

The logo for WeRin features the word "WeRin" in a bold, black, sans-serif font. The letter "i" is lowercase and has a small orange dot above it. To the right of the text is a stylized sunburst or flower-like graphic composed of several overlapping, semi-circular segments in shades of purple, pink, orange, and yellow. The background of the top half of the cover is white, with a large, abstract shape in shades of orange and purple on the left side.

WeRin

A photograph of a young woman with short brown hair and bangs, wearing black-rimmed glasses and a light-colored button-down shirt. She is holding an open book and a pen, looking directly at the camera with a slight smile. The background is a blurred bookshelf filled with books. The photo is framed by a white border and set against a purple background on the left side of the cover.

**Understanding Current Research on
Inclusive Entrepreneurial Ecosystems**

Literature Review Report

Project information

OVERVIEW

Project Title: Women Entrepreneurs in Regional Inclusive Entrepreneurial Ecosystems (WeRin)

Programme: Erasmus+ KA2: Cooperation for innovation and the exchange of good practices - Knowledge Alliances

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AUTHORS

Iulia Stroila, Sue Rossano-Rivero, Saskia Stoker, Ingrid Wakkee

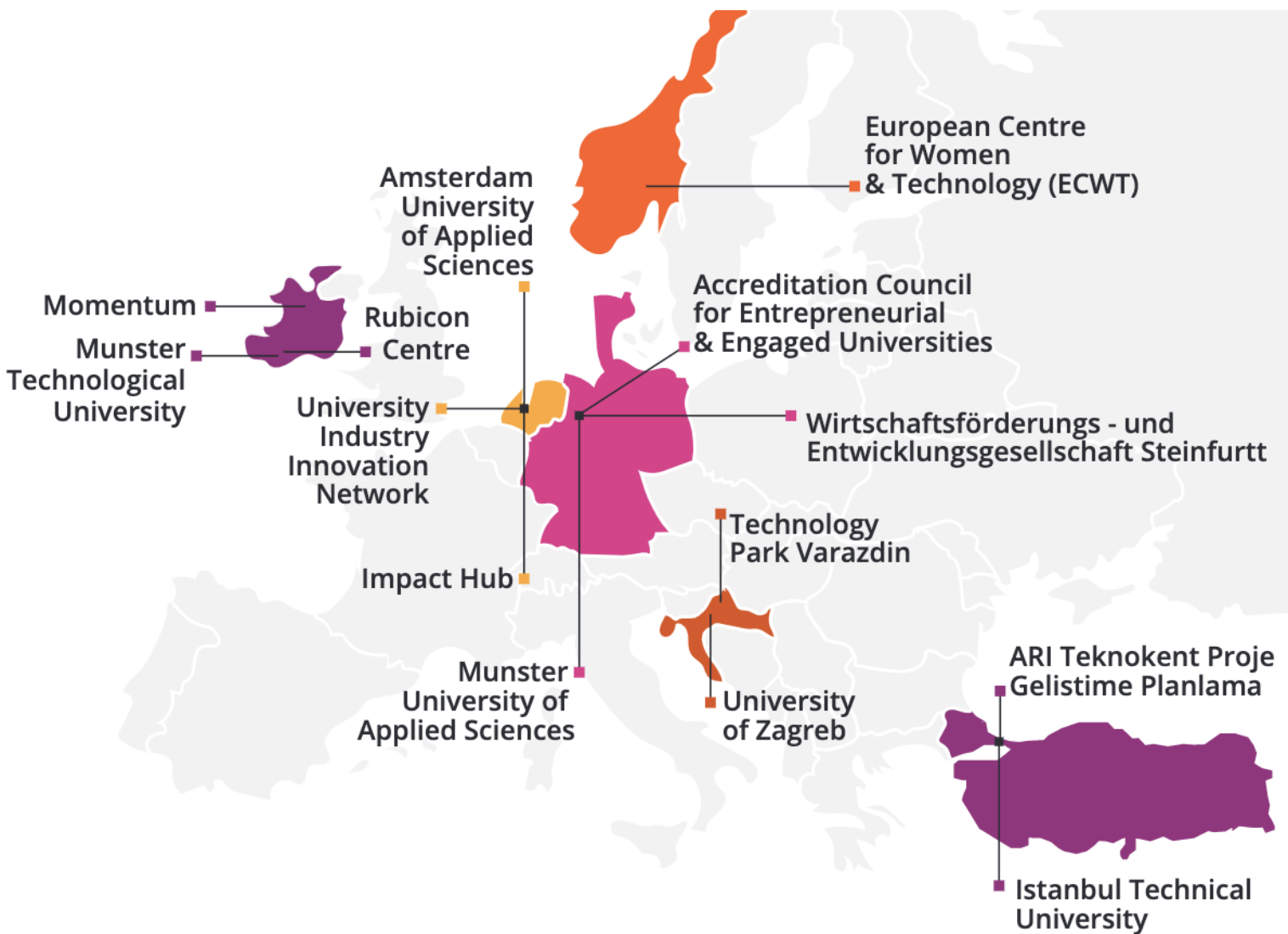
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DISCLAIMER

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Our partners

Funded by the ERASMUS+ Knowledge Alliance programme, the WeRin Project unites fourteen partners from network organizations, associations, research institutes, academia and businesses based in six countries in Europe. Their expertise and strong reputation make a solid foundation for successful achievement of the intended project results .





Overview of the WeRin project

PROJECT SUMMARY

The project Women Entrepreneurs in Regional Inclusive Entrepreneurial Ecosystems (WeRin) seeks to enhance the inclusivity of entrepreneurship education and support programmes with the intent to increase the share of female graduate entrepreneurs and improve their level of embeddedness in regional entrepreneurial ecosystems across Europe.

Despite a rise in participation of female students in entrepreneurship education (EE) at Higher Education Institutes (HEIs), they still lag behind compared to their male counterparts. Even when they have participated in EE, they are less likely to move towards actual entrepreneurial careers after graduation. When they do, these graduate female entrepreneurs are less embedded in the regional entrepreneurial ecosystem: fewer participate in local incubation and acceleration programs, move into science parks, seek and receive funding and/or are active members in regional networks. Many simply do not feel sufficiently invited. Given that female students now make up over 60% of the student population in Europe, this signifies a considerable loss of potential entrepreneurial talent and capacity.

Hence, the question that drives WeRin is: How can we enhance the inclusivity of regional entrepreneurial ecosystems and the embeddedness of women entrepreneurs therein by designing more inclusive academic and non-academic entrepreneurship education and support programmes?

PROJECT AIMS AND OUTPUTS

The WeRin project proposes the development of activities and results which may lead to:

- An extensive review of current entrepreneurship education and entrepreneurship support programs on a diverse set of indicators of inclusiveness, thus taking a holistic approach;
- Learning from best practices from across Europe;
- Redesigning programs through the implementation of the lessons learned and by actively involving the target group; and
- Increasing the share of women entrepreneurs graduating from HEIs and becoming embedded in the (regional) entrepreneurial ecosystem.

KEY RESEARCH PRIORITIES IN THE WERIN PROJECT

In the WeRin project, our key research priorities are:

- to identify the current state of gender-inclusivity of academic and non-academic entrepreneurship education and support programmes offered in each region by applying a qualitative research method
- to identify and analyse good practices for embedding women (graduate) entrepreneurs in regional entrepreneurial ecosystems across Europe through ecosystems and entrepreneurship support programs
- to identify regionally embedded female role models in each partner region
- to design the research instruments to track and measure the performance of innovative and inclusive entrepreneurial learning approaches and build bridges between HEIs and the broader entrepreneurial ecosystem



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1. Introduction

The Europe 2020 strategy and recent policy measures aim to expand entrepreneurship in each EU Member State (e.g., The Missing Entrepreneurs, 2019). Europe has taken the path to strengthen entrepreneurial culture and networks by assembling strategies and actions to enable everyone to start a successful and sustainable business, despite their gender, age, place of birth, or other personal characteristics. However, the field of entrepreneurship remains strongly male-dominated (Dileo & Pereiro, 2018). Even though women have struggled in the past decade to break the *glass ceiling*, start their ventures, or increase their participation in leadership positions, data suggests that women's entrepreneurial potential is still underutilised (Ughetto et al., 2019). The assumption that underlies most entrepreneurial ecosystems is that all entrepreneurs can equally access the ecosystem's support. In theory, this assumption is valid. However, in practice, this is not always the case (Brush et al., 2019); and even if the self-employment pattern has seemed to be increasing in recent decades, women are still less likely than their male counterparts to have entrepreneurial ambitions and entrepreneurship remains heavily male-dominated (Wu et al., 2019). In this line, according to the Global Entrepreneurship Monitor (GEM) study for 2018, 21 economies of the 74 in the sample show low entrepreneurial activity rates, and gender gaps persist in many regions of the world with levels that are half or less than half the level of men. This pattern arguably represents a significant waste of potential for society, diminishing the magnitude of innovation (Adom, 2015).

The lower entrepreneurial activity amongst women has been attributed to the traditional general attitudes in entrepreneurship education, which are discouraging for women (Dilli & Westerhuis, 2018). Therefore, traditional masculine assumptions underlie ideas about entrepreneurship, which in turn are presented to students in a classroom. There is little to no reflective process in developing the curriculum and entrepreneurship courses to challenge the "gendered entrepreneurship" (Tegtmeirer & Mitra, 2015, p. 225).

Women's lower entrepreneurial experience and reduced propensity to take a risk (Fairlie & Rob, 2009), a lack of educational resources and support of various institutions, as well as inaccessibility to financial and social capital required for the identification and exploitation of opportunities (Alesina et al., 2013) are a few of the difficulties women face in starting a new business. Evidence that soft dimensions of the entrepreneurial ecosystem (i.e., training and education, role models and mentors, human resources and workforce, markets' accessibility) are relatively less accessible for women has also been reported (Foss et al., 2019).

Against this background, there is a need for more inclusive approaches in entrepreneurship. Inclusion in education is "the right of all learners to quality education and the development of their full potential, regardless of special educational needs, disability, sex, social or economical backgrounds" (UNESCO, 2021). According to UNESCO (2005), inclusion is concerned with responding appropriately to various learning requirements in formal and informal educational environments. Rather than being a secondary concern about how certain students can be incorporated into formal education, inclusive (entrepreneurship) education will necessitate a strategy that investigates how to change education programs and other learning experiences to achieve success. Furthermore, there is strong evidence that institutions in the entrepreneurial ecosystems beyond academia are not fully inclusive of women entrepreneurs (Hechavarría & Ingram, 2019). Women are less well represented in incubators and scale-up programs and face substantial challenges such as fewer opportunities in start-up capital acquisition (National Women's Business Council, 2017), lower perception of the possibility of business creation, a greater fear of failure and low self-efficacy, and confidence since their role models tend to be male or have only masculine qualities (GEM, 2016/2017).

Suppose entrepreneurship education in Higher Education is inclusive, but the entrepreneurial ecosystem beyond academia is not fully inclusive towards women (aspiring) entrepreneurs that have already crossed the boundaries of HEIs; In that case, women will face several challenges, such as limited access to networks, entrepreneurial finance, government support, role models, and mentoring (Hechavarría & Ingram, 2019). Suppose women entrepreneurs' rate is to be improved. In that case, measures must go beyond fixing women through educational and training activities, hence moving the focus from individuals to resource providers, networks, and the connectors within the ecosystem (Foss et al., 2019, p.4). HEI's and their partners in the local ecosystem need to collaborate to increase the number of female graduates to engage in entrepreneurship, facilitate and remove obstacles to entrepreneurship overall (Brush et al., 2019), and support the progression and advancement of entrepreneurial journeys.

WeRin aims at making entrepreneurship education and support programs more inclusive at both ends of the story; at the time when female students receive the entrepreneurship education and when they transcend the boundaries of HEIs, thus bridging the apparent valley of death from entrepreneurship education towards the incubation of ventures from female students in HE and women that have decided to embark in an entrepreneurial career after graduation, hereafter denominated by graduate aspiring women entrepreneurs.

The following report explores the current research on (women) entrepreneurship in higher education, gender inclusivity, and the inclusive entrepreneurial ecosystems. The aim is to make women feel invited to the regional entrepreneurial ecosystem. The question is:

How can we enhance the inclusivity of regional entrepreneurial ecosystems and the embeddedness of women entrepreneurs therein through the design of more inclusive academic and non-academic entrepreneurship education and support programs?



Gender and entrepreneurship

Several researchers have empirically examined and confirmed gender disparities in the field of entrepreneurship (Barrett & Moores, 2009; Lockyer & George, 2012). Gender and entrepreneurship research is a diverse area, with some characterisations based on the stage of business expansion and a variety of *gender* definitions (Lockyer & George, 2012). Gender in entrepreneurship has attracted more attention recently because of many qualitative studies and surveys (Link & Strong, 2016), demonstrating how gender: may affect entrepreneurial activity; how it manifests itself; and how it varies across diverse identities of entrepreneurship (Stead, 2017) and within socioeconomic settings (Lewellyn & Muller-Kahle, 2016).

THE PARADOX OF HIGHLY EDUCATED WOMEN AND ENTREPRENEURSHIP

Even though women's entrepreneurship is not a new phenomenon, a new category of well-educated women entrepreneurs has developed (Sundin & Holmquist, 2006). Until the past few decades, women have received less formal education than their male counterparts (Quenzel & Hurrelmann, 2013). Women were underprivileged by access inequalities to higher education. In OECD countries, in 1985, women made up 46 per cent of higher education students (1.2 men for every woman) (OECD, 2009). However, the rapid growth in women's involvement in higher education has changed the trend, accelerating year after year. Nowadays, the formal education levels of women, on average, tend to resemble or exceed those of men (OECD/European Union, 2017). For instance, in the EU member countries, women who attained tertiary education in 2018 was 39 per cent compared to 31.3 per cent of their male counterparts (OECD, 2018).

Even though women with higher education degrees might have access to new professional opportunities, they may see possibilities they want to explore or prefer to launch their businesses (Kelley et al., 2017).

However, there are a few challenges in the education field. Women's entrepreneurial activity rates decrease as economic development levels grow, pointing to the contextual barriers women entrepreneurs face (Kelley et al., 2017). Simultaneously, the percentage of women entrepreneurs with a bachelors' degree or higher increases with the economic development intensity. For instance, 61% of women entrepreneurs in innovation-driven economies have a post-secondary degree or superior, but 14% in factor-driven economies. Thus, in innovation economies, women entrepreneurs hold higher education levels. However, the entrepreneurial activity rate is lower compared to the one in factor-driven economies. The contradiction of lower entrepreneurial activity levels in more educated economies is relevant to examine in further research.

Education alone is not working to increase the number of women entrepreneurs. This highlights the importance of identifying the cause(s) of low participation rates by women in entrepreneurship. Furthermore, context-specific considerations are essential since they can either encourage or discourage women entrepreneurs. Hence, a country's competitive advantage can be protected, and innovation capacities can be better leveraged.

“Factor-driven economies are the least developed. They are dominated by subsistence agriculture and extraction businesses, with a heavy reliance on (unskilled) labour and natural resources” (Global Entrepreneurship Monitor, 2021).

CONCEPTUAL DEFINITIONS

Before outlining the specific methods used in the literature review, it is critical to define the key concepts, especially as the literature is not unambiguous. Definitions of the key concepts used in this literature review are provided in Table 1. The key components are *entrepreneur*, *entrepreneurship education*, *gender-inclusive entrepreneurial ecosystem (regional)*, *entrepreneurial ecosystem*, and *women's academic entrepreneurship*.

Table 1. Conceptual definitions

Concept	Definition
Entrepreneur	(Women) entrepreneurs are (co-)founders and/or owner-managers of innovative and scalable ventures (Carree et al., 2007).
Entrepreneurship education	The term entrepreneurship education can be interpreted in two ways; either learning about entrepreneurship as a phenomenon or learning valuable skills to become an entrepreneur (Rasmussen & Sørheim, 2006). There are three primary activities aimed at stimulating entrepreneurship that should be found at a university. First, activities to create and maintain an enterprising culture at the university serve as an integrated part of all courses, research, and external activity. Second, the provision of separate courses in entrepreneurship to students. Third, the offer of specific training programs for individuals who wish to start their enterprise (Rasmussen, 2006, p. 187).
Gender-inclusive entrepreneurial ecosystem (regional)	Underlying most entrepreneurship ecosystem frameworks is the assumption that all entrepreneurs have equal access to resources, participation, and support and an equal chance of a successful outcome (venture start-up) within the entrepreneurship ecosystem (Brush et al., 2019). Therefore, an inclusive entrepreneurial ecosystem is open to entrepreneurs from diverse backgrounds (socio-cultural, ethnic, gender) and provides equal opportunities to these different groups (Harrison et al., 2018).
Entrepreneurial Ecosystem	"The Entrepreneurial Ecosystem is a set of different individuals who can be potential or existing Entrepreneurs, organisations that support Entrepreneurship that can be businesses, venture capitalist, business angels, and banks, as well as institutions like universities, public sector agencies, and the entrepreneurial processes that occur inside the ecosystem such as the business birth rate, the number of high potential growth firms, the serial entrepreneurs and their Entrepreneurial ambition". (Mason & Brown, 2014, p.5).
Women's academic entrepreneurship	Academic entrepreneurship has been defined as the commercialisation of research (Abreu & Grinovich, 2017). Disclosure of research and commercialisation are critical parts of academic life, with women entrepreneurs being less likely to disclose their research, to own a patent, or to form a spin-out company based on their research (Abreu & Grinovich, 2017) although women have been closing the gender gap on academic publications (Xie & Shauman, 2003). A women academic entrepreneur is defined as a woman who is benefitting from academic research through women entrepreneurship in an innovative and scalable venture by starting or owning a business based on research and knowledge generation or applications.

2. Research Methodology

The following report aims to understand the current research on (women's) entrepreneurship in higher education, gender inclusivity, and inclusive entrepreneurial ecosystems. To this end, a consortium of European partners has joined forces to explore the current state of research on (women's) entrepreneurship in higher education, gender inclusivity, and inclusive entrepreneurial ecosystems. These partners include well-established entrepreneurship experts from European HEI.

RESEARCH DESIGN

In conducting this literature review, we used a *narrative review* (Cronin & Elizabeth, 2020) approach to identify all research papers and practitioner reports focusing on inclusive entrepreneurial ecosystems and the related concepts. Narrative reviews serve an important function in taking stock of the state of research within a particular community of practice and then suggesting ways in which that community can improve (Cronin & Elizabeth, 2020, p.7).

Since the current stream of literature on inclusive entrepreneurial ecosystems and its associated concepts is still sparse and fragmented, we intend to gather a preliminary understanding of this topic. After mapping out the contemporary literature on inclusive entrepreneurial ecosystems and the related concepts, we propose a future research agenda focused on (women's) entrepreneurship in higher education, gender inclusivity, and inclusive entrepreneurial ecosystems. The promising areas of scholarly inquiry are based on the literature review. They are further considered the most relevant literature streams for the future development of inclusive entrepreneurial ecosystems.

The narrative review is characterised by a rigorous and transparent research approach to minimise bias in the literature. An exhaustive selection is carried out based on objective criteria for the topic studied (De Brito &

Leitão, 2020). In this case, various stages according to a pre-established process proposed by Higgins and Green (2011) have been followed.

First, a research plan was drawn up, including the related concepts on inclusive entrepreneurial ecosystems and criteria for including publications. As the aim of this literature review is to map out the streams of literature related to the concept of inclusive entrepreneurial ecosystems, the protocol considers the five concepts: The concepts have been discussed in advance by consortium partners based on their expertise and are formulated as followed:

- Gender-inclusive entrepreneurial ecosystems
- (Gender-inclusive) entrepreneurship education,
- Women networking/role models,
- Women's academic entrepreneurship
- Gender bias/stereotypes in entrepreneurship.

INCLUSION CRITERIA

To help understand the current state of the literature, we have considered the following inclusion criteria for selected research papers and practitioner reports in the period between 2006 and 2021:

- Articles published in the period from 2006 until 2021.
- Articles published in English.
- Scientific literature: consortium-owned publications and scientific literature dedicated to the topic, conference proceedings (70%).
- Grey literature: white papers, reports, policy reports, communication of policymakers or thought leaders, studies undertaken by regional governance, the European Commission, OECD, or other relevant stakeholders (30%).

3. Literature Review

RESEARCH ANALYSIS

The paper follows a narrative analysis (Cronin & Elizabeth, 2020) to identify trends within this gender-related subsample of the entrepreneurship ecosystem assessment literature: (1) ecosystems; (2) entrepreneurship education; (3) women networking/role models; (4) women's academic entrepreneurship; and (5) Gender bias/stereotypes. The comprehensive literature review focuses on two issues. First, general trends in inclusive entrepreneurial ecosystems are discussed, particularly how the concept of inclusivity has been used so far in the academic literature. Second, empirical findings on the five gender-inclusive entrepreneurship concepts are synthesised and discussed. This provides a comprehensive picture of the current stand of academic research and allows for a compelling research agenda that will advance research on inclusivity within entrepreneurial ecosystems.

A total of 96 papers have been identified by searching the databases Scopus, Web of Science and Google Scholar from management, business, and education.

After identifying articles for inclusion, the information was entered into an Excel spreadsheet: author name(s), article title, year of publication, the country where data was collected, theoretical frameworks, methodology, measures, and findings. The total number of papers identified in the search is illustrated in Figure 1, whereas the overview of the methodology can be seen in Figure 2.

SEARCH STRINGS

The following key search terms were used for each of the sub-concepts:

Gender-inclusive entrepreneurial ecosystems

The empirical research consisted of a narrative literature review about "female" OR "women" OR "gender" OR inclusive AND "entrepreneur* ecosystems" AND (incubator* OR support* OR barrier* OR obstacle* OR driver* OR enhance* OR network*) in the entrepreneurship and related fields. The search yielded 22 papers that were included in the literature review. From these papers, 21 are research papers and one practitioner report.

Women's academic entrepreneurship

The empirical research consisted of a narrative literature review with key search words: "female" OR "women" OR "gender" AND "entrepreneur* ecosystems" AND (academic* OR university* OR student*) in the entrepreneurship and related fields. The search yielded 17 papers that were included in the literature review. From these papers, 16 are research papers and one practitioner report.

Women networking and role models

This empirical literature search consisted of a narrative literature review with the search keywords female* OR wom*n OR gender OR lady OR ladies AND entrepreneur* OR enterprise OR business OR self-employed OR "Self employed" OR self-employ* OR Start-up* OR "Start ups" OR Founder* OR Owner* OR CEO AND Networks OR Stakeholders OR "Social inclusion" OR Participat* OR Engag* AND Embeddedness OR Ecosystem OR embed in the entrepreneurship and related fields. The search yielded 14 papers that were included in the literature review.

Gender bias and stereotypes in entrepreneurship (education)

This empirical literature search consisted of a narrative literature review with the search keywords "female", OR "women" OR "gender" OR "gender bias" OR "stereotypes" OR "bias" AND "entrepreneurship" OR "entrepreneur" in the entrepreneurship and related fields. The search yielded 23 papers that were included in the literature review. From these papers, 22 are research papers and one practitioner report.

(Gender-inclusive) entrepreneurship education

This empirical literature search consisted of a narrative literature review with the search keywords "entrepreneurial education" OR EE OR "entrepreneurship education" AND (academic* OR university* OR student*) AND gender OR female OR wom*n in the entrepreneurship and related fields. The search yielded 17 papers that were included in the literature review.

Figure 1. Share of identified papers

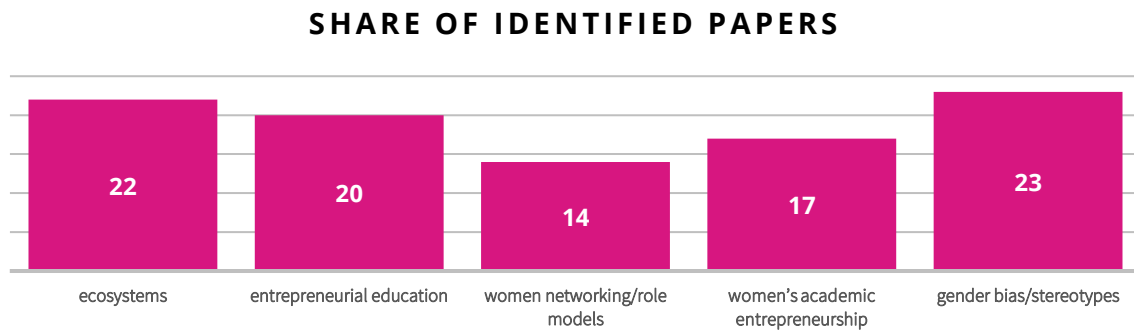


Figure 2. Methodology used in identified papers

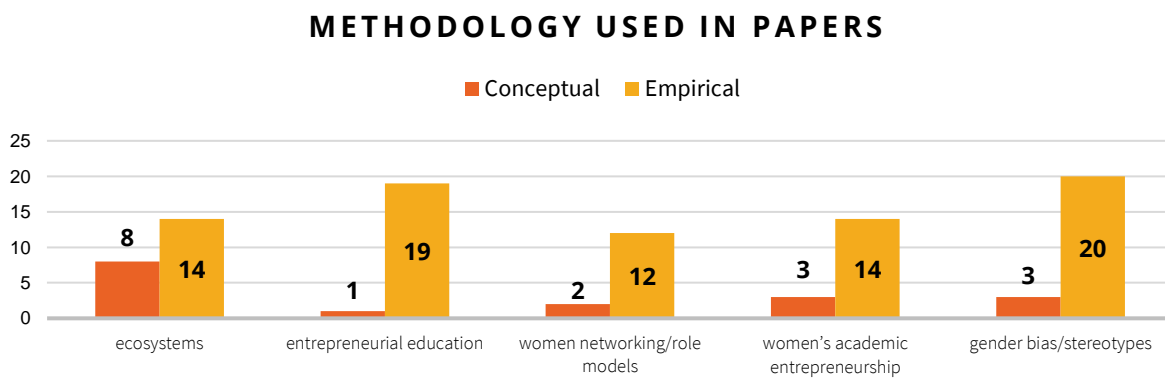
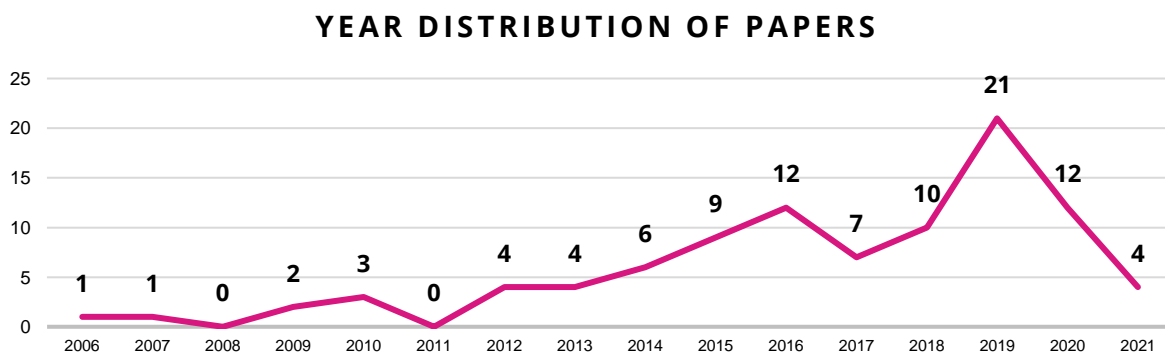


Figure 3. Year distribution of papers





4. Results

Papers in this study are based on the entrepreneurial ecosystem concept and concentrate on many of its components and their complex (inter)relationships. They employ different research methodologies (conceptual, qualitative, and quantitative), various theoretical frameworks and analyses' levels (individual, business, and consolidated country level), and data sources varying from narratives to comprehensive non-comparable panel datasets.

Gender-inclusive entrepreneurial ecosystems

Research suggests that entrepreneurial activity can be either facilitated or hindered by ecosystems (Stroila, 2020). The existing entrepreneurship ecosystem frameworks and perspectives appear to be essential factors that promote or hinder entrepreneurship. These frameworks and perspectives ignore the possibility that reasons for variance can be attributed to gender (Brush et al., 2019). Though gender may be implied in cultural definitions (Isenberg, 2010), or participant heterogeneity in an ecosystem (Roundy et al., 2017), or in the public status of freelancers or start-up communities (Mason & Brown, 2014), research suggests that adopting gender-aware practices may lead to improvement of theory and expand our understanding of entrepreneurial ecosystems in general (Brush et al., 2019).

The articles elaborate on the gendered impact of the various ecosystem components and stages, as well as the question about the ability of women entrepreneurs to influence the vibrancy of entrepreneurship ecosystems on regional and national levels (Brush et al., 2019; Foss et al., 2019; Hechavarría & Ingram, 2019; Wang et al., 2019). The most prominent factors of ecosystems are at the local scale rather than at the national scale (Berger & Kuckertz, 2016). Further, studies highlight the importance of a gender-based perspective by emphasising entrepreneurs' agency in their concepts (Stead, 2015). Current research does not explore socioeconomic conditions or drastically affect the entrepreneurship ecosystem, reinforcing the status quo. Furthermore, persistent gender gaps range through an ecosystem context of public perception of venture failure and society apprehension of venture failure.

Availability of support mechanisms within inclusive entrepreneurial ecosystems

One literature review identifies critical challenges faced by women in obtaining sufficient financing to begin and develop their ventures, particularly about

start-up capital (Foss et al., 2019). Orser et al. (2019a), who investigate strategies that strengthen ecosystem supports for women entrepreneurs, argue that incubator inclusivity is driven by variables such as leadership, organisation, and signalling. Government funding agencies should hold business support organisations accountable for equity, diversity, and inclusion inputs, processes, and outcomes. Measures of organisational performance should include economic and social impact indicators. Though there are many women CEOs managing incubators, boards are less gender-inclusive.

Finally, our review also indicates that entrepreneurship support organisations such as incubators and accelerators are ineffective at engaging women and organising their inclusion activities (Orser et al., 2019b). Most of these institutions' inclusion efforts are emergent, and the success of their inclusion activities still must be evaluated. Despite many women entrepreneurship support networks, women entrepreneurs, specifically women of colour, continue to remain distant from existing entrepreneurial support programs.

Existing models and perspectives on entrepreneurial ecosystems are significant for evaluating factors that promote or hinder entrepreneurship. On the other hand, explicit consideration of gender can improve the theory and expand our comprehension of entrepreneurial ecosystems in general and provide a more detailed and holistic view of how to encourage and overcome barriers to entrepreneurship in general. Moreover, given the digital era, women might benefit through technological advancements in improved employment prospects and decreased mobility restrictions. However, in contexts where gender differences in accessibility, knowledge, and self-perceptions about digital technologies persist, the promise of digitalisation for women may not manifest all the predicted consequences.

Women's academic entrepreneurship

Studies that examine the gender dimension in academic entrepreneurship are scarce (Best et al., 2016) and frequently restrict their emphasis to quantitative measurements by adopting a *gender as a variable* perspective (Perkmann et al., 2013). While many scholars have focused their interest and study on academic entrepreneurship and gender separately, these two concepts have been rarely studied in combination with one another. Link and Strong (2016) argue that the relationships between gender and academic entrepreneurship have been examined in only six out of over 500 scholarly contributions (published between 1979 and 2016).

Despite the scarcity of data, it is indicated that significantly fewer women than men are involved in academic entrepreneurship, and future research should focus on the development of networks with external organisations (Abreu & Grinevich, 2017; Garcia-Palma et al., 2016) the role of gender in academic entrepreneurship and the engagement of women academics in the commercial exploitation of academic research (Dahlstrand & Politis, 2013; Elliott et al., 2020; Lawton-Smith et al., 2017). Policies on technology and innovation transition at universities are often *gender-neutral*. Gender disparities in entrepreneurial trends designate that academic entrepreneurship is not "a gender-neutral phenomenon" (Goel et al., 2015, p. 175). The gender dimension is slightly integrated into the knowledge and technology transfer (Elliot et al., 2020; Best et al., 2016). Moreover, within the Science, Technology, Engineering, and Mathematics (STEM) disciplines, it has been found that women report far fewer technology disclosures and licenses, launch fewer businesses and have a lower chance of raising venture capital and angel funds (Rosser, 2012; Schiebinger, 2008). Women academics attempting to monetise their research do face unique and often more complex issues than men.

Commercialisation activity within women's academic entrepreneurship

Nevertheless, women's commercialisation operation tends to be of higher quality than men's, implying that counting alone does not provide a total and reliable view (Lawton-Smith et al., 2017). Women academics

seek to commercialise their research under challenging circumstances, many of which are related to implicit gender biases in the education system, and the majority of which represent global developments in entrepreneurship. However, in industry, women's commercialisation activities are significantly greater than in academia (Smith & Woods, 2015). This pattern arguably represents a large waste of potential for society and universities and diminishes the innovation's capacity (Etzkowitz et al., 2008). Similarly, women's potential continues to be largely unused in most disciplines (Etzkowitz et al., 2008). As women increasingly enter higher education faculties (Howe et al., 2014), this gender gap within the knowledge transfer area becomes increasingly problematic for universities. The transfer of ideas from knowledge institutions to businesses is not only essential for the economy of a country (Aldridge & Audretsch, 2011), but it also capitalises on innovation, supports the expansion of experimental learning curricula for undergraduates, and provides funding sources and income to researchers and institutions.

Motivations within women's academic entrepreneurship

Recent research claims that women academic entrepreneurs are motivated by wanting to implement their scientific work, as a result, achieving a positive value for society. On the other hand, male academic entrepreneurs are motivated by more individual ambitions such as financial gain and popularity, and they place an emphasis on product value and technological advantages (Iffländer et al., 2018). However, individuals' ability to align with the traits and behaviours identified with entrepreneurship determines when they engage in entrepreneurial activity (Laudano et al., 2019; Miranda et al., 2017) and allege that when entrepreneurship is strongly linked with individuality, persistence, self-confidence, high productivity, and decisiveness; this may harm women's entrepreneurial self-perception. It is essential to add that involvement in business practices does not ensure that a person perceives themselves as an entrepreneur, and women are less inclined to perceive themselves as entrepreneurial (Keser, 2014).

Women networking and role models

A well-documented factor in explaining the gender gap in entrepreneurship is that women entrepreneurs hardly have access to role models and mentors (Ganzerla, 2008; Byrne et al., 2019). The limited number of role models for highly educated women widens the gender gap in entrepreneurship even further. For instance, 20% of women indicated that they know an entrepreneur compared with nearly 25% of men (Bosma & Kelley, 2019). Even though entrepreneurs are presented in the media, they are overwhelmingly male, Caucasian, and not individuals to whom most women can relate (Kelley et al., 2017). A range of different women entrepreneurs with diverse backgrounds needs to be showcased. This will fight gender stereotypes by displaying women entrepreneurs active in sectors that are generally seen as *masculine* (OECD/European Union, 2017). This requires strengthening the linkages between the business sector and the universities, including women entrepreneurial role models celebrated within the university settings.

Networking within inclusive entrepreneurial ecosystems

Research shows that network relatedness and social capital allocation vary substantially between women and man entrepreneurs about the gendered impact of the entrepreneurship ecosystem's social attributes (Neumeyer et al., 2019; McAdam et al., 2019; Sperber & Linder, 2019). The form of a venture, the entrepreneur's background, and ethnicity influence the comprehended degree of social assistance from the ecosystem. Hence, Neumeyer et al. (2019, p. 482) discover that men entrepreneurs in "aggressive- and managed-growth venture networks" have higher bridging social capital results because women entrepreneurs outperform men entrepreneurs in lifestyle- and survival-business networks. In the same direction, McAdam et al. (2019) discover that gender capital cannot be accumulated by women engaging in only women's networks. Therefore, women have limited access to other forms of capital, which leads to reduced credibility. However, according to these two studies, experienced women entrepreneurs can

organise and leverage their networks better. Furthermore, the last result indicates that a more holistic approach is needed that investigates women entrepreneurs' diversity as well as make a comparison of entrepreneurial attitudes of men and women to comprehend the gendered impacts of social networks.

Networking within women entrepreneurship

Several researchers stress the relevance of networking to stimulate entrepreneurship; however, the way networks are used appears to be *gender-specific* (Klyver, 2011). By implementing gender-aware policies, support institutions and networking can reduce gender inequities (Ozkazanc-Pan & Clark Muntean, 2018). Networking activities provide women technology entrepreneurs with access to resources and services that would otherwise be unavailable to them. Observing the diverse dimensions of networking, business strategies at incubators and accelerators, and formalised gender roles in society, companies tend to partake in *gender neutral* recruiting practices and encourage transaction-based networking, essentially reproducing gender inequalities.

Research on networking argues that men and women create their networks differently (Bogren et al., 2013). For instance, women's networks are more homogeneous compared to men's, and women's networks are made up of more family and friends members (Renzulli et al., 2000). Despite their differences, men are found in women's and men's networks (Bogren et al., 2013). Personal networks provide more support than business networks; personal interactions with other entrepreneurs are valued, and willingness is a key factor. Women entrepreneurs who can create new networks have highly heterogeneous networks than those who do not have this desire. Further findings point to various levels of inspiration for market expansion too. This study provided a more complex view of the relationship between networking and the desire to grow by categorising women entrepreneurs as "unwilling," "willing," and "extra willing" (Bogren et al., 2013, p. 69).

Women entrepreneurs with higher social network positions or who were part of diverse networks demonstrated a stronger sense of how to engage than nascent entrepreneurs and members of women-only networks (McAdam et al., 2019). They have a more formed sense of habitus (i.e., socially ingrained habits, skills and dispositions), so they were forced to study the system's rules to be considered trustworthy players and successfully perform in the entrepreneurial ecosystem. Networks in those that participated in women-only networks or weak networks acted to perpetuate marginalisation and a sense of authority.

Networking within women's academic entrepreneurship

A networking perspective has also been brought to the academic entrepreneurship literature to explain the levels of engagement in academic entrepreneurship. Studies have found that women academics have lower accessibility to essential networks and R&D. Establishing and expanding specific networks often necessitates accessibility to multifaceted assets, both tangible and intangible, which can only be obtained by communicating with a diverse variety of organisations and individuals (Collison & Gregson, 2003). From an opportunity recognition perspective, this lack of networks affects the likelihood of commercialising research. Women scholars are less likely to know people who can support them in recognising the monetary advantages of their study and successfully commercialising it (Stuart & Ding, 2006). As a result, factors such as personality, attitudinal, and cognitive aspects influencing academics' participation in entrepreneurial activities have received considerable attention (Azagra-Caro, 2007).

Role models within women entrepreneurship

Exposure to role models impacts entrepreneurial behaviour and intentions (Abbasianchavari & Moritz, 2021; Nowiński & Haddoud, 2019). This influence is determined by how, where, and how role models are selected and presented. The inclusion of role models in the entrepreneurship education field, especially at a young age, can potentially enhance behaviour and intentions in the entrepreneurial context (Abbasianchavari & Moritz, 2021).

Role models influence an individual's entrepreneurial proclivity by displaying favourable media representations and narratives through direct intercommunication and case studies applied in entrepreneurship education (Bijedić & Welter, 2015).

There is clear evidence in the literature that parental role models positively influence a daughter's entrepreneurship behaviour (Hoffmann et al., 2015). In the same line, there is evidence from France that students show higher entrepreneurial intention when exposed to fictional role models (Lavolette et al., 2012). Studies of nascent entrepreneurs in the Netherlands in the retail, hotel, and restaurant sectors and business services concluded that one-third of entrepreneurs would not have opened their businesses if not for their role model (Bosma et al., 2012). Wyrwich et al. (2016) find that knowing an entrepreneur decreases others' fear of failing. The authors further suggest that signals produced by entrepreneurial role models may be missed or misinterpreted in low-approval contexts if they do not align with the dominant cognitive appraisal paradigm of entrepreneurship.

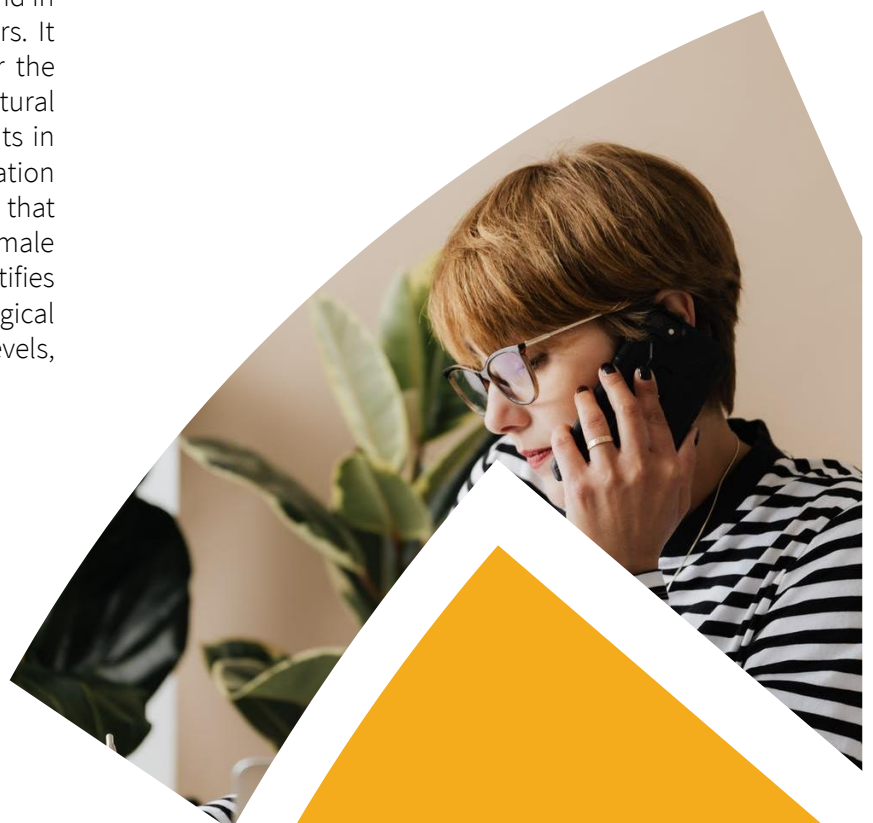
Structural aspects of (persistent) inequalities tend not to be surfaced in the literature, and a legitimisation process debates whether it should be the responsibilities of the individual or the individualisation of responsibility (Byrne et al., 2019). According to Byrne et al. (2019), five types of women entrepreneurs exist: (1) the individualised superwoman entrepreneur, (2) the relational women entrepreneur, (3) mumpreneur/maternal entrepreneur, (4) funpreneur or pleasure and passion seeking entrepreneur, and (5) the non-preneur, excessively feminine entrepreneur. Kalden et al. (2017) argue that cognitive models enable women to see themselves in the position of entrepreneurs. This means that successful entrepreneurs depicted as *superwomen* will create perceptions in the women's minds who want to partake in entrepreneurship in the context of a favourable role model or the recognition that they would need for their future careers (Carter et al., 2003). Even though entrepreneurs are promoted in the media, they are overwhelmingly male, caucasian, and generally, not individuals to whom women can relate (Kelley et al., 2017).

Furthermore, not only success stories but also stories about failure have a positive impact on entrepreneurial ambitions. (Liu et al., 2019). However, the stories of successful role models have a more substantial influence than the stories concerning failure. Idol stories, rather than peer stories, are more likely to spark people's entrepreneurial interests. Furthermore, individuals with poor entrepreneurial self-efficacy are less impacted by the storytelling process. A paradox in role model narratives points to role models simultaneously performing and denying social embeddedness within their narratives, particularly with minority and disadvantaged entrepreneurial aspiring entrepreneurs.

Role models within entrepreneurship education

The recent work of Abbasianchavari and Moritz (2021) specifically focuses on the use of role models in educational content. Their work reveals that prior research concentrates mainly on different types of role models (by whom), at which stage of life (when), and in which context the exposure to role models occurs. It could help policymakers and educators consider the different types of role models, the socio-cultural context, and the life cycle stage of the participants in structuring their entrepreneurship education programs. Tegtmeier and Mitra (2015) find that developing a focused approach based on a female ontology of entrepreneurship, and one that identifies specific contexts, and appropriate methodological considerations that enable inquiry at different levels, are of value to future research.

Gender moderates influences the antecedents of the theory of planned behaviour (Karimi et al., 2014, Türko, 2016). The perceived behaviour control (self-efficacy) and attitudes towards entrepreneurship are more strongly influenced by role models, in particular, exposure to parental role models (Türko, 2016) for females as opposed to male students (Karimi et al., 2014; Türko, 2016).



Gender bias and stereotypes in entrepreneurship

One of the challenges of women entrepreneurs is the effect(s) of gender bias and/or gender stereotypes in entrepreneurship and entrepreneurship education. To date, most studies addressing gender bias or gender stereotypes in entrepreneurship (education) research are written from a students' perspective, measuring the effect of gender stereotypes on students' entrepreneurial intention. In addition, it is interesting that most of the research on the students' perspective is quantitative research (e.g., Gupta et al., 2005). Only a few studies use qualitative research for their approach, and remarkably, only one study in this literature review has a mixed-method research approach (Foss et al., 2019). Another perspective used to address the issue of gender bias or gender stereotypes is from a female business owner perspective.

Main insights from a students' perspective

In 2013, research from Shenor et al. showed that male students exhibit higher levels of entrepreneurial intentions, self-efficacy, and social norms than female students. Also, other research shows lower intentions of female students than their male counterparts and that these differences are consistent across countries (Ozaralli & Rivenburgh, 2016; Yildirim et al., 2016). This gender gap may stand as a significant problem for developing women's entrepreneurship in the future. Research by Markussen and Røed shows that the gender gap is preserved through the influences of gender-specific networks and peer effects (2017). Strikingly, their research indicates that differences between male and female peer groups (family members, neighbours, and schoolmates) explain approximately half of the gender gap in early career entrepreneurship (2017). Since influences are heavily gendered, in the sense that men are more influenced by other men and women are more influenced by other women, this mechanism represents an essential source of gender gap persistence. Today, women are underrepresented in entrepreneurship partly because they were underrepresented in the past (Markussen & Røed, 2017).

Research by Sesen (2014), Yildirim et al. (2016), Türko (2016) advises that universities should consider specific policies regarding entrepreneurship education and, for instance, consider empowering and encouraging female students for entrepreneurial activities and must seek to transform the entrepreneurial environment. Especially for female students because entrepreneurship is mainly perceived as a career path more attractive for male students (Sesen, 2014). However, the question remains if male students' higher levels of entrepreneurial intentions can be explained by an effect of gender stereotypes and/or gender bias intertwined within the ecosystem. In 2014, an important insight from the research conducted by Gupta et al. (2014) was published about the effect of gender stereotypes on entrepreneurial intentions of men and women. As predicted, men reported higher opportunity evaluation than women when no gender-stereotypical information was presented. In addition, men and women evaluated business opportunities equally favourably when entrepreneurs were described using gender-neutral attributes.

Interestingly, gender differences in opportunity evaluation were exacerbated when entrepreneurship was linked to stereotypical masculine information and reversed in favour of women when entrepreneurship was linked to stereotypical feminine information (Gupta et al., 2014). In addition, the results from research conducted by Goktan & Gupta (2015) suggest that entrepreneurial orientation is higher among men and that among men and women, masculinity and femininity are positively related to entrepreneurial orientation. Finally, results show that an androgynous identity contributes more to entrepreneurial orientation than masculine, feminine or undifferentiated gender identities (Goktan & Gupta, 2015). Based on these insights, one would suggest ungendered curricula. Therefore, modification of entrepreneurship education curricula will reduce stereotypes that hinder women in entrepreneurship (Türko, 2016) and challenge the underrepresentation of women (Markussen & Røed, 2017).

Main insights from an entrepreneurial perspective

Laguía et al. (2019) call attention in their research paper to the male paradigm that applies to entrepreneurship, highlighting the need for more awareness of gender stereotypes. Their insight is in line with the results of Gupta et al. (2005) and Gupta et al. (2009), arguing the role of socially constructed gender stereotypes in entrepreneurship and their influence on men and women's entrepreneurial intentions. This body of research (Gupta et al., 2005; Gupta et al., 2009; Laguía et al., 2019) indicates that entrepreneurs are perceived to have predominantly male characteristics. Further, although men and women perceive entrepreneurs to have characteristics like those of males, only women also perceived entrepreneurs and women as having similar characteristics. In addition, Gupta et al. also found that respondents who perceived themselves as more like males had higher entrepreneurial intentions than those who saw themselves as less similar to males, while no such difference was found for people who saw themselves as more or less similar to women (Gupta et al., 2005).

The effects of gender roles on entrepreneurship are considered a distinguishing factor for both men and women (Yetim, 2008). An additional insight from the research conducted by Yetim (2008) is that women are excluded from the male-dominated work networks and are limited to gendered work relations. In addition, women entrepreneurs risk receiving significantly less venture capital (Malmstrom et al., 2017), where women-founded start-ups are 25-35% less likely to raise external equity, including venture capital. Conditional on being backed with equity, entrepreneurs outperform in gender-incongruent sectors, suggesting that requirements for funding are

higher for entrepreneurs that are a minority in gender-incongruent sectors (Hebert, 2020). A fascinating insight from the findings by Balachandra et al. (2019) reveals that investors are biased against the display of feminine-stereotyped behaviours by entrepreneurs, men, and women alike. Therefore, investor decisions are partly driven by observations of gender-stereotyped behaviours and the implicit associations with the entrepreneur's business competency rather than the entrepreneur's gender (Balachandra et al., 2019). Additionally, Barnir's (2020) results give an extra insight that high levels of stereotype threat disrupt the positive influence of self-efficacy and prior entrepreneurial exposure on women's entrepreneurial aspirations. Not only does gender stereotyping affect women's entry into entrepreneurship, but it also interferes with the positive effects of established drivers of entrepreneurial activity such as entrepreneurial self-efficacy or early entrepreneurial exposure.

On the one hand, it becomes visible that investors are biased in their judgment. On the other hand, Maden's (2005) research shows that most women entrepreneurs use traditional ways (i.e., governmental and non-governmental support mechanisms and banks) to get financial support. In addition, family members and business partners are the other sources of financial support, which may also provide moral support to women entrepreneurs (Maden, 2015). It is precisely these biased investors that women entrepreneurs often approach for their funding.

(Gender-inclusive) entrepreneurship education

Within the literature on entrepreneurship education, the role of gender has been addressed by several authors (e.g., Wilson et al., 2007; Petridou et al., 2009; Jones, 2015; Orser et al., 2019; Padilla-Angulo et al., 2021). Most of the research draws on a social feminist theory. From this perspective, it is not interesting what women and men are, but how the feminine and masculine are constructed and their impact on the social order (Jones, 2014, 2015; Jones & Warhuus, 2018). To date, most of the studies that address gender inclusivity in entrepreneurship education are written from a students' perspective. In addition, it is interesting that most of the research on the students' perspective is quantitative research (Wilson et al., 2007, Petridou et al., 2009, Oosterbeek et al., 2010, Dabic et al., 2012; Dempsey & Jennings, 2014; Türko, 2016, Westhead & Solesvik, 2016; Entrialgo & Iglesias, 2017; Ferreras-Garcia et al., 2020; Barnir, 2020; UI Hassan & Naz, 2020; Usman & Widyanti, 2020). Only a few studies use qualitative research for their approach (Johansen, 2015; Elliott et al., 2020), and remarkably only one study in this literature review has a mixed-method research approach (Agarwal et al., 2020). A few of these studies address the issue from an educators' perspective (Jones, 2015; Jones & Warhuus, 2018) or from the perspective of (potential) women entrepreneurs (Cheraghi & Schøtt, 2015; Armuña et al., 2020).

Thus far, the number of studies that focus on the role of the educators and management rather than on the student is limited, which is surprising since the educator's attitudes and prior experiences affect how educators interpret entrepreneurship and how they choose to teach the subject (Bennett, 2006). In addition, it is striking that all the research on educators is qualitative. The quantitative research conducted by Laird and Nelson (2011) focuses on curricular diversity and the effects of participation in diversity courses on student outcomes. Still, it is not included in diversity courses within entrepreneurship education.

Main insights from a students' perspective


The main insights in the literature from the students' point of view is that almost all of them focus on gender differences in entrepreneurial intentions measured by

either the theory of planned behaviour (Ajzen, 1991) or using Bandura's self-efficacy (1987). A difference is found in two focus points within the research area: it is either an evaluation of entrepreneurship education or measured effects of entrepreneurship education on (women's) entrepreneurial intentions. Simultaneously, incorporating mixed and qualitative methods more fully into the research portfolio may elucidate underlying causes of gender differences in outcomes. The influence of gender on specific outcomes, such as entrepreneurial intent and self-efficacy, may become more apparent with collecting deeper data.

Evaluation of entrepreneurship education

Petridou et al. (2009) show that men's enrolment rates are significantly higher than women's in entrepreneurship education. Their research showed that male and female students displayed different attitudes towards participation in entrepreneurship education programs. Women showed more interest in acquiring knowledge and networking with local businesses and considered these more critical for achieving entrepreneurial success. The findings of Ferreras-Garcia et al. (2020) indicated that women report more preliminary learning results than men using the business plan methodology. In addition, Cochran (2017) elaborates on the unique struggles the female participants had in the masculine domain of the entrepreneurship program.

Türko (2016) investigates whether entrepreneurship training can reduce stereotypes against women entrepreneurship. The results show that external factors seem to be more critical in the case of women to generate entrepreneurial behaviour. Additionally, the work of Elliott et al. (2020) shows that being a student mentor for others increased perceptions of entrepreneurial self-efficacy, a greater awareness of diversity and gender issues, and a changed perspective on problem-solving and life in general. Student mentors reported a distinct interest in becoming entrepreneurs at "some time" in their lives, although not immediately upon graduation.



Effects of entrepreneurship education on entrepreneurial intentions

Several studies (Wilson et al., 2007; Oosterbeek et al., 2010; Usman & Widyanti, 2020; Agarwal et al., 2020) highlight the positive impact of entrepreneurship education on entrepreneurial self-efficacy and entrepreneurial intentions, particularly among female students, but that this is not enough to increase their actual entrepreneurial intentions and behaviours later (Wilson et al., 2007; Westhead & Solesvik, 2016). More interestingly, the level of intentions among male students does not seem to decrease as much as the intentions of female students (Wilson et al., 2009; Joensuu et al., 2013), and the significantly lower entrepreneurial self-efficacy of the young women is attributable to their lower level of prior entrepreneurial experience according to Dempsey and Jennings (2014). Even the work of Johansen (2015) showed that male participants in specific entrepreneurship education (company) programs were more likely to start their venture later as adults, while similar results are shown by Dabic et al. (2012). There is a contradiction here because the research findings of Armuña et al. (2020) with a group of potential women entrepreneurs do not validate the hypothesis that women have fewer entrepreneurship intentions than men. Their results show a high and similar entrepreneurship intention between women and men in this sample, but the ratios of business ventures created in previous editions of this educational program show that few participants finally become entrepreneurs (Armuña et al., p. 88, 2020). The work of Cheraghi and Schøtt (2015) on education and entrepreneurial training explains this contradiction in results. Their research shows that education and entrepreneurial training is highly beneficial in developing competencies during career phases – i.e., intending to start a business, starting a business, and running a business. Early gaps in human capital are

reproduced as gaps in careers, and continuous disadvantages in the environment repeatedly widen gaps throughout a person's entrepreneurial career. That said, gender gaps are reduced slightly over time as women benefit from training more than men (Cheraghi & Schøtt, 2015).

Main insights from an educators' perspective

Entrepreneurship education is gendered through an underrepresentation of women in discourse (Fältholm et al., 2010); for instance, entrepreneurship-promoting texts in which only men are depicted and address both women and men, while pictures of women are depicted are only targeted to women. Similar results are found in the work of Korhonen (2012), which indicated that the characterisations of high-performing students, especially girls, are not included in the descriptions of *the entrepreneur type of pupil*. These results connect with what Jones (2015) shows, namely, the individualistic notion of the entrepreneurial mindset is currently firmly fixed in the powerfully symbolic realm of the masculinised, fictive entrepreneur against whom the fictive female student is found wanting. In addition, traditionally masculinised drivers and assumptions into ideas about entrepreneurship are presented to students in the classroom. Entrepreneurship education is gendered by the masculine language used in tutorials and other teaching materials (Jones & Warhuus, 2018). An insight derived from the research from Laird and Nelson (2011) is that white women and women of colour tend to include diversity to a greater extent than their colleagues. Also, courses taught in the soft fields are more likely to be inclusive.

5. Conclusion and future research

Women entrepreneurship and gender have been mostly contextualised as a "women's issue" since women have been the driving force behind equality and inclusivity. This view has contributed to the perception that only women are the primary beneficiaries of a more inclusive entrepreneurial ecosystem. Men also benefit from inclusivity since they also constantly experience rigid gender norms. It is essential to engage more men in standing for inclusivity and understand how gender inclusivity in entrepreneurship in higher education and entrepreneurial ecosystems. In this way, inclusivity can be achieved only through the equal participation of men and women.

We conducted a literature review on these subtopics, including scientific articles and grey literature, between 2006-2021 to identify trends within the inclusive entrepreneurial ecosystem research and generate a research agenda that calls for further research in this critical field.



Conclusion

Even though women have struggled over the last decade to break the *glass ceiling* to launch their businesses or expand their involvement in leadership roles, research shows that women's entrepreneurship ability remains underutilised. Many entrepreneurial ecosystems are based on the premise that all entrepreneurs have equal support resources within the entrepreneurial ecosystem. In theory, this assumption is valid. However, in practice, this is not always the case.

Prior research shows that the current research focuses mainly on the entrepreneurial activity of women and that research is "written by women for women" (Marlow, 2020, p. 46). Moreover, the gender research is predominantly concentrated on women, suggesting that women have turned into a generic proxy for gender. Research also highlights the embedded masculinity within entrepreneurship research where men are perceived as normative actors within the entrepreneurial ecosystems. Future avenues should consider the perspective of male counterparts on the topic of gender inclusivity and inclusive entrepreneurial ecosystems, making them allies.

Gender-inclusive entrepreneurial ecosystems

Many discussions of the entrepreneurial ecosystem appear devoid of a theory that explains how and when gender variation can apply differentially. We reveal that, through the inclusion of cultural and social elements, no potential gender impacts are recognised. Though existing conceptions of entrepreneurship's ecosystems provide possibilities for new studies proposing theoretical and empirical frameworks, gender as a construct and women's entrepreneurship

remain absent. While this literature review provided critical first steps in investigating both the role of gender across ecosystems and how women entrepreneurs can affect or are affected by the ecosystem, further research in this area is required.

Women networking and role models

Women's entrepreneurial journeys have attributed a significant influence on role models and access to networks. Media role models should increase awareness of women's entrepreneurship potential, which would have different degrees of effects on women's cognitive processes. Role model selection should ensure that students relate to the model and that the chosen role model depicts a desirable result and a feasible and achievable career goal. In this way, educators should consider how close the role models are in terms of age, educational background, and gender when selecting role models for educational programs. Educators should take the gender balance of role models seriously, reflecting on the predominance of positive models, and with further investigation needed to determine the learning significance of negative models (Laviolette et al., 2012). A diverse selection of women entrepreneurs from various backgrounds should be highlighted.

Networks are essential for developing confidence, but they are insufficient for developing habitus. One study proposed a concept of gender capital, exploring how feminine abilities, feminine appearance, and sexuality can affect women's involvement in entrepreneurial ecosystems.

(Gender-inclusive) entrepreneurship education

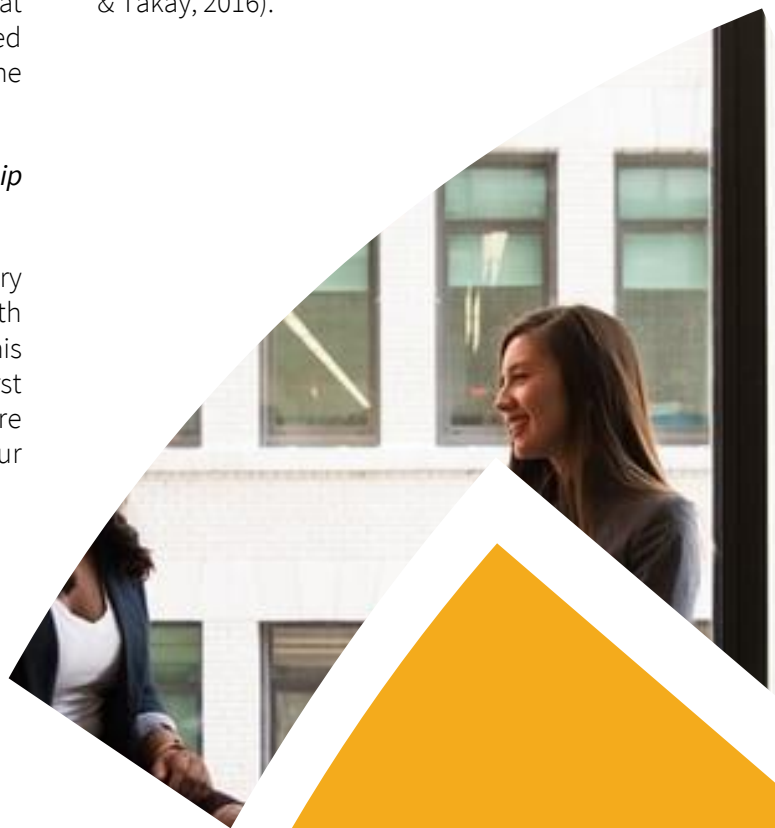
From an educational perspective, most research undertaken since 2010 reveals that entrepreneurship education is gendered, taking a male perspective. This illustrates why there is a disparity in the perspectives and experiences of female and male students in entrepreneurship education. Furthermore, the impact of entrepreneurship education differs between male and female students. Integrating more mixed and qualitative approaches into the research portfolio on entrepreneurial students could shed light on the potential causes of gender disparities in outcomes. The impact of gender on outcomes, such as entrepreneurial intent and self-efficacy, can become more precise as more evidence is collected. Fältholm et al. address an intriguing perspective in how to design gender mainstreaming approaches without recreating those stereotypes. For instance, they proposed that the solution is not gender neutrality, but rather a shift between liberal feminist and social constructionist interventions (Fältholm et al., 2010), which is consistent with advice from Hassan & Naz that integrating a gender-sensitive centred entrepreneurship education program may satisfy the needs of all genders.

Gender bias and stereotypes in entrepreneurship (education)

The socially constructed role of women is the primary challenge faced by women entrepreneurs in both urban and rural areas (Tuzun & Takay, 2016). This means that changing the status quo is one of the first needs within society. Entrepreneurial intentions are central in both student and women entrepreneur

perspectives. Interestingly: the male entrepreneurs are rarely really used as a target group (only in comparison with women), and their role in the ecosystem is often excluded from the research scope.

To include women in entrepreneurial activity, a gender-egalitarian culture is advised. More effective mechanisms for work-life balance, including the supported provision of parental leave and childcare, could encourage more women to participate in employment and engage in entrepreneurial activity (Karatas-Ozkan et al., 2010). To do that, a program aiming at supporting and promoting women's entrepreneurship should first support policies directed at transforming women's status within society (Ozar, 2016). One way of doing that is to start with entrepreneurship education, policymakers and media, which should promote a non-stereotyped image of entrepreneurship and foster this career option, particularly among women (Laguía et al., 2019). Additionally, support from public institutions and access to managerial consultants is necessary (Tuzun & Takay, 2016).



Future research directions

This study aimed to understand the current research on (women) entrepreneurship in higher education, gender inclusivity, and inclusive entrepreneurial ecosystems. After mapping out the contemporary literature on inclusive entrepreneurial ecosystems and their related concepts, we propose a path for future research focused on (women's) entrepreneurship in higher education, gender inclusivity, and inclusive entrepreneurial ecosystems.

Our early exploratory research on the current state of research on (women) entrepreneurship in higher education, gender inclusivity, and inclusive entrepreneurial ecosystems needs to be extended. Therefore, a compelling research agenda is provided to advance work in this area. **Table 2** sets out a detailed agenda for future research into gender-inclusive entrepreneurial ecosystems, (gender-inclusive) entrepreneurship education, women networking and role models, women academic entrepreneurship, and gender bias/stereotypes in entrepreneurship (education). The promising areas of scholarly inquiry are based on the literature review. They are further considered the most relevant literature streams for the future development of inclusive entrepreneurial ecosystems.

Table 2. Future research directions

(1) Gender-inclusive entrepreneurial ecosystems

- To what extent do entrepreneurship ecosystems encourage or obstruct women's entrepreneurship in terms of start-up, expansion, and scalability?
- How do ecosystems help woman entrepreneurs overcome barriers?
- Are there different features of ecosystems that are more important for women entrepreneurs than for men entrepreneurs?
- Do women entrepreneurs influence entrepreneurial ecosystems? How?
- What effects do network connections, relationships, and placement have on female entrepreneurs in ecosystems?
- When do women leave the ecosystem? Why?

(2) (Gender-inclusive) entrepreneurship education

- What role does gender play in entrepreneurship education?
- How can higher education institutions assist in overcoming barriers for women entrepreneurs?
- What is the impact of education on the entrepreneurial intent of students or the general population? Are there differences between men and women?

(3) Women networking and role models

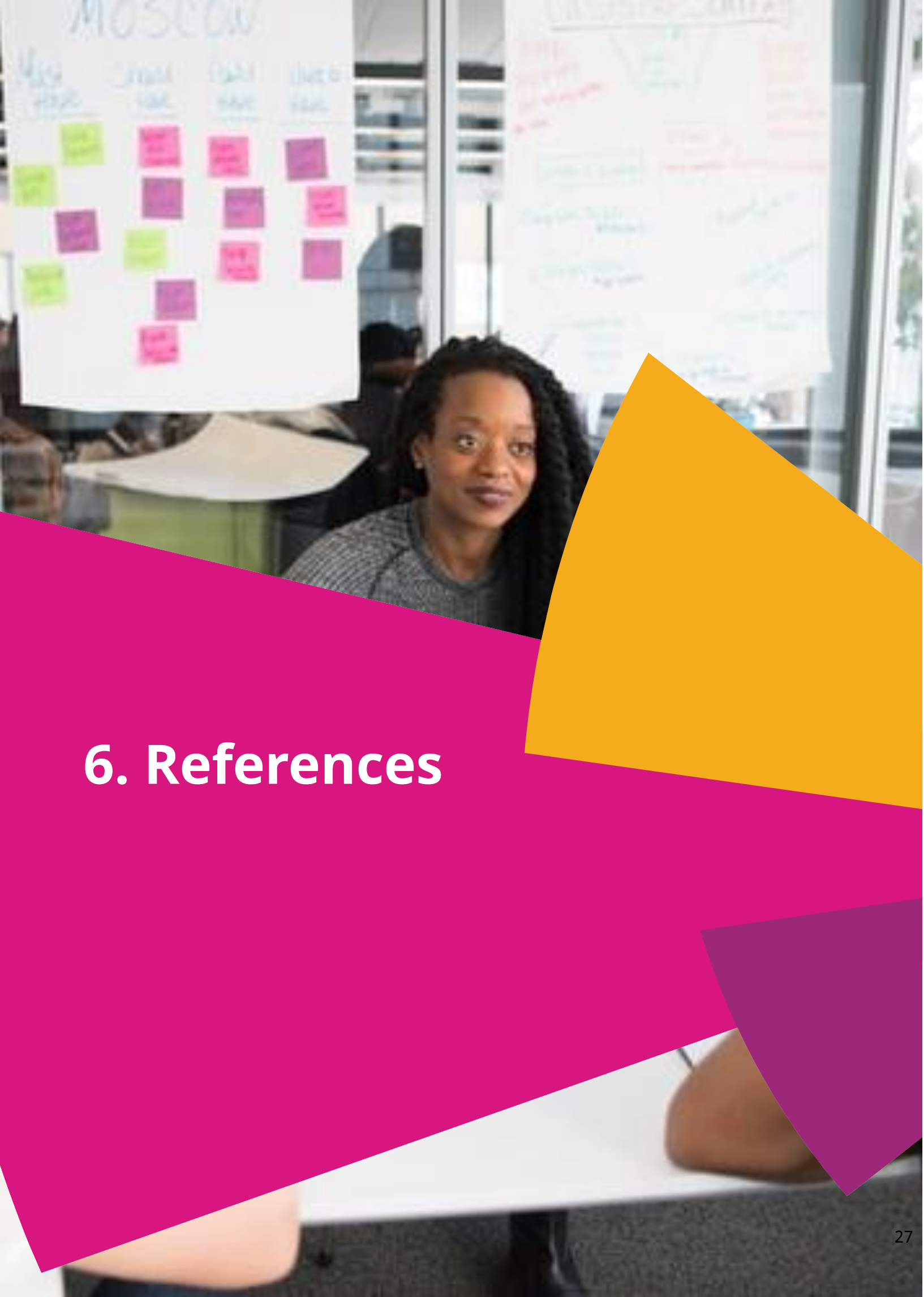
- What are the impacts of women support programs with role models on the entrepreneurial behaviour of highly educated women?
- To what extent does the networking behaviour of highly educated women affect their entrepreneurial engagements with external actors?
- To what extent do interactions of highly educated women with role models affect their entrepreneurial behaviour?
- What is the role of social and human capital in shaping strategies of women entrepreneurs?
- What is the contribution of social capital to the women's entrepreneurial process?

(4) Women's academic entrepreneurship

- What role does gender play in academic entrepreneurship?
- Are there gender differences in the propensity of academics to become entrepreneurs?
- What is the impact of university incubators on women's academic entrepreneurship?
- Does gender affect academic spinoffs? How?
- What is the impact of education (or on a broader scale impact of human capital) on the likelihood of women entering and/or re-entering into entrepreneurship, women-led enterprise performance and growth?

(5) Gender bias/stereotypes in entrepreneurship (education)

- How does gender bias manifest in entrepreneurship?
- To what extent do social norms shape gender biases?
- How do gender stereotypes influence the propensity of women to engage in entrepreneurial endeavours?
- Do gender stereotypes influence the access of women to resources in the entrepreneurial ecosystems? If so, how?



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The background of the slide is a photograph of a library. In the foreground, a person's head and shoulders are visible, looking towards a bookshelf. The bookshelf is filled with books of various colors. A prominent book with a blue cover and the name 'SILVA FERRANTE' is visible. The scene is lit with warm, indoor lighting. Overlaid on the image are several large, semi-transparent geometric shapes: a large magenta shape on the left, a yellow shape on the right, and a purple shape at the bottom right.

7. Analysed academic papers

Authors	Research Questions	Type	Outcomes/Findings
Abbasiachavari & Moritz (2021) Management Review	What is the current research on role models in the entrepreneurship context?	Conceptual	This study's findings demonstrate that entrepreneurial intentions and behaviour are affected by exposure to role models. This effect depends on whom, when, and in which context the exposure to role models occurs.
Quarterly Abreu & Grinevich (2017)	Is there a gender gap in academic entrepreneurship?	Quantitative	Women academics are more likely to be involved in applied research, hold more junior positions, work in the health sciences, social sciences, humanities, and education have less prior experience running a business and feel more ambivalent about research commercialisation.
The Journal of Technology Transfer	What kinds of contacts and networks of women exist?	Quantitative	Personal contacts with other entrepreneurs are regarded as valuable, and willingness is a crucial factor. Those women entrepreneurs who are willing to establish new networks already have more heterogenic networks than those who do not express such willingness.
Achtenhagen et al. (2013) International Journal of Gender and Entrepreneurship	Does the EE help in developing a positive EA among the young community towards entrepreneurship?	Quantitative	After the analysis, it was found that EE played an essential role in developing the EA of the young community towards entrepreneurship. All the factors of EE (awareness, enterprise knowledge, and practical skills) have a positive impact on EA (affective, cognitive, and behavioural).
Agarwal et al. (2020) Journal of Enterprising Communities	What was the evolution of measurement tools for comparative high-impact women entrepreneur development?	Conceptual	A scorecard to measure entrepreneurship ecosystem for women.
Aidis & Weeks (2016) International Journal of Gender and Entrepreneurship	What are the relevant insights and approaches to the development of women entrepreneurship?	Conceptual	An entrepreneurial ecosystem, which incorporates the critical elements of entrepreneurship education programs within a quadruple helix collaborative environment, supports the development of women entrepreneurs in developing countries.
Allahar (2019) Innovation	What is the relationship between planned gender initiatives, activities conducted, and reported results in the entrepreneurial ecosystem?	Qualitative	The understanding of what gender could imply for innovation has developed and become more complex. The policy can help to increase the acknowledgement of the gender equality issue within ecosystems.
Altan-Olcay (2014) Feminist Economics	How are the gendered meanings of responsibility and citizenship juxtaposed?	Qualitative	The focus is on the neoliberal discourse in Turkey towards turning citizens into self-governing individuals, including women, while still comprising hidden gender transcripts.
Amecua et al. (2019) Book	How do incubator attributes encourage women's entrepreneurship in the USA?	Qualitative	There are low levels of gender-inclusive practices among the most impactful business incubators. While there are many women CEOs running incubators, boards are less diverse and equal in terms of gender.
Armuña et al. (2020) International Entrepreneurship and Management Journal	Do women lack entrepreneurship competencies compared to men? In this context, what is the relationship between entrepreneurship competencies and intention?	Quantitative	Findings do not validate the hypothesis that women have fewer entrepreneurship intentions than men. In addition, the study confirms the hypothesis of a positive relationship between competencies and EI, but gender is not a moderating factor.
Balachandra & Dublisch (2019) Book	What role do other women play for women entrepreneurs in building their businesses?	Qualitative	In rural entrepreneurial ecosystems, women entrepreneurs see other women primarily as role models. In urban entrepreneurial ecosystems, women adopted four distinct roles: role model, investor, entrepreneur, and community builder.
Barnir (2021) Sex Roles	What is the relationship between perceived gender stereotypes and women's entrepreneurial aspirations?	Quantitative	First, the study established that experiencing social identity or stereotype threat is directly and negatively associated with women's entrepreneurial aspirations. Second, results show that high levels of stereotype negatively influence self-efficacy and women's entrepreneurial ambitions.
Berger & Kuckertz (2016) Journal of Business Research	Which characteristics of an ecosystem on the micro, meso, and macro levels explain a high proportion of women founders among start-ups?	Qualitative	The most influential parameters are at the local level in the ecosystems rather than at the national level. Designing gender-specific public policies appear especially promising. Greater gender equality in combination with a favourable microenvironment fosters women entrepreneurship.
Best et al. (2016) European Journal of Innovation Management	In what ways and to what degree is gender currently integrated?	Qualitative	The gender dimension is barely integrated, which mainly manifests itself through the fact that there are fewer than 10 per cent women among academic entrepreneurs.
Brush et al. (2019) Small Business Economics	What is the role of gender across ecosystems?	Conceptual	There is substantial evidence that women entrepreneurs' participation, access to resources, and outcomes in ecosystems vary from those of men

Bullough et al. (2015) Small Business Economics	Should entrepreneurship programmes target aspiring entrepreneurs with promising new business ideas that need to be nurtured?	Conceptual	Framework - Effectiveness Conceptual Model Applied to Women's EET Programs. This framework was designed for EET programs, but it can also be used for leadership development programs for entrepreneurs and non-entrepreneurs.
Byrne et al. (2019) Journal of Small Business Management	How are entrepreneurial role models promoted, and to whom?	Qualitative	This study identifies five types of women entrepreneurs: (1) the individualised superwoman entrepreneur, (2) the relational women entrepreneur, (3) mumpreneur/maternal entrepreneur, (4) fun-preneur or pleasure and passion-seeking entrepreneur, and (5) the non-preneur, excessively feminine entrepreneur.
Chen et al. (2016) Basic and Applied Social Psychology	How does an entrepreneurial failure influence peoples' prosperity for entrepreneurship?	Quantitative	The researchers hypothesised that observing a business failure decreases one's entrepreneurial intention when the level of self-esteem is low. However, one's preference for an entrepreneurial career is increased when the level of self-esteem is high.
Cheraghi & Schøtt (2015) International Journal of Gender and Entrepreneurship	What gender gaps related to a lack of education and training exist?	Quantitative	Education and entrepreneurial training, both during and after formal schooling, are highly beneficial in developing competencies. During career phases, gender gaps are reduced slightly over time, and women benefit more from training than men.
Cruz Sánchez-Escobedo et al. (2014) Journal of Public Health	Are there gender differences in entrepreneurial intentions between men and women by looking at various socioeconomic and psychosocial factors?	Quantitative	The model proposed in the study has decreasing explanatory power as economic development increases and is more conclusive for men than women.
Cukier & Chavoushi (2020) Gender in Management: An International Journal	What are the barriers for women entrepreneurship in all macro-, meso- and micro-levels of the entrepreneurship ecosystem?	Conceptual	Creating an inclusive innovation ecosystem linking micro-, meso- and macro-level factors can potentially advance women entrepreneurship.
Dempsey & Jennings (2014) International Journal of Gender and Entrepreneurship	How far can the four major factors that contribute to self-efficacy help account for observed differences in the entrepreneurial self-efficacy of young men and women?	Quantitative	The lower ESE of the young women is clarified by a lower level of prior entrepreneurial experience, which includes a lower level of positive and negative affect towards entrepreneurship, and their higher likelihood of receiving failure feedback due to their actual performance on an opportunity evaluation task.
Elliott, Mavripilis & Anis (2020) International Entrepreneurship and Management Journal	What is the experience of engineering and computer science female student mentors in a gender-sensitive entrepreneurship education and peer mentoring program?	Qualitative	One of the significant findings is that a gender-sensitive mentorship program can develop entrepreneurial identity among women engineers to experience strong perceptions of success and "see" themselves as entrepreneurs.
Esra Sena Türko (2016) International Education Studies	Can entrepreneurship training reduce stereotypes against women entrepreneurship?	Quantitative	Exposure to parental role models has a significantly more favourable influence on women's attitudes toward entrepreneurship than men's. Exposure to entrepreneurship education has a more significant effect on women's perceived entrepreneurial behaviour control than men.
Ewijk & Belgithi-Mahut (2018) International Journal of Gender and Entrepreneurship	Will entrepreneurship education have a positive or negative effect on the entrepreneurial intention of female students?	Quantitative	The main findings demonstrate how female students' entrepreneurial intention is lower than their male counterparts, regardless of the course type. Furthermore, entrepreneurship courses appear to be more successful than other courses in raising students' entrepreneurial intention in general and female students.
Fältholm et al. (2010) Journal of technology management & innovation	How should gender mainstreaming interventions be designed in the arena of academic entrepreneurship?	Qualitative	The interviews confirm that women researchers often feel they have less access to essential networks and large R&I- milieus, which may give them more difficulties than their male colleagues in obtaining external funding and being published.
Fernandes & Ferreira (2021) Review of Managerial Science	Which are the most critical trends in the literature on female entrepreneurship?	Conceptual	A critical word analysis points to research trends in this topic in (1) innovation and dynamics, including actors and norms;
Ferreras-García et al. (2020) Studies in Higher Education	Do entrepreneurial competencies acquired by students when working on a business plan have any kind of influence on the learning process?	Quantitative	(2) performance, knowledge, and entrepreneurship; and (3) technology and firms. Our findings indicated that women reported more inferior learning results than men using the business plan methodology.
Foss et al. (2019) Small Business Economics	How can policy implications create effective ecosystems for women's entrepreneurship?	Conceptual	While the ecosystem components impact everyone—regardless of gender—impact more significantly women than men or may be less accessible to women. A persistent gender bias exists in both entrepreneurship discourse and economic development policy.
Fuster et al. (2019) Technological Forecasting and Social Change	How can we understand the entrepreneurial university ecosystem?	Mixed Methods	Newer orientations of entrepreneurial universities can generate high knowledge contexts through specific actions, such as creating new businesses (University spinoffs).

García-Palma & Sánchez-Mora Molina (2016)	What role does knowledge have on women entrepreneurship?	Qualitative	Ecosystems can facilitate identifying more required knowledge and, therefore, it is the best place to acquire it.
Suma de Negocios			
Goel et al. (2015)	What are the determinants of the entrepreneurial propensity among women scientists, and how do they differ from male scientists?	Quantitative	The results support the proposition that the association of several essential factors is considerably weaker with female entrepreneurial propensity than with males.
The Journal of Technology Transfer			
Goktan & Gupta (2015)	How is individual entrepreneurship orientation affected by masculinity versus femininity?	Quantitative	Men reported a higher propensity towards entrepreneurship than women. Relationships were consistent across the four countries.
International Entrepreneurship and Management Journal			
Gupta et al. (2014)	How is gender-stereotypical information about entrepreneurship affect opportunity recognition?	Experiment	When no stereotypical information was presented, the study found that men assessed new business opportunities more favourably than women. When stereotypical masculine information was presented, men increased, and women decreased in their opportunity evaluation.
Journal of Business Venturing			
Gupta et al. (2009)	What impact do gender stereotypes have on differences in men and women's intentions to keep pursuing entrepreneurship?	Quantitative	The study found that entrepreneurship is typically seen as a masculine field, while women, but not men, see a significant relationship between entrepreneurial and feminine characteristics. Further, people who see themselves as males (male gender identification) have higher entrepreneurial intentions.
Entrepreneurship Theory and Practice			
Hechavarr et al. (2017)	How does a national culture of post-materialism shape blended value creation goals?	Quantitative	Societies with stronger post-materialist values are more likely to host entrepreneurs who emphasise social and environmental value over economic value. Female entrepreneurs' value creation goals are more notably impacted by post-materialistic cultural values than male entrepreneurs.
Small Business Economics			
Hechavarría & Ingram (2019)	Does the entrepreneurial ecosystem influence the prevalence rates of both men and women?	Quantitative	The prevalence in entrepreneurship is highest for women when the entrepreneurial ecosystem features low barriers to entry, supportive government policy towards entrepreneurship, minimal commercial and legal infrastructure, and a normative culture that supports entrepreneurship.
Small Business Economics			
Hughes & Yang (2020)	What processes are involved in entrepreneurial learning and leadership development for growth-oriented women entrepreneurs?	Mixed methods	Formal learning, informal learning, and peer/community support are central to women entrepreneurs' learning and leadership development.
Gender in Management			
Iffländer et al. (2018)	Does gender make a difference in the motivations and strategies in spinoff creation?	Qualitative	Women academic entrepreneurs are motivated by their ideals of finding applications for research results and creating a common good for society. More personal pursuits drive male academic entrepreneurs.
Book			
Islam et al. (2018)	What is the level of entrepreneurial aspiration among female university students in Saudi Arabia?	Quantitative	The paper's key contribution is its evidence concerning the effects of family entrepreneurial role models on female higher education students' perceptions of start-up businesses as a career choice.
Societies			
Joensuu et al. (2013)	How do the intentions of individuals change over time?	Quantitative	First, entrepreneurial intentions of higher education seem to decrease during their studies. Second, there is a gender difference in the initial level of entrepreneurial intentions and how intentions develop over time. Third, the initial level of intentions does not affect the future development of intentions.
Education+			
Journal of Entrepreneurship Research			
Do the entrepreneurship programmes promotes start-up activity?	Do the entrepreneurship programmes promotes start-up activity?	Qualitative	Results from econometric analyses indicate a positive correlation between participation in entrepreneurship programmes and start-up activity. The analyses also suggest that entrepreneurship programmes have more impact on male start-up activity as compared to women.
Report			
Jones & Warhuus (2018)	What is the social construction of gendered subjects in entrepreneurship education?	Qualitative	This paper finds that course descriptions are predominantly, but not exclusively, masculine in their language. The phenomenon is explained by course content/type, whereby practice-based entrepreneurship courses are highly masculine compared to traditional academic courses.
Journal of Small Business and Enterprise Development			
Kabasakal et al. (2015)	What is the role of women in management in Turkey?	Conceptual	The ratio of men to women entrepreneurs in Turkey is one of the highest among the efficiency-driven economies. This finding indicates that Turkey's measures to stimulate entrepreneurship have not paid off for women as much as for men. All dimensions of the perceived social support of participant students (family, friends, and unique persons) are positively related to all dimensions of social entrepreneurial attitudes.
Reporting			
Kapusuz et al. (2018)	What kinds of relationships exist between social entrepreneurship and perceived social support through the gender perspective?	Quantitative	Entrepreneurship education shows no gender differences. Also, taking an entrepreneurship course was highly associated with the motivation to choose entrepreneurship as a career.
Knowledge, Learning and Innovation			
Karadag (2018)	What's the relationship between the theory of planned behaviour, gender, social capital, and entrepreneurial intentions?	Quantitative	Entrepreneurship education shows no gender differences. Also, taking an entrepreneurship course was highly associated with the motivation to choose entrepreneurship as a career.
The International Journal of Management Education			

Karataş-Özkan et al. (2010) Book	What are the triggers and impediments to Turkish women's entrepreneurial activity	Conceptual	In the last three decades, social norms have changed, confronting women entrepreneurs with challenges and reconciling competing work and domestic life expectations. However, some factors that deter women from entrepreneurship in Turkey include persistent patriarchal social values and associated traditional sex roles, as well as limited access to education and training opportunities
Karimi et al. (2014) Journal of Entrepreneurship Education	As part of the theory of planned behaviour, what are the main effects of entrepreneurial role models on entrepreneurial intention?	Quantitative	The results show entrepreneurial role models indirectly influencing EIs via the antecedents of intention. No gender differences in the relationship between perceived behaviour control and EIs were found, but gender did moderate the other relationships within the TPB.
Kreitz-Sandberg (2013) Gender and Education	What are the university teachers' perceptions of strategies and dilemmas when working with gender inclusion in teachers' education?	Qualitative	The inclusion of gender topics in syllabuses, course literature, and examinations is another matter of concern to be followed up. This will hopefully give more evidence for further development of gender-equal teachers' education.
Laguia et al. (2019) Thinking Skills and Creativity	How to introduce the task and relationship orientation into entrepreneurship?	Quantitative	Non-entrepreneurs perceive entrepreneurship as stronger associated with task orientation than with relationship orientation. We posit that thinking about successful female entrepreneurs will also influence female participants' views on entrepreneurship by inhibiting the stereotype threat of being a member of a negatively stereotyped group.
Laudano et al. (2019) Management Decision	How can entrepreneurial universities foster entrepreneurship in women by attending to psychological and environmental factors and personality traits that encourage women to form entrepreneurial intent?	Quantitative	In both Italy and Albania, entrepreneurial universities significantly impact entrepreneurial attitudes and intentions in women. In Italy, the need for independence is a significant predictor, whereas the need for achievement has a considerable influence in Albania.
Lavolette et al. (2012) International Journal of Entrepreneurial Behavior & Research	What impact has positive and negative same-gender fictional role models had on students' self-efficacy and entrepreneurial intention?	Quantitative	Role model identification should ensure that students think that the model they are exposed to illustrates a desirable outcome and a feasible and accessible career goal.
Lawton-Smith et al. (2017) Book	Under what circumstances do women try and subsequently either fail or succeed in commercialising their research?	Conceptual	Women academics attempt to commercialise their research under highly challenging conditions, many of which relate to inherent gender biases in the academic system, which reflect trends in entrepreneurship globally. Women experience different and often more complex challenges than their male counterparts.
Liu et al. (2019) Frontiers in Psychology	How do remarkable entrepreneurial stories affect entrepreneurial intentions?	Quantitative	Results show that, through the intermediary variable of entrepreneurial passion, both success stories and failure stories positively influence entrepreneurial intentions. Successful role model stories have a more significant impact than failure stories.
Maden (2015) Gender in Management: An International Journal	What are the drivers, challenges, and profiles of women entrepreneurs in Turkey?	Quantitative	The impact of SN on EI is negative, whereas PA and PBC have strong and positive associations with the intention to become an entrepreneur. There is no meaningful difference between male and female students.
Malecki (2018) Geography Compass	What are the key contributors to the concept of entrepreneurial ecosystems?	Conceptual	A women-friendly entrepreneurial ecosystem is likely to be more resilient because women's networks tend to include more non-entrepreneurs and more women.
Marks (2021) Journal of Small Business Management	How is the relationship between individual agency and social context occluded in role model narratives?	Qualitative	This study identifies spoken, unspoken narratives and identifies points of divergence. Six discursive practices: (1) curated diversity, (2) encouraging inspiration, (3) expert staging, (4) founding focus, (5) distance shrinking, and (6) a beginning, middle, and end order of storytelling is often offered as an end, beginning, middle.
McAdam et al. (2019) Small Business Economics	How far does the extent to which formal women-only networks improve both women success and participation in entrepreneurial ecosystems?	Qualitative	Women entrepreneurs with stronger positions in social networks or that were members of mixed networks exhibited a greater sense of how to engage than nascent entrepreneurs and members of women-only networks. However, these networks may be crucial to develop confidence but not sufficient to create habitus.
Mcgowan et al. (2015) Journal of Small Business Management	What is the influence of social and human capital in defining the prospects of young women business owners as emerging entrepreneurial leaders?	Qualitative	The study identifies a disparity between the services offered to young self-employed women and those they believe they need. The dissatisfaction of the interviewed persons with the existing provision can be recognised from those charged to develop Entrepreneurship and think that current initiatives fail to help them negotiate barriers because of age, immaturity and gender.
Chamorro-Mera & Pérez-Mayo (2017) European research on management and business economics	Are determining factors of the entrepreneurial intention of academics the same for men and women, and does their degree of importance vary depending on gender?	Quantitative	Women academics have a less entrepreneurial intention related to the existence of implicit barriers for women that influence their entrepreneurial intention.

Mueller-Conway & Dato-on (2013) Journal of Technology Management & Innovation	Is there any interplay between biological sex, socialised gender roles, and culture on entrepreneurial self-efficacy and motivation to become entrepreneurs?	Quantitative	The study found no statistically significant difference in entrepreneurial self-efficacy between men and women among a sample of MBA students at an American university.
Neumeyer (2020) IEEE Transactions on Engineering Management	How do women transition from university programs to accelerator programs and incubators?	Quantitative	The results showed that women and men program participants differed in several entrepreneurial metrics. Women students are less likely to participate in accelerator or incubator programs than their male counterparts.
Neumeyer et al. (2019) Small Business Economics	What are the effects of venture typology, race, ethnicity, and past venture experience on the social capital distribution of women entrepreneurs in entrepreneurial ecosystems?	Quantitative	Network connectivity and the distribution of social capital are significantly different for men and women entrepreneurs. It depends on the type of venture and is additionally affected by the entrepreneur's experience and ethnicity.
Neves & Brito (2020) Journal of Management Development	What are the drivers of academic entrepreneurial intentions?	Conceptual	Individual factors, directly and indirectly via the Theory of Planned Behaviour, strongly impact the academics' intentions. It contributes to identifying and clustering the drivers that encourage academics to engage in knowledge valorisation activities, differentiating them by activity.
Nowinski & Haddoud (2019) Journal of Business Research	What are the mechanisms through which role models operate to increase entrepreneurial intentions?	Quantitative	The study confirms that inspiring role models would predict entrepreneurial intention when combined with positive attitudes towards entrepreneurship and show that a positive attitude towards entrepreneurship is considered necessary but not sufficient to foster entrepreneurial intentions.
Ozarsaracil (2019a) Report	What is the strategy to strengthen ecosystem supports for women entrepreneurs in Ontario?	Quantitative	Government funding agencies should hold business support organisations accountable for equity, diversity, and inclusion inputs, processes, and outcomes. Measures of organisational performance should include economic and social impact indicators, such as changes in organisational values and industry culture and knowledge about gender-related influences in venture creation.
Orser et al. (2019b) International Journal of Gender and Entrepreneurship	How to reduce the difference between knowledge about gender-related barriers to information, communication and technology adoption and the provision of entrepreneurship education and training (EET) programs?	Qualitative	The findings provide further evidence that adopting ICT resources is a gendered process, also provide insights to enhance business owners' capabilities and implications concerning increasing ICT resources. The study finds out strategies to support the adoption of new technologies within gender-inclusive ICT programs. Responders from different backgrounds advanced many recommendations as means to attenuate the digital divide.
Orser et al. (2019c) International Journal of Gender and Entrepreneurship	What is the efficacy of certifications, specifically women-owned certifications, on the frequency with which SMEs bid on and succeed in obtaining US federal procurement contracts?	Quantitative	The frequency of bidding on and receiving contracts from the US federal government does not differ significantly between men and women business owners. Neither does the frequency of bidding between certified and non-certified women-only businesses.
Özar (2016) Entrepreneurship and Public Policies	1) What are the problems and prospects women entrepreneurs have in Turkey?	Quantitative	A program aiming at supporting and promoting women's entrepreneurship should first support policies directed at transforming women's status within society. Ensure that the Turkish Employment Office designs specialised programs to enhance women's employment: take necessary action to support women's employment in various business areas where men are especially dominant.
Ozaralli & Rivenburgh (2016) Journal of Global Entrepreneurship Research	What are the antecedents to entrepreneurial behaviour with particular attention to social (experience and education), societal (economic and political climate), and personality factors?	Quantitative	Turkish students' low level of entrepreneurial intention can be explained by their somewhat unfavourable evaluations of their home country's economic and political conditions, which seemed to discourage their entrepreneurial intentions.
Ozkazanc-Pan et al. (2017) Report	How and why do women entrepreneurs lag their male counterparts regarding the number of start-ups and scaling of businesses?	Qualitative	Entrepreneur support organisations are not effective in communicating and coordinating their efforts towards inclusion. Women entrepreneurs, particularly women of colour, remain primarily disconnected from established entrepreneur support organisations.
Ozkazanc-Pan & Clark Muntean (2018) Gender, Work & Organisation	What is the role of technology incubators and accelerators to facilitate access?	Qualitative	Networking and support organisations have the potential to mitigate gender inequities by adopting gender-aware practices. Such practices increase access to networks and resources that might otherwise be unreachable for women technology entrepreneurs.
Padilla-Angulo et al. (2021) Academy of Management Learning & Education	To what extent do entrepreneurship-focused academic activities influence students' positive entrepreneurial personal attitude? Do gender differences play a role?	Quantitative	Female students respond in a different manner than men to entrepreneurship education.

Petridou et al. (2009) Gender in Management: An International Journal	What role does entrepreneurship education play in shaping young individuals' intentions and preparing them for successful entry into the entrepreneurial arena, emphasising potential female entrepreneurs? How does gender affect academic spinoffs?	Quantitative	A uniform educational program that can ensure both effectiveness that applies to all and a value of customised and focused entrepreneurial programs for women in building their entrepreneurial identity is highly recommended. Few women lead spinoffs because few women have senior research positions in leading science departments.
Rosa & Dawson (2006) Entrepreneurship and Regional Development, Sesen (2014) JWEE	What are the antecedents of entrepreneurial intentions to determine the strengths of the impact various personality traits and environmental factors have on entrepreneurial intentions? What effect has an interaction between culture and sex on the formation of entrepreneurial intentions?	Quantitative	First, the factor most strongly related to entrepreneurial intention was self-efficacy. Second, access to capital is negatively associated with entrepreneurial intentions. Universities should consider new policies regarding entrepreneurship education and seek to transform the environment and their curricula to support the entrepreneurial intentions of their students, especially female students. Results show that Turkish students, regardless of sex, exhibit significantly higher entrepreneurial intentions and self-efficacy levels. Irrespective of national background, male students display higher entrepreneurial intentions, self-efficacy, and social norms than females.
Shinnar et al. (2012) Asia Pacific Journal of Innovation and Entrepreneurship Sigdel (2016) Tribhuvan University Journal	How do culture and gender shape individual perceptions of barriers to entrepreneurship? Does the educational status of women entrepreneurs in the Kathmandu valley impact their choice of business, legal ownership status of the business, means of obtaining funds, and means of getting support? What are the gender differences in re-entry decisions after failure?	Quantitative	Women in China, the United States, and Belgium perceive the support barrier as significantly more critical than men. Surprisingly, there is no difference in the gender gap across the three nations, which suggests that perceptions of the support are not shaped by culture but rather by gender and the specific institutional environment of each country. The study found that education level does not determine the type of businesswomen entrepreneurs get involved in. Also, education level does not determine the legal ownership status of the business, i.e., most women entrepreneurs are engaged in sole proprietorship business irrespective of education level.
Simmons et al. (2019) Small Business Economics	What are the attitudes of female students towards new venture creation? What are policy recommendations for the growth of entrepreneurship education available?	Quantitative	There are persisting gender gaps that vary across an ecosystem framework under the public stigma of business failure and public fear of business failure. Public stigma of business failure may amplify the gender gap by disproportionately deterring women entrepreneurs from trying again. Only a few studies have investigated entrepreneurial attitudes among students. This research shows that students have a positive attitude towards entrepreneurship, and it provides evidence that urges action to advance entrepreneurship education globally.
Sperber & Linder (2019) Small Business Economics	To what extent do women' and men' strategic choices in starting a new venture reflect gender-specific perceptions of ecosystem support?	Quantitative	Men and women nascent entrepreneurs differ in their expectations of ecosystem support and, thus, apply gender-specific start-up strategies. While women tend to mobilise more resources than men to overcome support constraints, men are more confident of their capabilities.
Stead (2015) Report Türko (2016) International Education Studies Tuzun & Takay (2017) Gender in Management: An International Journal Ughetto et al. (2019) Small Business Economics Ul Hassan & Anjum (2020) Pakistan Journal of Commerce and Social Sciences	How does gender operate through entrepreneurial processes of belonging? How can entrepreneurship training reduce stereotypes against women entrepreneurship? How do women define the motivational factors, challenges and future needs of their entrepreneurial experience in urban and rural areas of Ankara-Turkey? How do women entrepreneurs leverage new digital technologies in creating and conducting new ventures to overcome the hurdles they face? Does university-based entrepreneurship education (EE) raise university students' self-employment attitudes and intentions through nurturing their perceptions on gender equality and empowering women?	Conceptual Quantitative Qualitative Conceptual Quantitative	Five forms of women's performing of belonging are identified: by proxy, concealment, modelling the norm, tempered disruption, and identity switching. Survey results reveal that rising advocacy and awareness about women entrepreneurship through entrepreneurship education and curricula modification is applicable. The results show that women entrepreneurs are mainly intrinsically motivated, and achievement is their primary motivation overall, particularly for women in rural areas. In these areas, women are highly motivated by a desire to increase their family income. The desire for independence is a crucial motivation factor irrespective of location. Women can benefit from digital developments in terms of increased work flexibility and reduced mobility constraints. However, the potential of digital technology for women may not display all the postulated effects in environments where gender inequalities, in terms of access, skills, and self-perceptions concerning digital technologies, are still in place. The most relevant result to be considered is the confirmation that female students' positive perceptions of gender equality can lead them to their perceptions of women empowerment, likewise, through it, to attitudes about and intention to participate in self-employment.

Usman & Widyanti (2020) Book	Do entrepreneurial self-efficacy and gender have an impact on entrepreneurial intention?	Quantitative	The result appears that Business Self-Efficacy is an overwhelming impact on Entrepreneurial Intention and Gender is, on the other hand, not as well compelling in Entrepreneurial Intention.
Wang et al. (2019) International Journal of Entrepreneurial Behavior & Research	How does the institutional environment of an entrepreneurial ecosystem foster the gender gap in entrepreneurial growth intention?	Quantitative	There are significant gender gaps in perceptions of the institutional environment and growth intention among Chinese entrepreneurs. Chinese women entrepreneurs have more negative perceptions of the regulative and cognitive institutional environment than their male counterparts.
Watson (2012) International Small Business Journal	Are there any systematic networking differences between men and women SME owners?	Quantitative	SME owners make extensive use of formal and informal networks, with women making more frequent use of family and friends and males making more frequent use of banks, solicitors, industry associations, and business consultants. However, most differences disappear when appropriate controls are included in the analysis.
Westhead & Solesvik (2016) International Small Business Journal	What's the link between entrepreneurship education skills and the intensity of entrepreneurial intention?	Quantitative	Hierarchical regression analysis revealed that EE students reported high intentions; however, EE did not benefit all students equally. Women were significantly less likely to report high intensity of intention. Both male EE and non-EE students reported higher intention, whereas women EE students with risk perception skills reported lower intention.
Women Entrepreneurs Association of Turkey (2018) Journal of Economy Culture and Society	How does the general situation related to women entrepreneurs in Turkey look like?	Report	Patriarchal mentality and cultural codes: "Women do not need to work"; "Women's place is her home"; Women do not make good entrepreneurs", etc. Insufficient state policy. Lack of affordable and universal childcare, hence the imbalance
Wyrwich et al. (2016) Small Business Economics	What kind of role do institutions have in the role model perceptions?	Quantitative	The study finds that knowing an entrepreneur reduces others' fear of failure. The effect was more substantial in West Germany but weaker for most people in East Germany: There was no differential effect of knowing an entrepreneur for younger East Germans; there were significant differences for older East Germans.



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