flaherty

University College Cork, b.oflaherty@ucc.ie

Follow this and additional works at: <https://aisel.aisnet.org/ukais2024>

---

#### Recommended Citation

Singh, Aditi; Heavin, Ciara; and O'Flaherty, Brian, "Factors Influencing The Career Decisions Of Women Software Entrepreneurs: Perspectives From India and Ireland" (2024). *UK Academy for Information Systems Conference Proceedings 2024*. 24.

<https://aisel.aisnet.org/ukais2024/24>

This material is brought to you by the UK Academy for Information Systems at AIS Electronic Library (AISeL). It has been accepted for inclusion in UK Academy for Information Systems Conference Proceedings 2024 by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact [elibrary@aisnet.org](mailto:elibrary@aisnet.org).

# **FACTORS INFLUENCING THE CAREER DECISIONS OF WOMEN SOFTWARE ENTREPRENEURS: PERSPECTIVES FROM INDIA AND IRELAND**

**Aditi Singh**

[Singhaditi0812@gmail.com](mailto:Singhaditi0812@gmail.com),

University College Cork  
Cork, Ireland

**Ciara Heavin**

[C.Heavin@ucc.ie](mailto:C.Heavin@ucc.ie)

University College Cork  
Cork, Ireland

**Brian O' Flaherty**

[b.oflaherty@ucc.ie](mailto:b.oflaherty@ucc.ie)

University College Cork  
Cork, Ireland

## **Abstract**

*Software entrepreneurship continues to be perceived as a sector dominated by men. Research points to key differences in the motivations to engage in entrepreneurship, stressing the significance of gender. Through a qualitative analysis approach, this research seeks to identify factors that influence women's decisions to pursue a career in software entrepreneurship in India and Ireland. Both countries rank highly as technology startup hotspots with rapidly growing women founder communities. This research undertakes a thematic analysis of six semi-structured interviews with women entrepreneurs from India and Ireland revealing the two main themes of barriers and tactics. Six major barriers include gender stereotypes, confidence, male-dominated sector, family expectation, age, and power dynamics. Nine tactics emerge including building confidence, owning personal autonomy, family support and background, mentors, feminist mindset, educational impact, utilising specific skills, government policies, and flexibility in gendered roles. This study uncovers similarities and differences that merit further research.*

**Keywords:** Software entrepreneur, gender, women, barriers, tactics, India, Ireland.

## **1.0 Introduction**

The number of female entrepreneurs has been rising, significantly boosting economic growth and societal well-being (Kelley et al., 2017). However, many entrepreneurs are men (Brush et al. 2009; Sánchez-Escobedo et al. 2014; Dileo and Pereiro 2018). The recent Global Entrepreneurship Monitor (2022) report supports this highlighting that more women than men—2.7% versus 4.7%—establish businesses in the information, computer, and technology (ICT) sector.

One of the 17 Sustainable Development Goals (SDGs) of the United Nations is to achieve gender equality in all aspects of life (UN, 2021). However, obstacles and limitations continue to prevent women from fully participating in entrepreneurial activities (Naidu and Chand 2017; Tur-Porcar et al., 2017). One of the main obstacles is gender stereotypes that characterise men as providers and women as homemakers, these perceptions impede efforts to achieve gender equality (Brush et al., 2018), leading to the classification of men's and women's job trajectories. The lack of gender equality in entrepreneurship, particularly in the software field, and the fact that many women do not select entrepreneurship as a career path are evident when the subject of gender in entrepreneurship is examined using both qualitative and quantitative methodologies (Brush et al., 2018). Against this backdrop, our research aims to understand the factors that influence the career decisions of women software entrepreneurs in India and

Ireland. This research focuses on women as a subject of study to investigate these factors by posing two questions:

1. *What barriers affect women software entrepreneurs?*
2. *How do women software entrepreneurs respond to these barriers?*

This study explores the challenges faced by women software entrepreneurs, particularly in the face of gender stereotypes and challenges such as accessing funding to support start-up ventures.

## **2.0 Literature Review**

Historically, gender and entrepreneurship studies have been divided into two approaches: the "Gender as a Variable approach" (GAV) and the "Gender as an influence" approach (Martinez and Marlow, 2018). The characteristics of a successful entrepreneur have been linked to masculine characteristics, leading to criticism when gender was used interchangeably with women (Schein, 1973). Research by Jennings and Brush (2013) focuses on the underrepresentation of women in entrepreneurship. Brush (1992) argues that women are "different," i.e., compassionate, and relational. Neergaard and Ulhoi (2007) bring a multiplicity of factors like gender, semiotics, media discourse, grounded theory, action research, ethnographic methodology, entrepreneurship as lived experience, critical realism, and discourse analysis to entrepreneurship, promoting the gradual shift towards the "Gender as influence" approach in qualitative research of gender in entrepreneurship.

According to Frederick et al. (2016), women encounter unique hurdles in entrepreneurship due to social conditioning differences. Socioeconomic obstacles can prevent women from accessing necessary resources for business success (Watson, 2002). Female entrepreneurs are underrepresented in the business sector, leading to perceptions of inferiority or marginalisation in female-specific niches (Ahl and Marlow, 2021). According to Robb and Watson (2012), equal access to resources can help women achieve equal success in entrepreneurship, if not more.

## **2.1 Factors Influencing Women Software Entrepreneurs**

Women in the software sector face biases and underrepresentation (Kovaleva et al., 2023; Wilson and Patón-Romero, 2022). According to a study by Griffith (2010), the gender gap in STEM participation is not only a global issue but also one that is not diminishing over time. Between the 1980s and the turn of the century, the gender gap did not significantly narrow, with the gender gap in STEM widening as education levels rose (Griffith, 2010).

Many factors may contribute to the underrepresentation of women in entrepreneurship (Jennings and Bush, 2013), attitudes of parents, teachers, society, and the media at large are cited as key influencing factors (Adya and Kaiser, 2005). One early childhood bias may arise when parents select toys for their kids based on gender (Kollmayer et al., 2018). These toys may encourage different skill development and interests in boys and girls, which could in turn influence future behaviour (Kollmayer et al., 2018). Playing with building blocks, for example, fosters the development of spatial reasoning abilities, essential for engineering (Kovaleva et al., 2023). Although studies deny any gender difference in math abilities (Hyde, 2014), some teachers and parents still hold the belief that boys have higher mathematical potential in schools and girls are often encouraged to pursue the arts, whereas boys have different hobbies (Hyde, 2014). Powell et al.'s (2012) study on the selection process for engineering cited factors that influence students' decisions to pursue engineering as a career. Childhood interests in technology were one of the most important criteria identified (Powell et al., 2012). Students who chose to become engineers or work with technology as their future profession were more likely to be doing anything "hands-on" with technology (Powell et al., 2012).

The role of teachers in influencing students to pursue careers in technology and engineering is deemed an important one (Germeijs and Verschueren, 2006). Parental advice is one of the most significant influences on professional choice, particularly for girls (Germeijs and Verschueren, 2006). Society sets the standards for acceptable behaviour for both boys and girls (Moss-Racusin et al., 2010). Additionally, children form their opinions regarding the world based on what is seen in the media and in their immediate surroundings, which still lack role models (Knoll et al., 2011). These elements influence females' decisions regarding their technical and scientific aptitude.

Young women may pursue other careers because they have low expectations for their performance in technical fields like the software (Jirout and Newcombe, 2015).

In the software profession specifically, academic women are less inclined to pursue an entrepreneurial career, while non-academic women are more likely to "fit in" by adopting views associated with masculine culture (Pogesi et al., 2020). As one researcher stated, "*Founding a technology-based firm is commonly regarded as a male domain*" (Dautzenberg, 2012, p79). Wilson and Patón-Romero (2022) conducted a systematic mapping study of papers from 2010 to 2021 on female technology entrepreneurship and highlighted the factors responsible for underrepresentation in the field. They identified several factors including family life, adopting behavior, competencies, educational perceived challenges, male behaviour, stereotypes, and role models affecting the career path of women in software entrepreneurship (Wilson and Romero, 2022). The study revealed that entrepreneurial intention is noticeably higher in male students than female students there is a link between stereotypical masculine traits and successful entrepreneurs as bold, aggressive, logical (Wilson and Patón-Romero, 2022). However, they noted that by acknowledging the status of women entrepreneurs as "other," women learn how to turn barriers into advantages and to mobilise their "otherness" by creating their own norms and accepting different ways to perform tasks instead of trying to "fit in" (Wilson and Patón-Romero, 2022). Further studies point to the lack of role models and mentors as another major obstacle (Knoll et al., 2011, Kovaleva et al., 2022).

Employing a feminist lens allows us to examine the "otherness" of women by making them the center of study. The term "feminism" aims to end women's subjugation (Jaggar, 1983, p.5), one of the fundamental principles of feminist thought is the necessity to address women's subjugation. According to feminist scholars, our understanding of entrepreneurship and growth must undergo a fundamental ontological transformation (Jaggar, 1983; Rosser, 2005). A thorough examination of the characteristics (e.g., exceptional support, nurturing, and empathy) and environments (primary caregiver) of women entrepreneurs who are culturally identified as feminist will be possible (Ahl and Marlow, 2012). Furthermore, there is a misconception that women are less capable or motivated to operate growing enterprises compared with

their male colleagues because they are still underrepresented in the companies that are expanding quickly. *"Somehow men get to be free riders on their few growth-oriented fellow businessmen while the women are marked out as the non-growers"* (Ahl, 2003, p.225).

While considerable research has been conducted to further understand feminist epistemology and the challenges faced by women entrepreneurs, often these studies assume male norms as a given without challenge or further interrogation (Ahl and Marlow, 2012) As a result, the conclusions from such studies inadvertently tend to attribute blame for deviating from the so-called "male norm" to women, and they recommend that women fix their flaws by adjusting their behaviour to adapt to the world. These adoptions may include getting better education, having higher aspirations, and networking differently (Brush et al., 2009; Mirchandani 1999; Jennings and Brush 2013; Henry et al., 2015). However, judging women's entrepreneurial aspirations based on male norms is overstating women's otherness and, as a result, strengthens women's subordination to males in fields related to entrepreneurship (Ahl 2006; Henry et al. 2015). Ahl (2006) developed a theoretical critique of the stereotypical masculinized discourse of contemporary entrepreneurship in her powerful critique of gender. This discourse asserts that males are given privileges just because of their gender because conventional masculinity is so prevalent in the entrepreneurial industry. This is a gendered discourse, according to Ahl (2006), where males who are identified with masculinity are given preference over women who are connected with feminine characteristics.

## **2.2. Gender in India and Ireland**

While Western developed nations have been the focus of most studies on female entrepreneurship (Kumar, 2013; Sestic and Ibrahimagic, 2015), little has been written about the difficulties faced by female entrepreneurs in developing countries. India, which has a rising number of startups but is also one of the lowest-ranked nations in the Glass Ceiling Index, a gauge of the inclusion of women in the economy, offers a particularly fascinating context in which to study this phenomenon (Pandey, 2018). Due to sociological factors like religion and caste-making, women in India experience particular difficulties to pursue entrepreneurship (Bertaux and Crable, 2007). Despite

these significant obstacles, some Indian women have overcome these and achieved success in business (Kumar, 2013). However, additional research is required as women from developing countries face different challenges than women from developed countries (Shah and Saurabh, 2015).

Ireland has experienced substantial economic growth since the 1980s. According to Grimes (2003), the influx of "Information" organisations into the "High-Tech" sector has significantly fueled the "employment boom" that has accompanied Ireland's economic success. While women's employment increased exponentially during this period (Cross and O'Brien, 2004), the same has not been mirrored in women-led businesses within the Irish economy (GEM, 2003). Even after ten years, Irish women entrepreneurs continue to emphasize that they are more responsible for their families than men are, and they use their businesses to help them strike a balance between their home and professional lives (Nevins and Hamouda, 2019; Anne and Eileen, 2010). According to GEM (2018), women in Ireland have seen fewer opportunities to start a business than males, despite men being 1.5 times more likely to be entrepreneurs. These statistics raise concerns about the status of women entrepreneurs in Ireland and make it space worth exploring.

This study begins to understand women software entrepreneurs in two different countries India and Ireland. Traditionally, software business is among the fastest-expanding industries in both countries (Arora et al., 2001; O'Gorman and Kautonen, 2004). The software industry has played a key role in both countries' recent economic development, despite that women in both countries find it difficult to start their businesses which allows one to question the pattern of low participation of women in software entrepreneurship despite high education and growth of software sector in countries. This opens up the option of researching on comparative study on women entrepreneurs in India and Ireland. Subsequently, this research aims to begin to shed light on the important topic of gender and entrepreneurship, particularly focusing on the software in India and Ireland.



### 3. Research Approach

This research investigates the barriers that affect women software entrepreneurs in India and Ireland, focusing on gender diversity and innovation. India offers a fascinating context for this research, as sociological factors like religion and caste-making make women in India face difficulties in pursuing entrepreneurship (GEM, 2022). In Ireland, traditionally women's employment has not been mirrored in women-led businesses within the Irish economy which was attributed to the strict marriage bar and conservative values (McCooney, 2023). To address the research objective the study uses in-depth, semi-structured interviews inspired by Trauth and Connolly (2021). There are shortcomings in past research, and some argue for qualitative, in-depth interviews with a clear feminist agenda (Martinez and Marlow, 2018). The research team contacted potential participants via LinkedIn and email. From June to August 2023, six women software entrepreneurs were interviewed based on the following inclusion criteria: co-founded or was the founder of a software entrepreneurship venture based in India or Ireland, still actively involved in the organisation, and willing to share their experiences and insights through semi-structured interviews (Table 1).

Interviewees	Business start year	Nature of Business	Country	Education
Interview 1	2019	Mentors- mentees app	India	Bachelors
Interview 2	2008	Booking hotel online	Ireland	Masters
Interview 3	2011	Account based marketing for B2B enterprises	India	Bachelors
Interview 4	2000	Logistical software developing company	Ireland	Bachelors
Interview 5	2021	Neuroscience used to support mental health online	India	Masters
Interview 6	2019	Hen parties	Ireland	Masters

**Table 1. Overview of Interviewees**

Each interview lasted approximately 60 minutes. Open-ended questions were asked of participants about their businesses, the challenges they faced as women entrepreneurs, the influence of government policies, gender/regional stereotypes, the influence of friends, family, and mentors, and their opinions on feminism and women empowerment.

Data analysis was performed using Creswell's (2007) data analysis spiral, a recurrent and iterative process of meaning creation and moving from description to interpretation.

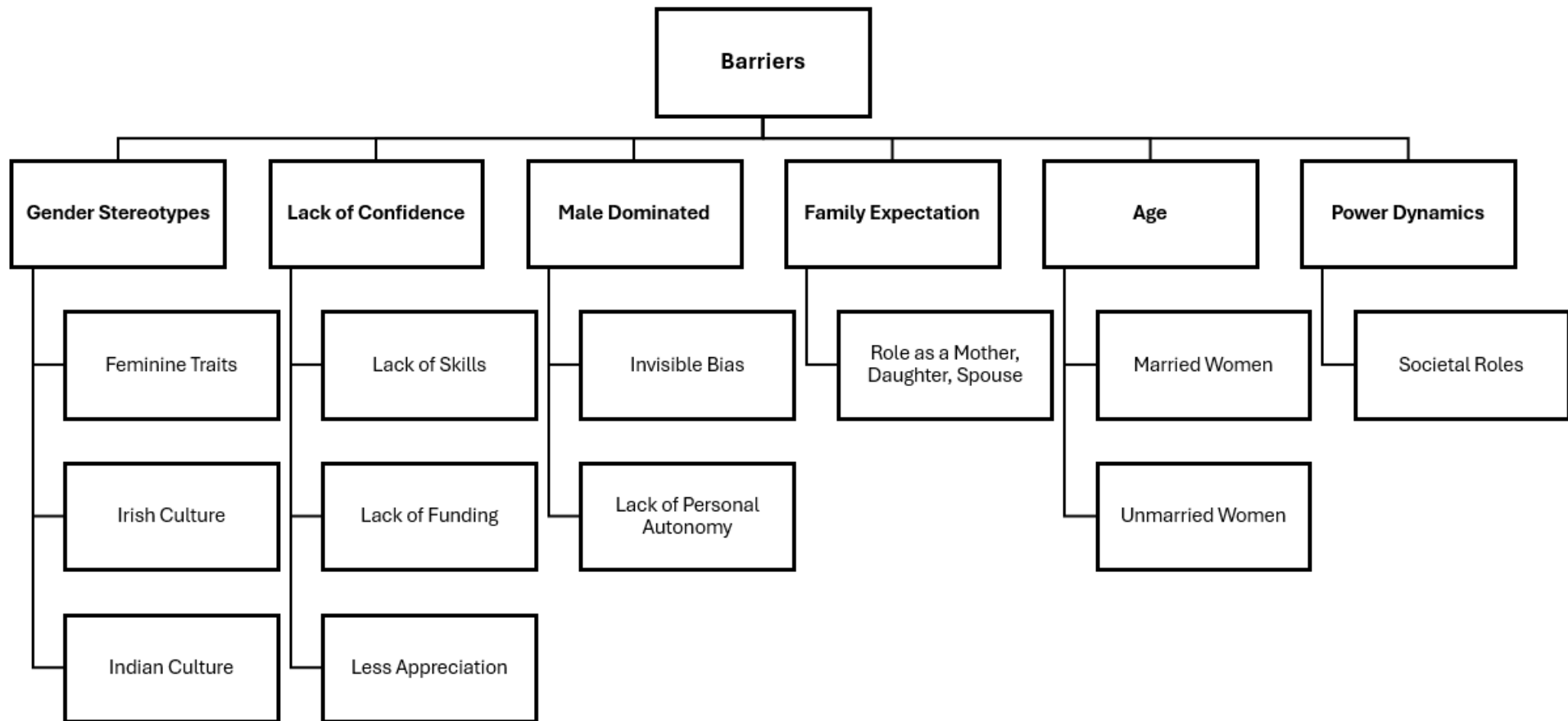
The researcher conducted a series of coding cycles to analyse the data from six interviews. In the first cycle, codes were classified based on the research question, such as motivation and gender stereotypes. The second cycle involved creating an MS Excel spreadsheet with columns. Codes formed in the first stage were sub-divided into individual factors, such as "stereotype" and "motivation." In the third cycle, NVivo software was used to extract and filter data to reach the research aim. The lead researcher discussed her preliminary findings with the team, presenting 130 codes generated by thorough data analysis. Major codes formed included male-dominated, gender stereotypes, family support, and other factors. These codes emerged as subthemes, including family background and stereotypes in Indian and Irish culture.

## **4. Findings**

This qualitative study aims to identify the factors that affect the career path of software women entrepreneurs in India and Ireland. Cultural, societal, and institutional barriers influence women's entrepreneurial journey and business performance in the software sector. The following section highlights the findings relating to career barriers.

### **4.1 Barriers**

Institutional hurdles include messages about gender roles in the family that restrict women's mobility and decision-making ability regarding their business. Societal infrastructure, lack of confidence, and male-dominated structure constitute other barriers that affect women software entrepreneurs, displayed in a coding tree (See Figure 1). Six significant barriers emerged from coding: gender stereotypes, lack of confidence, male-dominated sector, family expectation, age, and power dynamics. These barriers were further subdivided into 15 sub-themes: Feminine Traits, Irish and Indian Culture forming the sub-theme of gender stereotype, lack of skills, lack of funding, less appreciation forming the sub-theme of lack of confidence, invisible bias and lack of personal autonomy forming the sub-theme of the male-dominated sector, role as mother, daughter, and spouse falling under family expectation, married and unmarried status becoming the sub-theme of age, and power dynamics having societal roles under it. Women's perceived skills and confidence are crucial for starting entrepreneurial ventures, and their self-belief is significant in empowering themselves. Women must constantly remind themselves that they are good enough, which can lead to a lack of trust from others.



**Figure 1. Barriers codes produced using NVivo**

One of the most common obstacles that women entrepreneurs face is the lack of business funding, often a key driver for women starting their businesses. Women must meet requirements or provide guarantees, which may be related to a more complex phenomenon, as they must prove their worthiness and qualifications, which they believe does not happen with their male counterparts.

*“Women struggle to look for capital for their business. Women in India are often seen as dependent on men for their financial support if there is financial support if there is a property loan, but if they have their own money, it becomes easier for them.”* – Interview 3

The interviewee uses the term “dependent on men,” which leads to the question of men becoming the source and control capital for women and making them dependent on men.

The lack of female representation in the male-dominated sector of software entrepreneurship can negatively impact female entrepreneurs, creating an invisible bias and leading to feelings of self-doubt regarding their performance. Interviewees acknowledge the change in the field with changing times and the more acceptability of women leaders in IT, especially in software entrepreneurship. However, they also acknowledge the need for further improvement and more inclusivity.

*“I think software entrepreneurship is still a largely masculine domain though it is changing”*- Interview 4

Another significant effect of the male-dominated sector in IT is the lack of personal autonomy held by women. With most males around them wielding power, women may struggle to acknowledge their identity as the leader of their business. One interviewee felt that women must learn from their male counterparts, leading to whether women must become more like men to be effective in a male-dominated industry.

*“I did not call myself a CEO for 5-6 years”* – Interview 3

Research findings reveal that being a mother is a powerful identity that transcends geographical boundaries, and women face societal challenges in balancing professional advancement with the perception of women working outside the home when they

consider having children. Cultural discourses about parenthood often hinder women's potential to pursue careers, as they are often the primary caregivers of their children.

In addition to childcare, family-related responsibilities may also involve housekeeping and taking care of the extended family, which can lead to increased caregiving duties that hinder their potential to pursue entrepreneurship opportunities. Cultural norms and community beliefs play a significant role in these barriers, as Indian interviewees found that family permission to start a business becomes highly significant as their role as caretakers gets wrapped with the patriarchal norms of Indian society. For Irish interviewees, their role as a mother was important, but their role as entrepreneurs held as much relevance as their role as family members. Age also plays a significant role in their entrepreneurial journey. Indian interviewees found that childhood values had a significant impact on their careers, as they realised certain things were not expected of them due to their gender.

*“No matter how much we talk about it, some responsibility of household and household work is always more on women, even though my husband pick up a lot of the responsibility” – Interview 5*

Power dynamics among women entrepreneurs from underrepresented groups are also important, as being from a minority exacerbates the difficulties that women entrepreneurs face. In an Indian context, there are layers of power that create discrimination faced by both men and women, more so by women of their gender and social identity. Social class identity intersects with gender identity to suppress them. In contrast, another example of social class denied access to equal education for women belonging to a social class not accepted as privileged by Indian society. In an Irish context, power dynamics work differently, with diverse identities bringing diverse challenges. Irish women entrepreneurs face unique challenges such as pregnancy, being a single mom, and having twins, which they may not face as they are from India or any other ethnicity.

## **4.2 Tactics**

Nine themes emerged, including building confidence, owning personal autonomy, family support and background, mentors, feminist mindset, education impact, utilising feminine skills, government policies, and flexibility in gendered roles (See Figure 2).

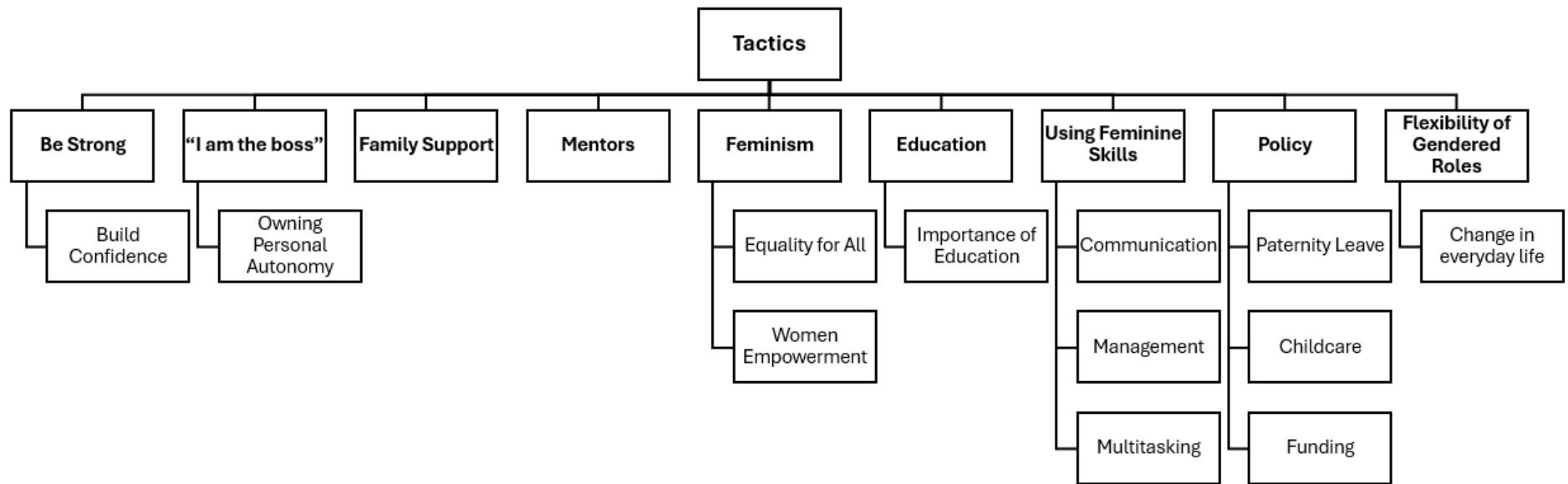
Building confidence is crucial for women entrepreneurs, as self-doubt in their skills reduces their capability in the field. Empathy and assertiveness are essential for women entrepreneurs, as they must be strong enough to face repercussions if decisions are made with emotions.

Women entrepreneurs are motivated to build a path for themselves by upholding their ideals and ambitions while refusing to submit to the norms of the sector carved out for them in a male-dominated society.

*“I think I grew up not embracing my femininity for the longest time because I recognise that I want to be ambitious”*—Interview 5

Family support is vital for women entrepreneurs, as parents want to support their children and actively encourage their daughters to break through gender boundaries while initiating cultural and infrastructure modifications. Family backgrounds in entrepreneurship also help pass entrepreneurial values to them as they grow up learning from them. A person's spouse's support and motivation have played a massive role in the successful growth of their career path.

*“My family had a major role in starting my business. When I was starting out, I needed to make connections in hotels, and as I had nothing to sell them because my grandparents had businesses in the same industry, my grandmother made personal calls to friends and set up meetings for me which helped me a lot”* – Interview 2



**Figure 2. Tactics codes produced using NVivo**

Mentors also play a significant role in the lives of women entrepreneurs, as they not only help them tackle these barriers, but also help them grow their businesses by giving them helpful advice. The influential people for women entrepreneurs include support from certain people in their firm, such as coworkers who ask other men to let them speak and hear their opinions. In an Irish context, there is no significant difference noticed, as all interviewees had male mentors. The importance of mentorship lies in the person, not their gender, as they teach them lessons through their experience, benefiting both themselves and their business.

Interviewees discussed their experiences with gender stereotypes and how they tackled these barriers using their feminine strengths. Some believed that women excelled in certain areas, such as management, communication, and discipline, while others believed in multitasking and that there were no distinct masculine or feminine skills. Interviewee 5 believed that everyone can do what they want if motivated.

*“Women are more disciplined and good in finances and management, so we can put those skills to use here better. Their support and caring nature can give different kinds of advantages to businesses if utilised wisely.” -Interview 3*

This quote from one of the interviewees represents her views on how they tackle those feminine stereotypes that divide the work into “men’s work” and “women’s work.”

The concept of feminism was also discussed, with some interviewees identifying as feminists while others did not publicly identify as feminists. Some Indian interviewees believed in equality but did not publicly identify as feminists, citing a misunderstanding. The diversity also emerged in Irish interviewees, as interviewee six did not identify as a "today's feminist" but believed in equality and equal rights for everyone. One of the interviewees shared her view on feminism.

*“People are like “Oh! She is a feminist; she does not care about equality; she cares about women.” So, I would not say that I am a feminist, but I fight for equal opportunity every time.” -Interview 6.*

Women's empowerment was another theme that emerged. Some interviewees believed that women must believe in themselves and be confident, while others believed that



financial independence and proper education are crucial steps towards empowering women. The diversity in their views on feminism and women's empowerment highlights the importance of understanding and embracing the unique strengths of women in various fields.

Government policies and statutes effectively promote change, but they often lack support for women entrepreneurs. In Ireland, there is a lack of encouragement for female entrepreneurship, and entrepreneurs believe that more significant incentives from the government should be provided. They propose policy changes around paternal leave and childcare facilities to mitigate family care responsibilities, particularly for women. In India, governments support women entrepreneurs and provide incentives to enter the field. However, policy amendments proposed differ from Irish responses, focusing on equal representation of women in policymaking. They suggest that the government consult with women business owners to understand their concerns and make more funding options available.

This study explored the experiences of female software entrepreneurs in Ireland and India. Shared issues emerged in this study, such as the need for self-confidence, identifying as a feminist and the availability of investment capital for Female entrepreneurs. Differences between Ireland and India emerged around the role of family and the nature of government policy.

## **5.0 Discussion**

Findings reveal that software entrepreneurship is a gendered phenomenon, with women entrepreneurs facing several barriers. Women entrepreneurs often struggle to balance work and family obligations, which can be challenging. They often work with their spouses to handle household chores and childcare and practice gender flexibility. Intersectionality is another significant issue for women entrepreneurs from underrepresented groups in India and Ireland. Being from a minority can exacerbate the difficulties women entrepreneurs face, as they may feel a perceived "lack of fit" in the group and may be disregarded during the entrepreneurial process. However, some women have overcome these obstacles and achieved success in entrepreneurship.

In Ireland, the church has traditionally played a role in determining women's placement in society, with, Catholic and rural cultural norms and values supporting this cultural perspective. Public regulations about marriage, reproductive rights, and employment also support this cultural perspective. It was revealed that in the Indian context, women from social class and religion face dual biases based on social identity as members of certain religions or social classes. Due to sociocultural issues like caste and religion making it difficult for them to pursue entrepreneurship, women in India confront difficulties (Bertaux and Crable, 2007). From a social feminist perspective, the intersectionality of gender, social class, and race has a dual influence on women entrepreneurs' access to resources and ability to succeed in the entrepreneurship industry.

This research highlights the importance of role models, connections, and mentors for women software entrepreneurs. However, none of the participants had female role models or mentors, which they identified as a barrier. Female mentors help women balance feminine and masculine features in their entrepreneurial identities, helping them overcome identity difficulties. Lack of confidence and difficulty in obtaining capital is another major obstacle faced by women entrepreneurs. Nieva (2015) emphasised that women business owners frequently experience a lack of self-belief, leading to hesitation when making decisions, avoidance of commitment, and a severe fear of criticism and failure. This lack of confidence is linked to external factors such as male dominance in the field and fear of failure.

In terms of social feminism, female business owners who participate in international accelerator programs encounter challenges that affect their capacity to secure funding from foreign investors, including severe competition due to the female entrepreneur's age, place of origin, financial needs, and the masculinised nature of the technology business and accelerator program (Tan, 2008). Parenthood and family expectations pose significant hurdles for women entrepreneurs, hindering their ability to start businesses. Winn (2004) highlighted the challenges women with children face in starting their businesses due to the demands of their families and childcare. Humbert and Brindley (2015) found that these expectations put women in entrepreneurship at risk and influenced their willingness to participate. Interviewees shared this perception, indicating that this is still a concern for worried women throughout Ireland and India.

Familism, a cultural ideal emphasising interdependent, loving, and sustaining family ties at the cost of individual desires and needs, impacts women software entrepreneurs. The cultural narrative that parenthood hinders women from pursuing a career in any field was presented to all women, but these messages were interpreted differently by different women. Significant individuals persuaded interviewees who were childless or had parenthood responsibilities to reinterpret the motherhood message. To navigate these barriers, women software entrepreneurs use coping mechanisms such as family support, mentors, and values like self-confidence, strength, and belief in feminism and equality. However, the lack of female role models and mentors was observed among the interviewees. This research suggests that government initiatives can help women entrepreneurs overcome obstacles by providing incentives and utilising government resources effectively.

Women entrepreneurs face challenges in networking and navigating the male dominated industry. They often rely on sisterhood and unity among women as their primary tactic to act against this male-dominated domain. Feminine stereotypical skills, such as management, communication, and multi-tasking, are used to overcome the lack of confidence in the male-dominated industry. Gender stereotypes, reinforced through socialisation during childhood and adolescence, are also influenced by childhood values taught by parents. Family support plays a vital role in women entrepreneurs' career paths, with Irish interviewees believing their family was open-minded to support them in pursuing software entrepreneurship. However, in developing nations like India, there is no distinction between the responsibilities of extremely small-scale female business owners at home and the company.

## **6.0 Conclusion**

This study investigates the factors affecting the career decisions of women software entrepreneurs in India and Ireland. It identifies several societal and cultural barriers that prevent women from engaging in entrepreneurship and the tactical response of these entrepreneurs to these barriers. The research findings align with Wilson and Patón-Romero's (2022) work, which identified factors like family life, adopting behaviour, competencies, perceived educational challenges, male behaviour, stereotypes, and role models affecting the career path of women in software entrepreneurship. The absence

of role models, social problems, institutional obstacles, gender stereotypes, lack of confidence, marginalisation, and individual factors like age, family background, and others were identified as barriers faced by women entrepreneurs. Gender stereotypes reinforce these barriers in various forms, and discrimination against women affected how they were perceived, and others largely viewed their social positions. This study found that negative attitudes toward support varied between the two countries. In India, women were expected to fit in roles as family members and rarely received family support, while in Ireland, it was mostly a cultural construct. The adversarial culture toward marginalised social class and immigrant women was also identified as a barrier.

By asking questions about how they viewed feminism and whether they identified themselves as feminists and women's emancipation, the study reveals that women in entrepreneurship can own personalised opportunities, realise agentic potential, and create wealth and value for society. The study suggests that women should view entrepreneurship as a journey, seeking mentors and role models to help them succeed. Future research could explore the undoing or redoing of gender in entrepreneurship, examining social-cultural barriers to female entrepreneurship in Ireland and India. The socio-cultural differences between India and Ireland require further investigation. More context specific research could provide a comparative understanding of variables supporting or obstructing women entrepreneurs across different regions. Feminist theory can also be applied to investigate female entrepreneurship, and further studies on genders other than women could be pursued. The socioeconomic backdrop could also be investigated, including the economy, environmental conditions, and technological advances.

The small sample size and cross-sectional study are critical limitations of this research. Future research should focus on larger and heterogeneous samples, examining the influence of demographic characteristics on career choices. The research has shown that women have limited engagement in policymaking for entrepreneurship, which may offer some explanation for the dearth of female entrepreneurs (Shrivastava, 2021; Wu et al., 2019). The early involvement of female entrepreneurs in policymaking would be beneficial for promoting female-friendly entrepreneurial policies. Women software entrepreneurs are best positioned to empower other females through mentoring and

networking schemes. In doing so, they can support the next generation of women software entrepreneurs to navigate the existing barriers.

## References

- Adya, M., & Kaiser, K. M. (2005). Early determinants of women in the IT workforce: a model of girls' career choices. *Information Technology & People*, 18(3), 230259.
- Ahl, H. (2006). Why research on women entrepreneurs needs new directions. *Entrepreneurship: Theory and Practice*, 30(5), 595–621.
- Ahl, H., & Marlow, S. (2021). Exploring the false promise of entrepreneurship through a postfeminist critique of the enterprise policy discourse in Sweden and the UK. *Human Relations*, 74(1), 41-68.
- Anne, L. H. and Eileen, D. (2010) 'Gender, entrepreneurship and motivational factors in an Irish context', *International Journal of Gender and Entrepreneurship*, 2(2), 173–196. Doi: 10.1108/17566261011051026.
- Arora, A., Arunachalam, V.S., Asundi, J., and Fernandez, R. (2001). The Indian software services industry. *Research Policy*, 30(8), 1267 – 1287.
- Bertaux, N. and Crable, E. (2007). Learning About Women. Economic Development in Entrepreneurship and The Environment in India: A Case Study. *Journal of Developmental Entrepreneurship* 12(4): 467–478 <https://doi.org/10.1142/S1084946707000757> [accessed 30 March 2023].
- Brush, C. G. (1992). Research on women business owners: Past trends, a new perspective, and future directions. *Entrepreneurship: Theory and Practice*, 16(4), 5–30.
- Brush, C. G., de Bruin, A., & Welter, F. (2009). A gender-aware framework for women's entrepreneurship. *International Journal of Gender and Entrepreneurship*, 1(1): 8–24.
- Brush, C. G., Edelman, L. F., Manolova, T., & Welter, F. (2018). A gendered look at entrepreneurship ecosystems. *Small Business Economics*. <https://doi.org/10.1007/s11187-018-9992-9>.
- Creswell, J. W. (2007). Qualitative inquiry and research design: Choosing among five approaches. (2nd ed.). *Thousand Oaks, CA: Sage*.
- Cross, C., O'Brien, M. (2004). Shattered Dreams – The Resilient Glass Ceiling, Paper Presented at the 1st International Conference on Women's Studies Eastern Mediterranean University, Famagusta, Turkish Republic of Northern Cyprus, April.
- Dautzenberg, K. (2012). Gender differences of business owners in technology-based firms In *International Journal of Gender and Entrepreneurship* 4(1):79–98. <https://dx.doi.org/10.1108/17566261211202990> [ accessed 29 March 2023].
- Frederick, H., O'Connor, A., and Kuratko, D. F. (2016) *Entrepreneurship: Theory/Process/Practice*. 4th edn. Victoria: Cengage Learning.
- Germeijs, V. and Verschueren, K. (2006). High school students' career decisionmaking process: Development and validation of the Study Choice Task Inventory. *Journal of Career Assessment* 14:449471.

- Global Entrepreneurship Monitor (GEM) (2018) GEM Ireland 2018 report. Available at: <https://www.gemconsortium.org/report/gem-ireland-2018-report> [Accessed 09 January 2024].
- Global Entrepreneurship Monitor (2022). Global entrepreneurship monitor releases new research highlighting women's entrepreneurship trends across the globe, London, available from: <https://www.gemconsortium.org/reports/womensentrepreneurship> [accessed 01 September 2023].
- Griffith A. L. (2010). Persistence of women and minorities in STEM field majors: is it the school that matters? *Economics of Education Review* 29 (6) 911–922, Persistence of women and minorities in STEM field majors: Is it the school that matters? - ScienceDirect [ accessed 28 March 2023].
- Grimes, S. (2003). 'Ireland's Emerging Information Economy: Recent Trends and Future Prospects: *Regional Studies.*, 37(1):3-14.
- Henry, C., Foss, L., Ahl, H. (2016). Gender and entrepreneurship research: a review of methodological approaches. *International Small Business Journal*, 34(3):217–241.
- Humbert, A. L. & Brindley (2015). Challenging the concept of risk in relation to women's entrepreneurship. *Gender in Management: An International Journal*, 30(1), 2-25.
- Hyde J.S. (2014). Gender Similarities and Differences in Annual Reviews Psychology, 65(1): 373-398 Gender Similarities and Differences | Annual Review of Psychology (annualreviews.org) [accessed 28 March 2023].
- Jaggar, A. M. (1983). *Feminist politics and human nature*. Rowman & Littlefield.
- Jennings, J. E., & Brush, C. G. (2013). Research on women entrepreneurs: Challenges to (and from) the broader entrepreneurship literature? *Academy of Management Annals*, 7(1), 661–713.
- Jirout J., Newcombe N.S. (2015). Building Blocks for Developing Spatial Skills: evidence From a Large, Representative U.S. Sample, *Psychology Science*, 26 (3),302–310, <https://doi.org/10.1177/0956797614563338>
- Kelley, D. J., Baumer, B. S., Brush, C., Green, P. G., Mahdavi, M., Majbouri, M., et al. (2017). *Global entrepreneurship monitor 2016/2017 report on Women's entrepreneurship*. Babson College, Smith College, and the Global Entrepreneurship Research Association.
- Knoll S., Eisend M., Steinhagen J. (2011), Gender roles in advertising: measuring and comparing gender stereotyping on public and private TV channels in Germany, *International Journal of Advertising*, 30 (5) :867–888, <https://doi.org/10.2501/IJA-30-5-867-888> [accessed 29 March 2023].
- Kollmayer M., Schultes M. T., Schober B., Hodosi T., Spiel C. (2018). Parents' Judgments about the Desirability of Toys for Their Children In associations with Gender Role Attitudes, Gender-typing of Toys, and Demographics, *Sex Roles* 79 (5–6) 329–341, <https://doi.org/10.1007/s11199-017-0882-4> [ accessed 28 March 2023].
- Kovaleva Y., Saltan A., Happonen A. (2023). Becoming an entrepreneur: A study of factors with women from the Tech Sector in Information and Software Technology, 155(107110):1-12 *Becoming-an- entrepreneur--A-study-offactors-wit\_2023\_Information-and-Softwa.pdf* [ 29 August 2023].

- Kumar, A. (2013). Women entrepreneurs in a masculine society: Inclusive strategy for sustainable outcomes In *International Journal of Organizational Analysis*, 21(3): 373–84.
- Martinez, D., and Marlow, S. (2018). Annual review article: Is it time to rethink the gender agenda in entrepreneurship research In *International Small Business Journal: Researching Entrepreneurship*, 36(1): 3-22.
- McCooney, R. (2023). The Employment Boom in Ireland. <https://recruiteconomics.com/the-employment-boom-in-ireland/>. [accessed 29 March 2023].
- Moss-Racusin, C., Phelan, J., & Rudman, L. (2010). “I’m Not Prejudiced, but...”: Compensatory Egalitarianism in the 2008 Democratic Presidential Primary. *Political Psychology*, 31(4), 543-561.
- Naidu, S., & Chand, A. (2017). National Culture, gender inequality and Women’s success in micro, small and medium enterprises. *Social Indicators Research*, 130(2), 647–664.
- Neergaard, H. and Ulhøi, J.P. (eds) (2007). *Handbook of Qualitative Research Methods in Entrepreneurship*. Cheltenham: Edward Elgar Publishing.
- Nevins, R. and Hamouda, A. (2019) ‘Generation Y females in Ireland: An insight into a new entrepreneurial phenomenon’, *Proceedings of the European Conference on Innovation & Entrepreneurship*, 716-723. 10.34190/ECIE.19.060.
- Nieva, F. (2015). Social women entrepreneurship in the Kingdom of Saudi Arabia. *Journal of Global Entrepreneurship Research*, 5(1).
- OECD. (2020). Inclusive Entrepreneurship Policies, Country Assessment Notes, <https://www.oecd.org/cfe/smes/Ireland-IE-2020.pdf>. [accessed 01 September 2023].
- O’Gorman, C and Kautonen, M. (2004). Policies to promote new knowledge-intensive industrial agglomerations. *Entrepreneurship & Regional Development*, 16 (6): 459 – 479.
- Pandey, N. K. (2018), An analysis of startup ecosystem in metropolitan city in India, *International Journal of Engineering and Management Research (IJEMR)* 8: 237–44.
- Powell, A., Dainty, A., & Bagilhole, B. (2012). Gender stereotypes among women engineering and technology students in the UK: lessons from career choice narratives. *European Journal of Engineering Education*, 37(6), 541-556.
- Robb, A.M. and Watson, J. (2012) ‘Gender differences in firm performance: evidence from new ventures in the United States’, *Journal of Business Venturing*, 27(5), 544–558.
- Rosser, S. V. (2005). Through the lenses of feminist theory: Focus on women and information technology. *Frontiers: A Journal of Women Studies*, 26(1), 1-23.
- Tan, J. (2008). Breaking the “bamboo curtain” and the “glass ceiling”: The experience of women entrepreneurs in high-tech industries in an emerging market. *Journal of Business Ethics*, 80, 547-564.
- Trauth, E.M. and Connolly, R. (2021). Investigating the Nature of Change in Factors Affecting Gender Equity in the IT Sector: A Longitudinal Study of Women in Ireland, *MIS Quarterly*, (45: 4), 2055-2100.
- Tur-Porcar, A., Mas-Tur, A., and Belso, J. A. (2017). Barriers to women entrepreneurship. *Different methods, different results? Quality & Quantity*, 51(5), 2019–2034.

- Sánchez-Escobedo, M. D., Díaz-Casero, J. C., Díaz-Aunión, A. M., & Hernández Mogollón, R. (2014). Gender analysis of entrepreneurial intentions as a function of economic development across three groups of countries. *International Entrepreneurship & Management Journal*, 10(4), 747–765.
- Shrivastava, M. (2021). “Women Tech Entrepreneurship in India.” *Women’s Entrepreneurship in STEM Disciplines: Issues and Perspectives*, edited by Michaela Mari et al., Springer International Publishing, 61–73. *Springer Link*, [https://doi.org/10.1007/978-3-030-83792-1\\_4](https://doi.org/10.1007/978-3-030-83792-1_4) [ accessed 24 September 2023]
- United Nations (UN). (2021). United Nations Sustainable Development Goals, <https://www.un.org/sustainabledevelopment/education/>. [ accessed 30 March 2023].
- Schein, V.E. (1973). A global look at psychological barriers to women's progress in management. *Journal of Social Issues*, 57, 675–688.
- Sestic, M. and Ibrahimagic, S. (2015). Business Problems in A Women’s Small Entrepreneurship–The Bosnia and Herzegovina Case of Post Conflict and Transition Context in *Economic and Social Development: Book of Proceedings*, 1: 491.
- Shah, H. and Saurabh, P. (2015). Women entrepreneurs in developing nations: Growth and replication strategies and their impact on poverty alleviation In *Technology Innovation Management Review*, 5(8): 34–43 <http://doi.org/10.22215/timreview/921> [ accessed 29 March 2023].
- Watson, J. (2002). ‘Comparing the performance of male- i and female-controlled businesses: relating outputs to inputs,’ *Entrepreneurship: Theory & Practice*, 26(3), 91–100. doi:10.1177/104225870202600306.
- Wilson, A. W. and Patón-Romero, J. D. (2022). Gender equality in tech entrepreneurship: A systematic mapping study. In *Proceedings of the Third Workshop on Gender Equality, Diversity, and Inclusion in Software Engineering*, 51-58.
- Winn, J. (2004). Entrepreneurship: not an easy path to top management for women. *Women in management review*, 19(3), 143-153.
- Wu, J., Li, Y., & Zhang, D. (2019). Identifying women’s entrepreneurial barriers and empowering female entrepreneurship worldwide: a fuzzy-set QCA approach. *International Entrepreneurship and Management Journal*, 15(3), 905-928.