




# Women in top echelon positions and firm internationalisation strategies: What do we know? How do we know? Where should we be heading?

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## Abstract

While women in top echelon positions and firm internationalisation have been investigated separately for an extended period, the intersection between the two has seldom been explored. This study reviews 55 publications analysing the effect of women in top echelon positions on firm internationalisation. Our review relies on the ADO–TCM framework and the microfoundational approach. Following the Theories–Contexts–Methods (TCM) framework, previous research is outlined describing: (1) theories, i.e., gender-related theories; (2) contexts, i.e., women’s top echelon position and country where women operate; (3) methods, i.e., research methods, the consideration and measurement of gender, sample, and years. Following the Antecedents–Decisions–Outcomes (ADO) framework and the microfoundational approach, emerging findings are classified into: (1) antecedents of firm internationalisation by distinguishing between those related to microfoundation (i.e., characteristics of women in top echelon positions), the discrete context (i.e., firm characteristics), and the omnibus context (i.e., characteristics of the countries of origin, destination and public stimulation programmes); (2) characteristics of the decisions regarding firm internationalisation (i.e., entry mode, export propensity, and propensity to foreign direct investments); (3) outcomes of firm internationalisation (i.e., export intensity, percentage of foreign equity ownership, number of foreign direct investments, number and characteristics of destination countries, investment success and performance, and other outcomes). Based on this, research gaps are identified and a research agenda is offered.

**Keywords** Internationalisation · Women · Top echelon positions · ADO–TCM framework · Microfoundation · Literature review

## 1 Introduction

In recent years, gender diversity in top echelon positions<sup>1</sup> has garnered significant attention, both in terms of its antecedents and effects (e.g., Ramos et al., 2022; Reddy & Jadhav, 2019; Yao, 2023). The impact of this presence has been extensively scrutinised, particularly concerning firm performance (for a review, see Hazaea et al., 2023) and strategies such as innovation (for a review, see Khushk et al., 2023) and sustainability (for a review, see Bannò et al., 2023).

Conversely, internationalisation has been relatively overlooked. While women in top echelon positions and firm internationalisation have been investigated separately for an extended period, the intersection between the two has seldom been explored (see e.g., Moreira et al., 2019; Ratten & Tajeddini, 2018).

The first two studies examining how women in top echelon positions affect firm internationalisation were conducted in the mid-1990s and did not rely on any theoretical framework (see Grondin & Grondin, 1994; Grondin & Schaefer, 1995). Only since 2010 has the topic gained more attention. However, the majority of studies do not employ a gender-related theoretical approach to investigate the issue, thus assuming a lack of gender differences in explaining firm internationalisation (Williams, 2013). Marginally, gender is considered by relying on the feminist theory (e.g., Moreira et al., 2018; Orser et al., 2010). Moreover, the literature has not produced definitive results (Karam & Zaki, 2021; Pergelova et al., 2018).

Thirty years after the two seminal papers, it becomes imperative to conduct a review that synthesises existing research on how women in top echelon positions influence firm internationalisation. Three research questions must be answered:

**RQ1** How do women in top echelon positions affect firm internationalisation?

**RQ2** How has the issue been investigated from a methodological and theoretical point of view?

**RQ3** What are the existing gaps and the future research avenues?

To answer these questions, we conducted a framework-based review covering 55 publications spanning the years 1994 to 2022. We scrutinised both women's positions in the firm (i.e., entrepreneurs, managers, and directors) and internationalisation strategies (i.e., exports and foreign direct investment).

In this review, we employed the ADO–TCM framework (Lim et al., 2021) and the microfoundational approach (Foss & Linder, 2019). The ADO–TCM framework combines the Antecedents–Decisions–Outcomes (ADO) framework (Paul & Benito, 2018) and the Theories–Contexts–Methods (TCM) framework (Paul et al., 2017). These two frameworks together allow for a comprehensive understanding of the literature regarding a construct, encompassing both “what” is known and “how” it is

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<sup>1</sup> In this review, the term “women in top echelon position” indicates all relevant positions that women can hold in the firm, i.e., entrepreneurs, managers, and directors.

known, thereby addressing the shortcomings of each individual framework (Khatri & Duggal, 2022; Lim et al., 2021). Specifically, the ADO framework organises research findings on a construct into three dimensions: antecedents, decisions, and outcomes (Paul et al., 2023). Instead, the TCM framework proves instrumental in explaining the theories, contexts and methods that underlie previous studies (Paul et al., 2023). Additionally, in organising the antecedents of firm internationalisation, we adopted the microfoundational approach. We define microfoundations as a form of multilevel explanation that emphasises the micro level (often represented by individuals) while acknowledging the significance of contextual factors (Coleman, 1990). These factors are particularly important when analysing gender issues and encompass the discrete level (referring to specific and proximal aspects) and the omnibus level (referring to more macro and distant aspects) (Johns, 2006).

Our review has revealed interesting evidence. Following the TCM framework, it emerged that despite the pivotal importance of theories, a majority of publications do not employ gender-related theories (e.g., liberal and social feminist theories) to interpret women's roles, thereby overlooking the problems and challenges faced by women in society. Existing studies mainly focus on the figure of the entrepreneur and were conducted across geographical areas. Lastly, nearly all selected publications employ quantitative methods.

Following the ADO framework, our findings underscore that various antecedents either facilitate or impede the decision of women in top echelon positions to internationalise. Specifically, the characteristics of women in such positions (e.g., knowledge, education and skills) and those of their firms (e.g., size and age, resources and capabilities) significantly influence the decision to internationalise. Additionally, the characteristics of the countries of origin and destination play a pivotal role. These factors also impact the entry mode of women-led firms. However, the effect of women in top echelon positions on export propensity remains unclear, while their impact on the propensity to undertake a foreign direct investment is negative. As for outcomes, the effect on export intensity and the percentage of foreign equity ownership is ambiguous. Women entrepreneurs and directors tend to export to fewer destinations, whereas the opposite holds true for women managers. Concerning foreign direct investments, women directors exhibit a positive effect on the number of investments made and the number of destination countries, but only when women on the board of directors are at least three. Women managers contribute significantly to investment success.

Our review complements those of Moreira et al. (2019) and Ratten and Tajeddini (2018). These reviews identify three primary areas of analysis: the epistemological position and the consideration of gender in studies; the motivations for entrepreneurship (i.e., cultural and social reasons for creating firms); and firm management, characteristics, and performance. These reviews highlight that several factors influence the decision to internationalise, including gender, risk-taking propensity, needs, and cultural capital (e.g., education, experience, networks) (Moreira et al., 2019; Ratten & Tajeddini, 2018).

The paper is structured as follows. Section 2 describes the methodology. Section 3 describes the bibliometric characteristics of the selected publications. Section 4 discusses the ADO–TCM framework. Sections 5 and 6 present the most

relevant results of our analysis. Section 7 outlines the directions for future research. Section 8 reports the contributions to the literature and the managerial and policy implications. Section 9 concludes.

## 2 Methodology

In this study, we conducted a systematic literature review. This type of review “uses systematic and explicit methods to identify, select, and critically appraise relevant research, and to collect and analyse data from the studies that are included in the review” (Moher et al., 2009, p. 1) and is considered “among the most useful vehicles for advancing knowledge and furthering research” (Elsbach & Knippenberg, 2020, p. 1,277).

Our methodology comprises four phases: identification, screening, eligibility, and inclusion. In the following, each phase is described in detail. A summary of how the systematic review process was undertaken is presented in Fig. 1.

### 2.1 Identification

The identification phase was executed based on seven considerations: database selection, search string, search strategy, areas, document type, search period, and language.

We used the Web of Science and Scopus databases to identify potential publications for review. These sources are well-established bibliographic databases and the most used platforms for academic research since they are readily updated, reliable, relevant and prestigious, and contain only high-impact studies (e.g., Falagas et al., 2008; Zhu & Liu, 2020).

To identify the search string, we conducted a keyword search in existing reviews focusing on the effects of women in top echelon positions or internationalisation. The final search string comprised three parts:

- The first part focuses on women’s presence. Following Bannò et al. (2023), we used these keywords: *female\* OR wom\*n OR gender*;
- The second part focuses on the role of women in top echelon positions. We relied on Bannò et al. (2023), who examined the role of women in corporate governance, board of directors and management. We decided to expand the top echelon positions that women can hold, adding the positions of Chief Executive Office, entrepreneur, owner and founder. This process resulted in the use of the following keywords: *bod OR board\* OR “corporate governance” OR manager\* OR management OR CEO OR “Chief Executive Office” OR executive\* OR entrepreneur\* OR \*-owned OR founder\**;
- The third part focuses on firm internationalisation. Following Castagnoli et al. (2022), we used these keywords: *“international business” OR “international management” OR “international entrepreneurship” OR “global factor\*” OR “global supply chain” OR “global value chain” OR “internationali\*ation”*

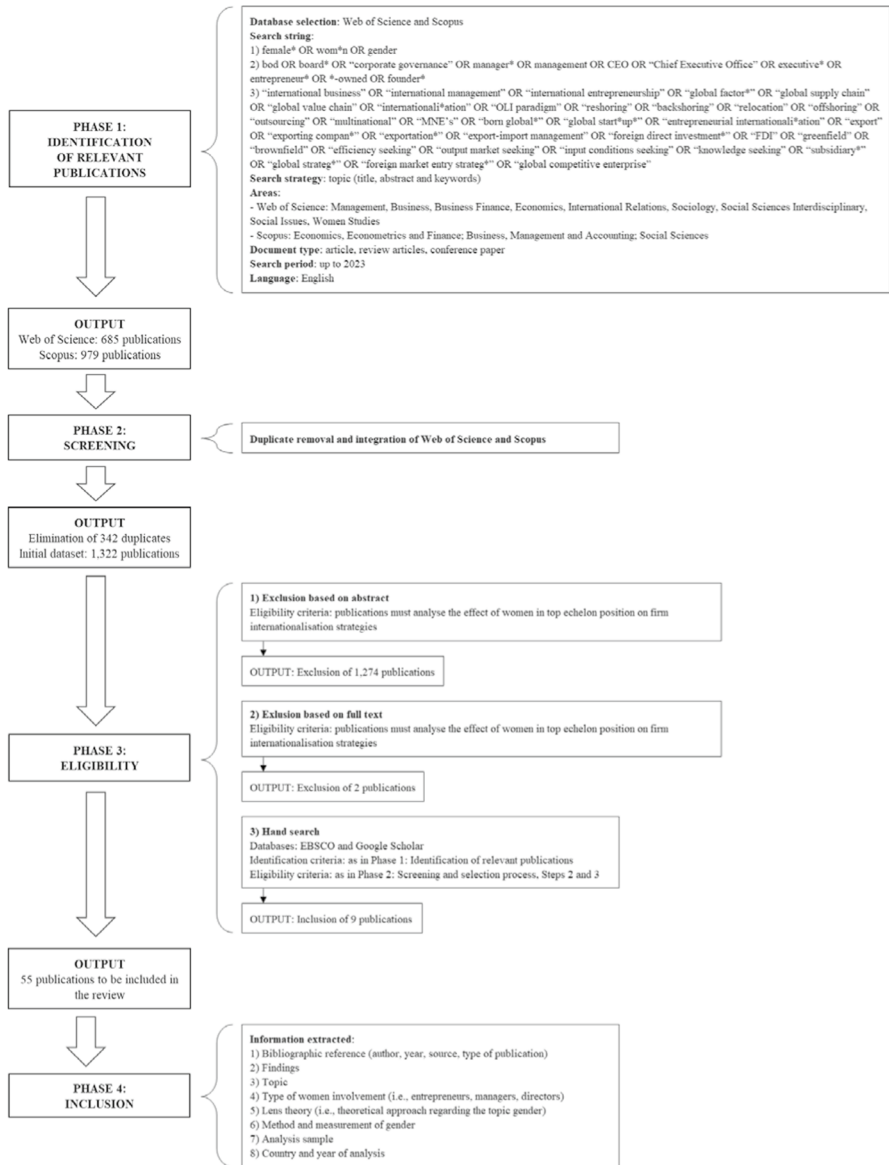


Fig. 1 Systematic review process. Source: Our elaboration

*OR "OLI paradigm" OR "reshoring" OR "backshoring" OR "relocation" OR "offshoring" OR "outsourcing" OR "multinational" OR "MNE's" OR "born global\*" OR "global start\*up\*" OR "entrepreneurial internationalization" OR "export" OR "exporting compan\*" OR "exportation\*" OR "export-import management" OR "foreign direct investment\*" OR "FDI" OR "greenfield" OR "brownfield" OR "efficiency seeking" OR "output market seeking" OR "input*

*conditions seeking” OR “knowledge seeking” OR “subsidiary\*” OR “global strateg\*” OR “foreign market entry strateg\*” OR “global competitive enterprise”.*

Selected keywords must be contained in the title, abstract and keywords (Paul & Criado, 2020).

Potential publications must relate to management, internationalisation, social sciences, gender studies and associated fields. Specifically, we selected the following areas in Web of Science: Management, Business, Business Finance, Economics, International Relations, Sociology, Social Sciences Interdisciplinary, Social Issues, and Women Studies. In Scopus, we selected the following areas: Economics, Econometrics and Finance; Business, Management and Accounting; Social Sciences.

Potential publications must be articles, review articles, and conference papers. The decision to include conference papers was made to ensure a comprehensive view of the issue, irrespective of the publication source.

The search in these databases was subject to publication time criteria, with publications required to be released before 2023.

Lastly, publications must be in the English language.

Applying these criteria, the Web of Science and Scopus searches yielded 685 and 979 publications, respectively.

## 2.2 Screening

In the screening process, we consolidated the publications extracted from Web of Science and Scopus to perform a single unified analysis. This merger led to the removal of 342 duplicates, resulting in an initial dataset of 1,322 publications.

## 2.3 Eligibility

In the eligibility stage, we examined the content relevance of publications to ensure that only those exploring the effects of women in top echelon positions on firm internationalisation were included in the review.

First, publications were filtered by reading and analysing their abstract (Moher et al., 2009). Each author conducted the first screening independently, deciding whether to exclude or include the publication for further examination. Subsequent discussions among the authors resulted in the exclusion of 1,274 publications based on the title and abstract.

Second, publications were filtered by reading their full text (Moher et al., 2009), following a process similar to the initial screening. This step led to the exclusion of two publications based on the full text.

The entire process resulted in the selection of 46 publications retrieved from Web of Science and Scopus.

To ensure a comprehensive review and include all relevant publications, each author conducted a hand search in EBSCO and Google Scholar. This hand search adhered to the identification and eligibility criteria previously described. The

potential publications identified by each author were compared and discussed. This hand search led to the inclusion of an additional 9 publications.

In total, 55 publications were included in the review.

## 2.4 Inclusion

In this phase, all selected publications underwent a thorough examination to extract pertinent information and synthesise the research findings.

The ADO–TCM framework guided the analysis to extract, code and organise information from each selected publication (Paul & Benito, 2018). This review adhered to a protocol that considered (1) bibliographic references (author, year, source, and type of publication), (2) theories, contexts, and methods, (3) antecedents, decisions, and outcomes. Following Lim et al. (2021), each author read each publication and coded relevant information. Specifically, the following information was extracted:

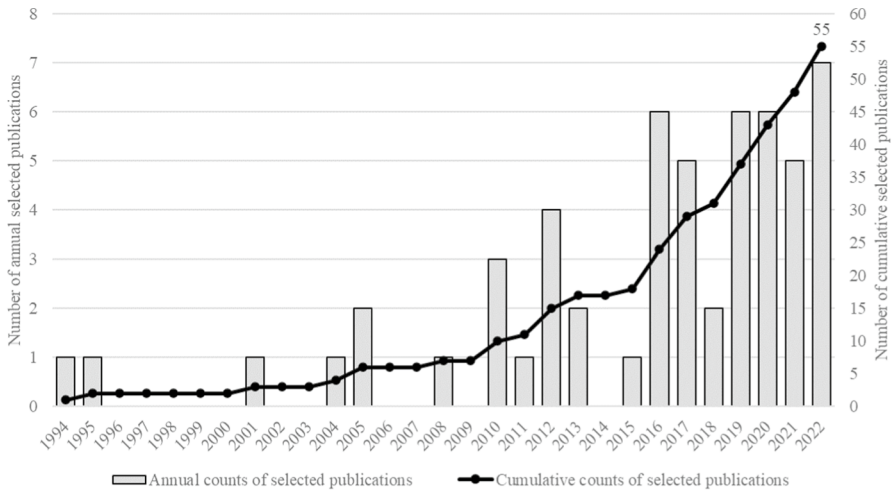
- Bibliographic reference (author, year, source, and type of publication);
- Findings;
- Topic (i.e., antecedents, decisions and outcomes);
- Theoretical approach regarding the topic *gender*;
- Women's top echelon position (i.e., entrepreneurs, managers, and directors);
- Country of analysis;
- Research method;
- Consideration and measurement of gender;
- Sample analysis;
- Years of analysis.

## 3 Bibliometric characteristics of relevant publications

This section provides an overview of the publishing trends and identifies the sources of the selected publications.

### 3.1 Publishing trend

The literature on women in top echelon positions and firm internationalisation began in the mid-1990s with two seminal publications (Grondin & Grondin, 1994; Grondin & Schaefer, 1995) (Fig. 2). Subsequently, there was a gradual increase in attention for nearly 15 years. However, since 2010, the topic has experienced a notable surge in interest. It can be observed, therefore, how the topic took several years to capture the attention it deserves, receiving the proper recognition only from 2010 onwards.



**Fig. 2** Cumulative and annual counts of selected publications. Source: Our elaboration

### 3.2 Source

Out of the 46 sources that published the selected publications, only three are conferences (Table 1). Additionally, the majority of sources (32) are associated with entrepreneurship, management, and economics, while the remaining sources focus on international business (9) and gender issues (5).

Nearly all sources released one selected publication. The lack of concentration is likely attributed to the limited number of publications on the issue.

## 4 Framework

This review adopts the ADO–TCM framework (Lim et al., 2021) and the microfoundational approach (Foss & Linder, 2019).

The ADO–TCM framework combines the Antecedents–Decisions–Outcomes (ADO) framework (Paul & Benito, 2018) and the Theories–Contexts–Methods (TCM) framework (Paul et al., 2017), thus addressing the limitations in each (Lim et al., 2021) and facilitating the integration of fragmented knowledge (Kahiya, 2018). The ADO–TCM framework captures the state of the literature concerning a construct in terms of both “what” is known (through the ADO framework) and “how” it is known (through the TCM framework) (Khatri & Duggal, 2022). This provides scholars with a comprehensive overview of the state of the literature, serving as a starting point to advance the field (Lim et al., 2021). Specifically, the ADO framework organises research findings into three dimensions: antecedents, representing key drivers influencing involvement or non-involvement in a behaviour; decisions, relating to the characteristics of that behaviour; and outcomes, describing



**Table 1** Distribution of selected publications by source

Source Title	Document type	Area	Number of selected publications
International Journal of Gender and Entrepreneurship	Journal	Gender	3
Global Business Review	Journal	International business	2
International Business Review	Journal	International business	2
International Conference on Gender Research	Conference	Gender	2
International Journal of Entrepreneurial Behaviour & Research	Journal	Entrepreneurship, Management, and Economics	2
International Journal of Entrepreneurship and Small Business	Journal	Entrepreneurship, Management, and Economics	2
Journal of Small Business and Enterprise Development	Journal	Entrepreneurship, Management, and Economics	2
Women in Management Review	Journal	Gender	2
Asia Pacific Business Review	Journal	Entrepreneurship, Management, and Economics	1
Baltic Journal of Management	Journal	Entrepreneurship, Management, and Economics	1
Business Excellence Challenges during the Economic Crisis	Conference	Entrepreneurship, Management, and Economics	1
Corporate Ownership & Control	Journal	Entrepreneurship, Management, and Economics	1
Cross Cultural and Strategic Management	Journal	Entrepreneurship, Management, and Economics	1
Economics	Journal	Entrepreneurship, Management, and Economics	1
Economics and Business Letters	Journal	Entrepreneurship, Management, and Economics	1
Entrepreneurship: Theory and Practice	Journal	Entrepreneurship, Management, and Economics	1
Estudios Gerenciales	Journal	Entrepreneurship, Management, and Economics	1
Eurasian Business Review	Journal	Entrepreneurship, Management, and Economics	1
Feminist Economics	Journal	Gender	1
International Entrepreneurship and Management Journal	Journal	International business	1
International Journal of Contemporary Hospitality Management	Journal	Entrepreneurship, Management, and Economics	1
International Journal of Human Resource Management	Journal	Entrepreneurship, Management, and Economics	1
International Journal of Management and Enterprise Development	Journal	Entrepreneurship, Management, and Economics	1

Table 1 (continued)

Source Title	Document type	Area	Number of selected publications
International Small Business Journal: Researching Entrepreneurship	Journal	Entrepreneurship, Management, and Economics	1
Journal of Accounting in Emerging Economies	Journal	Entrepreneurship, Management, and Economics	1
Journal of Asia-Pacific Business	Journal	Entrepreneurship, Management, and Economics	1
Journal of Business Ethics	Journal	Entrepreneurship, Management, and Economics	1
Journal of Business Research	Journal	Entrepreneurship, Management, and Economics	1
Journal of Business Venturing	Journal	Entrepreneurship, Management, and Economics	1
Journal of Developmental Entrepreneurship	Journal	Entrepreneurship, Management, and Economics	1
Journal of International Business Research	Journal	Entrepreneurship, Management, and Economics	1
Journal of International Management	Journal	International business	1
Journal of International Trade and Economic Development	Journal	International business	1
Journal of Management Studies	Journal	International business	1
Journal of Small Business and Entrepreneurship	Journal	Entrepreneurship, Management, and Economics	1
Journal of Small Business Management	Journal	Entrepreneurship, Management, and Economics	1
Journal of World Business	Journal	Entrepreneurship, Management, and Economics	1
Management International Review	Journal	International business	1
Quarterly Journal of Political Science	Journal	Entrepreneurship, Management, and Economics	1
Review of International Business and Strategy	Journal	International business	1
Revista Espanola de Financiacion y Contabilidad	Journal	Entrepreneurship, Management, and Economics	1
Revista internacional de Organizaciones	Journal	Entrepreneurship, Management, and Economics	1
Sinergie-SIMA Management Conference	Conference	Entrepreneurship, Management, and Economics	1
Small Business Economics	Journal	Entrepreneurship, Management, and Economics	1
The International Journal of Management Science and Information Technology (IJMSIT)	Journal	Entrepreneurship, Management, and Economics	1

**Table 1** (continued)

Source Title	Document type	Area	Number of selected publications
Women's entrepreneurship and economics: New perspectives, practices, and policies	Journal	Gender	1

Source: Our elaboration

its consequences (Paul et al., 2023). Antecedents influence decisions, which, in turn, affect outcomes (Paul et al., 2023).

In our review, we employed the ADO framework to categorise emerging findings into: antecedents of firm internationalisation adopting the microfoundational approach; characteristics of decisions regarding firm internationalisation, distinguishing entry mode, export and foreign direct investment; outcomes of these strategies, differentiating between those arising from exports and those stemming from foreign direct investments.

In organising the antecedents of firm internationalisation, we consider the microfoundational approach appropriate. This approach posits that macro-concepts, macro-constructs and causal relations involving the interaction of macro-variables should be broken down to their constituent components: individuals and the interaction among them (Abell et al., 2008). Moreover, depending on the analysis's aim, the characteristics of women (e.g., entrepreneurial personality, education) can be considered fixed or influenced by the context (Foss & Pedersen, 2019). Unlike macro theories that usually overlook individuals or treat them as homogeneous, the microfoundational approach acknowledges the diversity among individuals, with their characteristics contingent on the context (Felin & Foss, 2011). Moreover, this approach recognises that the influence of context varies in strength and that the discretion of decision-makers is conditioned by the environment, affecting available opportunities, individual motivations, and cognition (Foss & Pedersen, 2019). Context, in this regard, can be described at two different levels: the "discrete" context, which pertains to specific and proximal aspects influencing individuals, and the "omnibus" context, referring to more macro and distant aspects (Johns, 2006).

In our review, we characterise microfoundations as a specific kind of multilevel explanation that emphasises the micro level, usually represented by individuals, while not disregarding contextual factors (Coleman, 1990), which are particularly crucial when analysing gender issues. In our review, microfoundational explanations begin with the motivations and capabilities of women in top echelon positions and recognise that behaviours are shaped and/or influenced by both the discrete and omnibus contexts (Johns, 2006). Some publications examining the effect of women in top echelon positions on firm internationalisation underscore the influence of context, noting that gender is not the sole or primary determinant for internationalisation (Amoros et al., 2016; Spence et al., 2011) as many context-related factors come into play (Marques, 2019). In our review, antecedents of firm internationalisation are therefore categorised among those related to microfoundation (i.e., characteristics of women in top echelon positions), the discrete context (i.e., firm characteristics), and the omnibus context (i.e., characteristics of the countries of origin, destination and public stimulation programmes).

We adopted the TCM framework to elucidate the theories, contexts and methods underpinning previous studies (Paul et al., 2023). In this framework, theories guide the answer to research questions, serving as the foundations upon which findings are built (Lim et al., 2021). Contexts encompass the circumstances and the economic and/or political environment in which the investigation takes place (Paul et al., 2017). Lastly, methods involve the nature of empirical evidence produced and include the collection and analysis of data used for the investigation (Lim et al., 2021; Paul et al., 2017). In

our review, theories are described in relation to those addressing gender issues, contexts involve women's top echelon position and the country in which women operate, whereas the methods employed are described focusing on research methods, the consideration and measurement of gender, sample, and years.

Figure 3 illustrates the ADO–TCM framework adopted in this review.

## 5 TCM framework-based review

The theories, contexts and methods applied in the selected publications are described following the TCM framework (Paul et al., 2017).

### 5.1 Theories

Theories guide answering research questions since they are the foundations for building findings (Lim et al., 2021).

Despite the paramount importance of theories, only a minority of publications (16 out of 55) (e.g., Bannò et al., 2022; Moreira et al., 2018; Welch et al., 2008) adopt one or two theoretical approaches and consider what feminist theories recognise as problems and challenges that women encounter in society (Lykke, 2010). The main perspectives embraced are the liberal and social feminist theories. Liberal feminists argue that men and women are fundamentally the same, with societal discrimination against women stemming from the belief that they are less capable (both intellectually and physically) than men (Ahl, 2006). On the other hand, social feminists argue that women and men differ due to their socialisation process (Ahl, 2006). Other theories considered include the social identity theory, the critical mass theory, the gender self-schema theory, gendered institutions, gendered social values and institutions, the post-structural feminist theory, and the relational theory. These theories provide a diverse range of perspectives on various aspects, such as how gender perception influences information acquisition and personal assumptions, the role of institutions in shaping gender formation, and the decision-making processes of women, particularly in group settings.

In contrast, a significant majority of publications (39 out of 55) do not rely on theories to interpret the women's role: they treat gender merely as a variable, often emphasising differences and similarities between men and women (e.g., Amoros et al., 2016; Grondin & Schaefer, 1995; Marques, 2015) (Table 2). Consequently, they do not take into account that gender is shaped throughout life and how society impacts this formation. Additionally, they overlook how gender is accomplished, i.e., how it influences the decisions and actions of women in top echelon positions. Thus, in these studies, gender is simply tied to individuals of specific sexes.

### 5.2 Contexts

Contexts refer to the circumstances and the economic and/or political environment under which an investigation takes place (Paul et al., 2017). In this review, context regards women's top echelon position and country in which women operate.

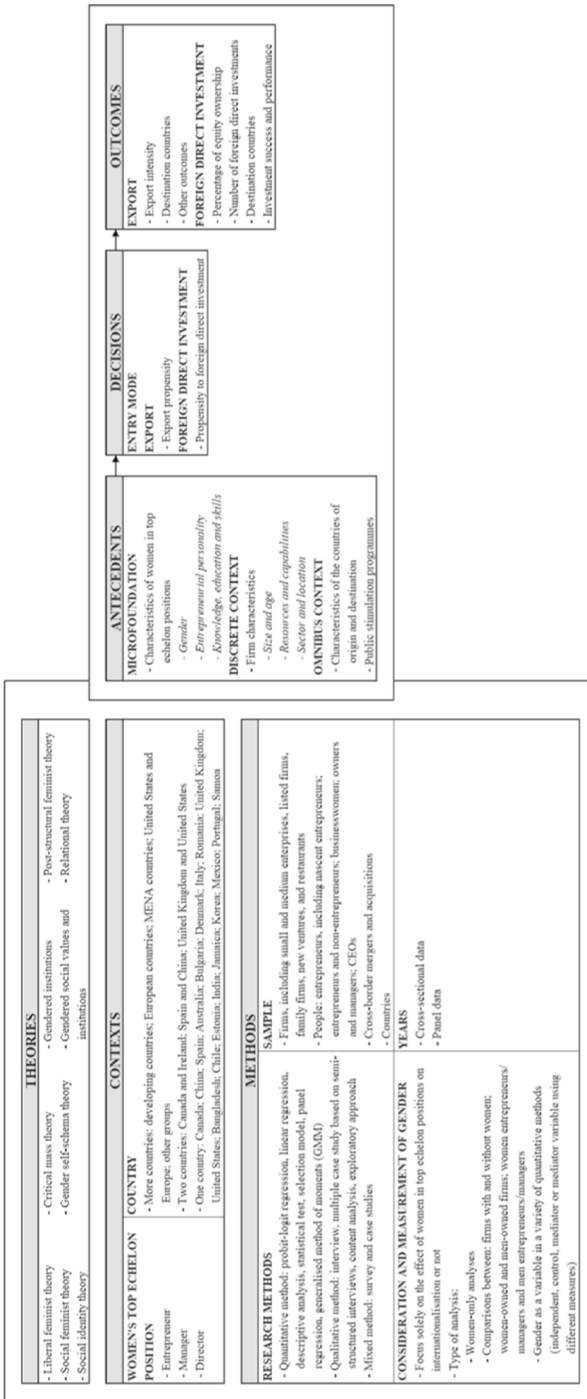


Fig. 3 ADO–TCM framework. Source: Our elaboration

**Table 2** Theoretical approach adopted in selected publications

Theoretical approach	Number of selected publications
<b>Distribution of selected publications by number of theories used</b>	
Publications relying on no (explicit) theory	39
Publications relying on one theory	12
Publications relying on two theories	4
<b>Theories used</b>	
Liberal feminist theory	5
Social feminist theory	5
Social identity theory	4
Critical mass theory	1
Gender self-schema theory	1
Gendered institutions	1
Gendered social values and institutions	1
Post-structural feminist theory	1
Relational theory	1

Source: Our elaboration

*Women's top echelon position* All top echelon positions that women can hold (i.e., entrepreneur, manager, and director) have received attention in the literature. Forty-eight publications exclusively examine one position women can assume, 5 publications consider two positions, only two publications consider all three positions (Berenguer et al., 2016; Giraldez & Berenguer Cárceles, 2016).

The most studied position is that of the entrepreneur. Specifically, 33 publications focus on women entrepreneurs (e.g., Grondin & Grondin, 1994; Rosenbaum, 2019), 16 on women managers (e.g., Charoenrat & Amornkitvikai, 2021; Pergelova et al., 2018), and 15 on women directors (e.g., Bazel-Shoham et al., 2020; Wang et al., 2022).

The prevalence of studies focused on a single role that women can assume and on the role of women entrepreneurs is therefore noticeable. The emphasis on women entrepreneurs is likely attributed to their autonomous and pivotal role in overseeing women-led firms.

*Country* Fifteen publications focus on more than two countries in different geographic areas, spanning different geographical areas such as developing countries and European nations (e.g., Jafari-Sadeghi et al., 2021; Rivas, 2012) (Table 3). Three publications consider three countries each (Ahmed et al., 2022; Niñerola et al., 2016; Reavley et al., 2005). The remaining 37 publications conduct the analysis on a single country (e.g., Naz et al., 2010; Williams, 2013). Most frequently studied countries include Canada (considered in 5 publications), China (4), Spain (4), Australia (3), Bulgaria (2), Denmark (2), Italy (2), Romania (2), United Kingdom (2), and the United States (2).

**Table 3** Levels of analysis considered in selected publications

Level of analysis	Number of selected publications
<b>Distribution of selected publications by country of analysis</b>	
Publications considering more countries	15
Publications considering two countries	3
Publications considering one country	37
<b>Countries and areas analysed</b>	
<i>More countries</i>	
Developing countries	2
European countries	2
MENA countries	1
United States and Europe	1
Other groups	9
<i>Two countries</i>	
Canada and Ireland	1
Spain and China	1
United Kingdom and United States	1
<i>One country</i>	
Canada	5
China	4
Spain	4
Australia	3
Bulgaria	2
Denmark	2
Italy	2
Romania	2
United Kingdom	2
United States	2
Bangladesh	1
Chile	1
Estonia	1
India	1
Jamaica	1
Korea	1
Mexico	1
Portugal	1
Samoa	1

Source: Our elaboration

The conduction of analyses across diverse geographical areas highlights the global significance of the subject and allows for a more in-depth examination, taking into account the influence of factors such as institutional context and culture.



**Table 4** Research methods employed in selected publications

Method adopted	Number of selected publications
<b>Distribution of selected publications by method</b>	
Publications adopting a quantitative method	48
Publications adopting a qualitative method	6
Publications adopting a mixed method	1
<b>Method</b>	
<i>Quantitative method</i>	
Probit-Logit regression	21
Linear regression	20
Descriptive analysis	7
Statistical test	6
Selection model	5
Panel regression	3
Generalised method of moments (GMM)	2
<i>Qualitative method</i>	
Interview	3
Multiple case study based on semi-structured interviews	2
Content analysis	1
Exploratory approach	1
<i>Mixed method</i>	
Survey and case studies	1

Note: Publications adopting more methods are counted multiple times

Source: Our elaboration

### 5.3 Methods

Methods encompass the nature of empirical evidence produced and involve the collection and analysis of data for the investigation (Lim et al., 2021; Paul et al., 2017). This review focuses on research methods, the consideration and measurement of gender, sample, and years.

*Research methods* Nearly all publications (48 out of 55) employ a quantitative method (e.g., Audretsch et al., 2022; I. H. Lee et al., 2016a, 2016b; Ramón-Llorens et al., 2017) (Table 4). The most commonly employed quantitative methods include probit-logit regression (adopted in 21 publications) and linear regression (20), followed by descriptive analyses (7) and statistical tests (6).

Six publications employ a qualitative method (e.g., McClelland et al., 2005; Rosenbaum, 2017; Welch et al., 2008), primarily relying on interviews and multiple case studies based on semi-structured interviews (adopted in three and two publications respectively).

Finally, one publication (Orser et al., 2004) adopts a mixed-method approach, combining a survey and case studies.

A lack of conceptual and qualitative studies is thus evident. This could be a limitation since quantitative methods may constrain a comprehensive understanding of the analysed phenomenon (Creswell & Plano Clark, 2018), while the use of qualitative or mixed methods can enable the acquisition of more in-depth insights (Bryman, 2008).

*Consideration and measurement of gender* Thirty-four publications focus solely on the effect of women in top echelon positions on firm internationalisation (e.g., Idris & Saridakis, 2020; Moreira et al., 2018). The remaining 21 publications, while not exclusively gender-focused, still analyse the role of women (e.g., Rashid, 2020; Westhead et al., 2001).

Different strategies are employed to analyse the effect of gender on internationalisation.

Ten publications are women-only analyses, i.e., they consider solely women-led firms (e.g., Jafari-Sadeghi et al., 2021; Rosenbaum, 2017), thus allowing for a thorough analysis that considers the perspective and experiences of women.

Five publications analyse the effect comparing firms with and without women (Giraldez & Berenguer Cárceles, 2016), women-owned and men-owned firms (Grondin & Schaefer, 1995), women entrepreneurs/managers and men entrepreneurs/managers (Javadian & Richards, 2020; Naz et al., 2010; Nissan et al., 2012). These studies adopt quantitative methods, specifically descriptive analyses and statistical tests. These studies assign organisational actors to one of the two sex categories (i.e., men or women) and compare them to a particular phenomenon of interest. The assumption is that differences between men and women arise from both anatomical sex differences and the socialisation of gender roles and experiences.

In the remaining 40 publications, the presence of women in top echelon positions is considered through a variable in a variety of quantitative methods. Specifically, 33 publications take into account the presence of women through an independent variable (e.g., Alves et al., 2021; Wang et al., 2022), two publications through a control variable (Amoros et al., 2016; Mohan, 2019), two publications through a mediator variable (Marques, 2015; Orser et al., 2010), and three publications through a moderator variable (Audretsch et al., 2022; Expósito et al., 2022; Liu & Pearson, 2010). These publications thus treat gender simply as a marginal variable, one among other demographic variables or descriptive controls.

Among the publications that consider gender as an (independent, control, mediator or mediator) variable, the majority construct gender as a dummy variable measuring the gender of the entrepreneur, manager or director (e.g., Garg & Shastri, 2022; Giotopoulos et al., 2017). Other measures include: a dummy variable indicating the presence of at least one or two women entrepreneurs, managers or directors (e.g., Lukason & Vissak, 2020; Osgood & Peters, 2017); the percentage of women directors (e.g., Ren & Zeng, 2022; Watkins-Fassler & Rodríguez-Ariza, 2019); the number of women directors (Ahmed et al., 2022; Bannò et al., 2022); the Blau Heterogeneity Index regarding the board of directors or the management (Niñerola et al., 2016; Ren & Zeng, 2022); the share of capital owned by women (Berenguer et al., 2016); a dummy variable for majority ownership by women (Spence et al.,

2011); a dummy variable for the presence of only women in the ownership and management (Zimmerman & Brouthers, 2012); a dummy variable measuring the token and critical mass effects (Bannò et al., 2021); the number of women full-time employees (Karam & Zaki, 2021). Employing various metrics to capture the presence of women in top echelon positions enables a comprehensive assessment of the effects of such representation. This extends beyond merely acknowledging the presence of women, encompassing their representation in percentage terms (e.g., when measuring the percentage of women directors or the majority ownership by women), their influence on corporate decisions (i.e., when capturing the token and critical mass effects), and their interaction with the presence of men (i.e., when relying on the Blau Heterogeneity Index).

*Sample* The samples used in the analyses primarily include firms, individuals, cross-border mergers and acquisitions, and countries.

Specifically, 38 publications consider a sample of firms (e.g., Osgood & Peters, 2017; Zimmerman & Brouthers, 2012), encompassing various types such as small and medium firms (e.g., Idris & Saridakis, 2020; Pergelova et al., 2019), listed firms (e.g., Bordean & Borza, 2012, 2013; Rivas, 2012), family firms (Ramón-Llorens et al., 2017; Watkins-Fassler & Rodríguez-Ariza, 2019), new ventures (I. H. Lee et al., 2016a, 2016b; Spence et al., 2011), and restaurants (W. S. Lee et al., 2016a, 2016b).

Fourteen publications consider a sample of individuals and specifically: entrepreneurs (e.g., McClelland et al., 2005; Mohan, 2019), including nascent entrepreneurs (Giotopoulos et al., 2017; Marques, 2019), entrepreneurs and non-entrepreneurs (Alves et al., 2017, 2021), business women (Gundlach & Sammartino, 2019), owners and managers (Javadian & Richards, 2020), CEOs (W. S. Lee et al., 2016a, 2016b).

Two publications consider a sample of cross-border mergers and acquisitions (Bazel-Shoham et al., 2020; Zhu et al., 2020).

Lastly, one publication considers a sample of countries (Nissan et al., 2012).

This heterogeneity in the samples used in the analyses enables an evaluation focusing on both the individual level and the discrete and omnibus contexts, thus aligning with the microfoundational approach, which stresses the need of considering the individuals and the context when examining a phenomenon.

*Years* Thirty-three publications consider cross-sectional data (e.g., Alves et al., 2021; Gundlach & Sammartino, 2019), while 22 publications use panel data (e.g., Marques, 2019; Rashid, 2020). The analyses use data referring to the years from 1991 to 2018.

Compared to cross-sectional data, the use of panel data enables a more comprehensive investigation, enabling a dynamic understanding of the issue.

## 6 ADO framework-based review

The findings from selected publications are outlined adopting the ADO framework (Paul & Benito, 2018) and the microfoundational approach.

## 6.1 Antecedents

The antecedents of firm internationalisation are exposed by adopting the microfoundational approach, distinguishing those related to (1) microfoundation, i.e., characteristics of women in top echelon positions (i.e., gender; entrepreneurial personality; knowledge, education and skills), (2) the discrete context, i.e., firm characteristics (i.e., size and age; resources and capabilities; sector and location), and (3) the omnibus context (i.e., characteristics of the countries of origin and destination and public stimulation programmes).

### 6.1.1 Microfoundation: characteristics of women in top echelons positions

The characteristics of women in top echelon positions relevant to firm internationalisation are primarily associated with the entrepreneur and specifically her gender, entrepreneurial personality and knowledge, education and skills.

*Gender* Gender is not the sole or primary determinant for internationalisation (Amoros et al., 2016; Spence et al., 2011) as many context-related factors play a role (Marques, 2019). Other publications specify that when contextual factors are properly addressed or controlled, gender ceases to be decisive, allowing women in top echelon positions to achieve similar results in international business as men (Lee et al., 2016a, 2016b; Orser et al., 2010). However, many women perceive gender itself as a relevant factor for firm internationalisation (Orser et al., 2004). In general, being a woman is not considered a barrier to internationalisation (Reavley et al., 2005). Gender-related barriers, relating to cultural and personal factors (e.g., lack of respect by men, not being taken seriously, and refusal to do business with women) (Orser et al., 2004), may indeed be encountered only sporadically (McClelland et al., 2005; Reavley et al., 2005). What emerges is that gender can have a more or less significant influence on firm internationalisation, but generally, it does not represent a barrier.

*Entrepreneurial personality* Entrepreneurial personality encompasses entrepreneurial orientation, motivations and expectations (Moreira et al., 2018).

Entrepreneurial orientation plays a crucial role in promoting the internationalisation of women-led firms (Moreira et al., 2018; Zimmerman & Brouthers, 2012). Specifically, an all-women top management team with a high entrepreneurial orientation is associated with a higher international diversification compared to more gender-diverse top management teams or teams with a lower entrepreneurial orientation (Zimmerman & Brouthers, 2012). This is due to two reasons: first, the presence of women in mixed-gender teams may hinder them from sharing their ideas, thus preventing the group from benefiting from the diverse approach and style of women; second, teams with a high entrepreneurial orientation are more inclined to take risks associated with internationalisation and therefore to pursue it (Zimmerman & Brouthers, 2012). Traits of entrepreneurial orientation analysed include tolerance for ambiguity, risk aversion, confidence, dominance, and leadership style (e.g., Nissan et al., 2012; Reavley et al., 2005). Tolerance for ambiguity tends to be higher for women who have internationalised compared to those operating solely in the domestic market (Gundlach & Sammartino, 2019). Similarly, lack of confidence

(perceived as a personal barrier; Gundlach & Sammartino, 2019) and a high-risk aversion in women entrepreneurs or managers discourage firm internationalisation (e.g., Nissan et al., 2012). Internationalisation is indeed considered a conscious choice in which individuals grapple with high ambiguity (Gundlach & Sammartino, 2019). Therefore, it can be expected that women who internationalise possess the ability to confront uncertain situations, are confident and are generally less risk-averse (Gundlach & Sammartino, 2019; Nissan et al., 2012). Instead, women who are about to internationalise but do not possess these qualities may need additional guidance or advice (Gundlach & Sammartino, 2019). Women entrepreneurs who successfully internationalise also lack dominance and exhibit a transformational and participative leadership style so that they prefer a collaborative approach to management, characterised by involvement, shared decisions and consensus (Reavley et al., 2005). They also prioritise firm growth and view internationalisation as a key strategy to achieve this (Reavley et al., 2005).

In terms of motivations and expectations, various stimuli propel the internationalisation of women-led firms. Women with opportunity-oriented motivations foster firm internationalisation as they seek opportunities both in the domestic and foreign markets (Amoros et al., 2016). Women may desire to expand sales markets to overcome a limited domestic market (Moreira et al., 2018; Orser et al., 2004) or to obtain financial rewards (e.g., desire to maintain or increase income) (Jafari-Sadeghi et al., 2021).<sup>2</sup> Expectations also shape motivations: when expectations are favourable in the home country, the need and impetus to internationalise decrease and for some level of expectations, men entrepreneurs tend to have a higher propensity to internationalise than women (Nissan et al., 2012). However, some studies suggest that women entrepreneurs are generally less ambitious in terms of growth and international expansion and, in turn, less likely to pursue strategies in this direction (Gioto-poulos et al., 2017; Nissan et al., 2012).

In summary, various features of entrepreneurial personality, encompassing entrepreneurial orientation, motivations, and expectations, intricately influence the internationalisation of women-led firms.

*Knowledge, education and skills* Women-owned firms need to build an “export readiness” before venturing into internationalisation as gathering information about the political, social and economic conditions of destination countries and acquiring knowledge for improving internationalisation strategies and tactics are crucial for success (Grondin & Grondin, 1994; Reavley et al., 2005). Additionally, accessing market intelligence, warehousing facilities, understanding how to be competitive abroad, creating product awareness, and building international demand are essential steps (Grondin & Grondin, 1994; Reavley et al., 2005). The knowledge necessary for internationalisation is usually acquired through trade fairs, brochures, and advice from successful women entrepreneurs (Reavley et al., 2005). Seminars and conferences are instead considered less useful, possibly due to the costs associated with

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<sup>2</sup> Instead, necessity-driven motivations (e.g., lack of job alternatives) foster domestic entrepreneurship (Jafari-Sadeghi et al., 2021). At the same time, non-financial desires (e.g., becoming independent) reduce both domestic and international entrepreneurship (Jafari-Sadeghi et al., 2021).

their attendance (Grondin & Grondin, 1994). Lastly, while some studies note sparse use of networks due to concerns about knowledge misappropriation (Rosenbaum, 2017), other studies find that leveraging network advice can moderate the negative relationship between women and firm internationalisation (Idris & Saridakis, 2020).

Education is another significant factor. Women entrepreneurs with secondary education tend to exhibit a lower propensity to internationalise compared to men, probably because they mainly operate in the personal service sector (Nissan et al., 2012). In contrast, higher educational levels positively contribute to firm internationalisation (Amoros et al., 2016): highly educated women are equally likely to internationalise as men since they need to exert less effort in this strategy (Nissan et al., 2012).

Ultimately, having the right skills may not enable women to internationalise as much as men; however, when both women and men lack the necessary skills, they exhibit an equal probability to engage in internationalisation (Alves et al., 2017).

In summary, knowledge, education, and skills play a crucial role in facilitating internationalisation and promoting its success. The absence of these factors should be addressed by women through various means, which show different levels of efficacy.

### 6.1.2 Discrete context: firm characteristics

Characteristics of women-led firms (i.e., discrete context) such as firm size and age, resources and capabilities, sector and location play a significant role in influencing firm internationalisation (Grondin & Schaefer, 1995).

*Size and age* The lower internationalisation of women-led firms can be attributed to their smaller size and lower growth orientation (Nissan et al., 2012; Orser et al., 2010; Williams, 2013). Nevertheless, women-led firms are still less likely to internationalise compared to men-led firms of the same size (Orser et al., 2010). Instead, firm age is not a primary determinant of firm internationalisation (Williams, 2013). Internationalisation indeed necessitates acquiring key resources to overcome challenges in operating in foreign markets (Williams, 2013). This implies that firms commence operations on a smaller scale and embark on internationalisation only as they grow over time (Orser et al., 2010). This consideration is especially pertinent for women-led firms, which are typically smaller compared to men-led firms (Williams, 2013).

*Resources and capabilities* A lack of resources and capabilities may represent a barrier to internationalisation (Grondin & Grondin, 1994; McClelland et al., 2005). Several types of firm resources and capabilities have been analysed: financial capital, R&D and innovation, technology, and knowledge.

Available financial capital is among the most crucial and analysed resources given its effect on firm internationalisation (e.g., Gundlach & Sammartino, 2019; McClelland et al., 2005). The propensity to internationalise is diminished by the share of fixed and working capital financed through retained earnings, in relation to which women have acquisition difficulties (Marques, 2015). The lack of support from financial institutions further hinders the internationalisation of women-led firms (Gundlach & Sammartino, 2019; McClelland et al., 2005). Coherently,

while self-financing holds relevance for international expansion, especially for men-led firms, access to funding from financial institutions proves more beneficial for women-led firms (Karam & Zaki, 2021). However, women-owned ventures usually encounter greater challenges in securing venture capital, despite this type of financing not being positively associated with firm internationalisation (Lee et al., 2016a, 2016b).

The process of internationalisation may be fostered by innovation capabilities (Moreira et al., 2018). In developing countries, firm R&D and innovation favour the internationalisation of women entrepreneurs, enabling them to attain the same chances to internationalise as men entrepreneurs (Alves et al., 2017). Conversely, in developed countries, firm R&D and innovation exacerbate the existing gap between women and men entrepreneurs since they are not sufficient to compensate for the inferior status that women experience in society (Alves et al., 2017). Alongside heightened marketing capabilities, superior firm innovation capabilities empower men-owned new ventures to achieve better international business results than women-owned ones (Lee et al., 2016a, 2016b). The significance of firm R&D and innovation has been corroborated by other studies, which attribute the lower internationalisation of women-owned firms to their lower R&D intensity (Orser et al., 2010).

The use of technologies can help women entrepreneurs in their early internationalisation (Amoros et al., 2016). Information and communication technologies enable women-led firms to enter foreign markets, avoiding network membership costs or an alteration in their work-life balance (Rosenbaum, 2017). The use of digital technologies and information management systems proves especially advantageous for women entrepreneurs, allowing them to leverage these technologies for building the market knowledge and intelligence essential for expanding internationally (Pergelova et al., 2019). Conversely, front-end infrastructures and the internet affect both men and women entrepreneurs similarly (Pergelova et al., 2019).

Firm knowledge, pivotal in fostering the process of internationalisation, encompasses many aspects including industry, the possibility of sending firm products to foreign markets, familiarity with the destination country (i.e., knowledge about the characteristics of the target market and the foreign language or culture), administrative aspects, logistics, and the ability to manage relationships with distributors operating in foreign markets (e.g., McClelland et al., 2005; Orser et al., 2004). Knowledge barriers are perceived as higher by women who have not yet internationalised since internationalisation itself enables a learning process, which benefits the effectiveness of the strategies adopted (Gundlach & Sammartino, 2019). Nevertheless, knowledge barriers may remain relevant even after internationalisation has taken place when the internationalisation strategy must be improved and the competitiveness in the foreign market maintained (Grondin & Grondin, 1994).

In summary, resources and capabilities related to financial capital, R&D and innovation, technology, and firm knowledge play a fundamental role in either promoting or hindering the internationalisation of women-led firms. However, while the impact of certain resources (e.g., available financial capital, use of technologies, firm knowledge) is clear, the impact of other resources (e.g., innovation capabilities) is more complex and may depend on the context.

*Sector and location* Operating in extractive sectors (e.g., farming, forestry, fishing, and mining) increases the probability of early internationalisation of women-led firms (Amoros et al., 2016). In contrast, operating in sectors characterised by a lower degree of internationalisation (e.g., personal services sector) hinders the internationalisation of women-led firms (Nissan et al., 2012; Orser et al., 2010). A high degree of competition is associated with a higher propensity to internationalise as facing a higher number of competitors may imply a lower risk aversion (Marques, 2015). Instead, a higher industry's degree of specialisation favours internationalisation since it provides women with the necessary confidence (Moreira et al., 2018).

The probability of internationalisation is heightened and results are better when women-owned firms are located near other women-owned firms or domestic firms operating in the same industry as positive spillover effects arise (Marques, 2015). The effect is opposite when women-owned firms locate near foreign-owned firms as spillover effects are negative (Marques, 2015).

In summary, the sector in which women-led firms operate has a complex impact on the propensity to internationalise, as many of its characteristics (e.g., industry type, degree of competition, and level of specialisation) influence this propensity in opposing directions. The impact of localisation, on the other hand, seems clearer.

### 6.1.3 Omnibus context: characteristics of the countries of origin and destination and Public stimulation programmes

The omnibus context, and specifically the characteristics of the countries of origin and destination and public stimulation programmes, exert substantial influence on firm internationalisation.

*Characteristics of the countries of origin and destination* The institutional context of the country of origin (i.e., omnibus context) influences firm internationalisation (Karam & Zaki, 2021). Regulatory barriers, including importation procedures (e.g., custom clearance procedures or the number of days to import) and procedures to conduct the firm (e.g., cost of firm licensing), are more obstructive for women-led firms compared to men-led ones (Karam & Zaki, 2021; Moreira et al., 2018). In countries of origin characterised by a high level of discrimination, internationalisation enables escaping some costs of discrimination (e.g., restricted access to finance or smaller business networks) that negatively impact on the firm and its activities (Osgood & Peters, 2017).

The characteristics of the destination country (i.e., omnibus context) also play a role. In the selection of destination countries, the closest ones are preferred as they are generally more familiar (Lee et al., 2016a, 2016b). The internationalisation of women-led firms can be prompted by an unfulfilled demand or an unsolicited order in the destination country (Grondin & Grondin, 1994; Grondin & Schaefer, 1995; Orser et al., 2004). However, when internationalising, some barriers and difficulties related to the destination country may be encountered, including non-tariff barriers, risks of political instability, cultural and language barriers, and variation in exchange rates (Gundlach & Sammartino, 2019; McClelland et al., 2005). Women who have not yet internationalised may perceive these barriers as challenging (Gundlach & Sammartino, 2019).



In summary, the characteristics of the countries of origin and destination, especially in terms of regulatory barriers, play a pivotal role in influencing the internationalisation of women-led firms.

*Public stimulation programmes* While according to some studies, knowledge and perceived usefulness of stimulation programmes strongly affect the internationalisation of women-led firms (Grodin & Schaefer, 1995), other studies suggest that the assistance received from these programmes is not a great stimulus (Grondin & Grondin, 1994). Government-funded export promotion programmes may be viewed as expensive, time-consuming, insufficiently specific and irrelevant and consequently, their usefulness may be negligible (Rosenbaum, 2019). Furthermore, improved information obtained from these programmes may benefit women entrepreneurs already operating in foreign markets instead of promoting internationalisation (Grondin & Grondin, 1994). The effectiveness of public stimulation programmes in helping women to internationalise is therefore not clear.

## 6.2 Decisions

The characteristics of firm internationalisation decisions are examined distinguishing entry mode, export (export propensity), and foreign direct investment (propensity to foreign direct investment).

### 6.2.1 Entry mode

Entry mode can be equity (e.g., wholly-owned ventures and joint ventures such as acquisitions and greenfields) or non-equity (e.g., contractual modes such as exporting, licencing, and alliances) (Canabal & White, 2008; Xie et al., 2017).

The entry mode of women-led firms is influenced by various factors regarding both the discrete context (e.g., firm sector and location) and the omnibus context (e.g., country of origin). Women-led SMEs and women-led manufacturing firms prefer exports (Pergelova et al., 2018). Instead, firms with young women CEOs and women-led firms situated in a capital city favour foreign direct investments since they are more likely to break down social norms by opting for a more challenging entry mode (Pergelova et al., 2018). The country of origin also plays a crucial role: for instance, in Australia and Ireland, women-led firms are prevalent born-global, probably due to the women's previous international work or study experience, while in Singapore and South Africa, a gradual approach to internationalisation is preferred (McClelland et al., 2005). In Canada, women entrepreneurs frequently internationalise taking advantage of their high-developed business networks and, specifically, through the establishment of strategic alliances and joint ventures (McClelland et al., 2005), whereas in Denmark, reliance on networks is rare, partly due to concerns about knowledge misappropriation (Rosenbaum, 2017). Institutional and cultural factors seem thus to strongly influence the entry mode of women-led firms.

### 6.2.2 Export (export propensity)

The characteristics of export decisions refer to export propensity or extensive margin of trade (i.e., the probability that the firm exports).

Numerous studies find that women entrepreneurs are less likely to export compared to men (e.g., Alves et al., 2017, 2021; Garg & Shastri, 2022; Nissan et al., 2012; Westhead et al., 2001). Their lower export propensity is particularly pronounced during crises since in this situation women may be less ambitious or face higher difficulties and thus fail to establish an export-oriented firm (Giotoopoulos et al., 2017). The lower propensity of women-led firms holds also for established firms, but not for early-stage firms, which show a higher tendency to export (Spence et al., 2011). In contrast, women entrepreneurs foster export propensity under two conditions: first, when they lead a large firm as they face lower financial and regulatory barriers (Karam & Zaki, 2021); second, when they are immigrants, since they usually face lower domestic opportunities and at the same time can take advantage of the enhanced cultural, geographical, and market knowledge of the destination country (Orser et al., 2010). However, some studies find no effect of women entrepreneurs on export propensity (Berenguer et al., 2016; Giraldez & Berenguer, 2016).

Other roles (i.e., women managers and directors) have received less attention in the literature. Some studies find that women managers have a positive (Berenguer et al., 2016; Karam & Zaki, 2021) or no effect on export propensity (Expósito et al., 2022; Giraldez & Berenguer, 2016; Ramón-Llorens et al., 2017). Conversely, women directors negatively affect export propensity (Bordean & Borza, 2012, 2013; Idris & Saridakis, 2020; Lukason & Vissak, 2020) or do not impact it (Berenguer et al., 2016; Giraldez & Berenguer, 2016).

The effect of women in top echelon positions on export propensity is therefore not clear.

### 6.2.3 Foreign direct investment (propensity to foreign direct investment)

Decisions made regarding foreign direct investments have been analysed considering the propensity to undertake a foreign direct investment.

According to Liu and Pearson (2010), the gender of the manager plays a significant mediating role in determining the effect that factors such as market size, labour costs, and business ethics have on the decision to engage in foreign direct investments.

Instead, the effect of women directors on the propensity to undertake a foreign direct investment is direct and negative: the presence of women directors reduces the probability of the firm having subsidiaries or branches in foreign countries (Watkins-Fassler & Rodríguez-Ariza, 2019).

This indicates that, unlike the nuanced mediation observed with managers, women directors have a more straightforward and adverse impact on the probability of firms expanding their activities through foreign direct investments.

### 6.3 Outcomes

The outcomes of firm internationalisation are outlined distinguishing between those deriving from exports (i.e., export intensity, number and characteristics of destination countries, and other outcomes) and those deriving from foreign direct investments (i.e., percentage of foreign equity ownership, number of foreign direct investments, number and characteristics of destination countries, and investment success and performance).

#### 6.3.1 Exports

The outcomes of exports can regard export intensity or intensive margin of trade (i.e., the export volume of the firm), the number and characteristics of destination countries, and other outcomes.

*Export intensity* Some studies suggest that women entrepreneurs exhibit a lower export intensity (e.g., Nissan et al., 2012; Westhead et al., 2001), while others find this to be true only for women entrepreneurs over 30 years old (Javadian & Richards, 2020). Conversely, women entrepreneurs operating in countries with a high level of discrimination have a higher export intensity as operating abroad enables them to partially remove the discrimination faced in the country of origin and its costs (Osgood & Peters, 2017).

Few studies argue that the gender of firm owners does not affect export intensity (e.g., Karam & Zaki, 2021; Mohan, 2019; Zimmerman & Brouthers, 2012). Specifically, firms with a majority of women ownership are less likely to export, but once engaged in exports, the owner's gender does not affect export intensity (Garg & Shastri, 2022). The main reason may be the government support that both women and men entrepreneurs receive (Naz et al., 2010).

Instead, some studies indicate that the gender of the entrepreneur affects export propensity only indirectly (Marques, 2015) and that other factors (e.g., firm age, sector and country) should be considered (Grondin & Schaefer, 1995; Williams, 2013). The export intensity of women-led firms is correlated with the number of years the firm has been operating in foreign markets (Moreira et al., 2018). Moreover, the export intensity of women-led firms is lower than that of men-led firms only in start-ups, not in young firms (Marques, 2019). Other studies found similar results: women-led firms experience a decrease in internationalisation during the launch stage but an increase during the establishment and shifting gears stages (Javadian & Richards, 2020). Lastly, the industry and country where the firm operates influence the effect of gender on export intensity (Javadian & Richards, 2020).

Women managers have a positive effect on export intensity (e.g., Berenguer et al., 2016) or do not affect it (e.g., Karam & Zaki, 2021). The positive effect is consistent across firms of different sizes (Charoenrat & Amornkitvikai, 2021). The influence of women managers on export intensity has been investigated also in relation to the level of corruption. An increase in pervasive (i.e., widely present) corruption is associated with lower export intensity for firms with women managers as export costs are added to those due to the resort to bribery in various situations (Audretsch et al., 2022). On the contrary, an increase in arbitrary (i.e., uncertain) corruption

leads to higher export intensity since this type of corruption can be less costly (Audretsch et al., 2022).

Women directors negatively affect export intensity (Bordean & Borza, 2012, 2013; Ren & Zeng, 2022). The negative effect is more pronounced when the average age of women directors is higher since older women directors may avoid engaging in risky activities like exports (Ren & Zeng, 2022) or when the firm is state-owned since in these firms gender diversity in decision making is pursued and the negative impact of women is thus magnified (Wang et al., 2022). On the contrary, the negative effect of women directors weakens when women directors possess a financial background as they may be more risk-seeking (Ren & Zeng, 2022), when women directors have an international experience since they may be less resistant to internationalisation and consider it as an opportunity (Ren & Zeng, 2022) or when firm ownership is concentrated since the board of directors more strongly represents the expectations of larger stakeholders and women directors are thus able to exert a lesser influence (Wang et al., 2022). Instead, other studies find that women directors either positively impact (Rivas, 2012) or do not affect export intensity (Berenguer et al., 2016; Giraldez & Berenguer, 2016; Lukason & Vissak, 2020).

In summary, the effect of women entrepreneurs, managers and directors on export intensity is not clear: it is positive, negative or null depending on several contextual factors.

*Destination countries* Women entrepreneurs and directors tend to export to fewer destinations (e.g., Berenguer et al., 2016; Garg & Shastri, 2022), often just one (Lukason & Vissak, 2020). These findings have been confirmed for family firms led by women entrepreneurs or with women directors (Giraldez & Berenguer, 2016). Conversely, firms with women managers exhibit a higher international dispersion, exporting to almost three more countries compared to firms with only men managers, and a higher spread of the international dispersion (Giraldez & Berenguer, 2016).

Women entrepreneurs and managers display a conservative approach in choosing destination countries (e.g., Berenguer et al., 2016), with women entrepreneurs favouring export markets that are geographically closer or share a similar culture (McClelland et al., 2005).

Women entrepreneurs, managers and directors are thus more or less conservative depending on whether their effect is examined in terms of the number of destination countries or their locations.

*Other outcomes* Exporting may offer many benefits for women entrepreneurs and their firm, enabling personal growth and success in expanding income for women, while fostering growth and increasing turnover and customer base for their firms (Moreira et al., 2018; Welch et al., 2008).

### 6.3.2 Foreign direct investment

Outcomes related to foreign direct investments encompass the percentage of foreign equity ownership, the number of foreign direct investments, destination countries, and investment success and performance.

*Percentage of foreign equity ownership* Women managers and directors reduce the percentage of foreign equity ownership (Bazel-Shoham et al., 2020; Lee et al., 2016a, 2016b). In cross-border mergers and acquisitions deals, this negative effect is moderated by small gendered cultural differences between the origin and destination countries (Bazel-Shoham et al., 2020). Conversely, according to Rashid (2020), women directors do not significantly affect foreign equity ownership. The impact of women managers and directors on the percentage of foreign equity ownership is thus not clear, although evidence of a negative effect prevails.

*Number of foreign direct investments* The presence of a single woman director does not affect the number of subsidiaries, but when there are at least three women directors, a positive effect is observed (Bannò et al., 2021). Additionally, the degree of gender equality in the context where women operate is crucial: women-led firms operating in non-egalitarian (external and/or internal) contexts are less likely to internationalise due to the existing barriers faced in this process (Bannò et al., 2022). The number of women directors and the level of gender equality thus strongly affect the number of foreign direct investments undertaken.

*Destination countries* Similar to the findings on the number of foreign direct investments, the presence of a single woman director does not affect the number of countries in which the firm invests, whereas the presence of at least three women directors is associated with a higher number of destination countries (Bannò et al., 2021). Women directors also influence the type of destination country. Specifically, since women directors are more ethical and compliant with tax laws, they decrease the likelihood of firms having subsidiaries in tax haven jurisdictions (Ahmed et al., 2022).

*Investment success and performance* The gender diversity in top management teams enhances the likelihood of a firm's survival in foreign markets because women are more risk-averse and therefore undertake fewer investments that then turn out to be successful and prefer investments in lower-risk countries (Niñerola et al., 2016). Additionally, women managers can reduce the negative effect that an individualistic culture in the host country has on the wealth generated through a cross-border merger and acquisition (Zhu et al., 2020).

## 7 Directions for future research

By applying the ADO–TCM framework and the microfoundational approach, we identified some important gaps in the literature and built a comprehensive future research agenda (Table 5).

### 7.1 Theory

Most studies investigating the effect of women in top echelon positions on internationalisation place the explanatory processes in a black box, i.e., they advance hypotheses just by mentioning other empirical papers and not delineating the theoretical interpretation. Empirically, this can only lead to the detection of correlations

**Table 5** Summary of the current literature focus and areas for future research

Level of analysis	Current focus	Areas for future research
<b>TCM framework</b>		
Theories	Feminist theories (marginal)	Greater use of theories, particularly feminist theories
<i>Context</i>		
Type of women's involvement	Women entrepreneur	Women managers and directors
Country	Single and multi-country analyses Geographically well distributed countries	New contexts with different cultures and institutions Comparisons between developed and developing countries
<i>Methods</i>		
Research methods	Quantitative methods	Qualitative methods and mixed-method approaches
Consideration and measurement of gender	Women-only analyses and analyses through comparisons Women's presence in top echelon positions through a (independent, control, mediator or mediator) variable in a variety of quantitative methods Samples composed by firms or people	All gender concerns (e.g., lesbian, gay, and transgender) Interaction of women's role with other sources of inequality and diversity (e.g., age, disability, ethnicity, religion, and belief) Inclusive language Samples composed by non-manufacturing firms, SMEs, and family firms
Sample		
Years	Cross-sectional and panel data	Cross-sectional and panel data
<b>ADO framework</b>		
<i>Antecedents</i>		
Microfoundation: characteristics of women in top echelons positions	Role of gender (marginal) Characteristics of women entrepreneurs	Role of gender Characteristics of women managers and directors

**Table 5** (continued)

Level of analysis	Current focus	Areas for future research
Discrete context: firm characteristics	Firm size and age (marginal) Firm resources and capabilities (i.e., financial capital, R&D and innovation, technology, and knowledge) Sector characteristics (i.e., extractive sectors, degree of internationalisation, and degree of specialisation) and location characteristics (i.e., proximity to other women-owned firms, domestic firms, and foreign-owned firms) (marginal)	Influence of firm size and age Firm resources and capabilities (e.g., marketing capabilities and strategies) Sector characteristics (e.g., degree of competition, degree of specialisation, degree of concentration, and stage of maturity) and location characteristics (e.g., proximity to critical resources for internalisation)
Omnibus context: characteristics of the countries of origin and destination and Public stimulation programmes	Characteristics of the country of origin (i.e., institutional context, level of discrimination) and the country of destination (i.e., distance from country of origin, existing barriers) Efficacy of public stimulation programmes and which women benefit from them	Characteristics of the countries of origin and destination (e.g., infrastructure quality and local market characteristics) Stimulus from public stimulation programmes, their usefulness and who benefit from them
<i>Decisions</i>		
Entry mode	Influence of the discrete and omnibus contexts on entry mode	Entry mode choice and how context's characteristics influence this decision
Export (export propensity)	All top echelon positions	Clarify the effect on export propensity How firm characteristics moderate the effect More analysis on the issue
Foreign direct investment (propensity to foreign direct investment)	Marginal attention on the issue	
<i>Outcomes</i>		
Exports	Effect of women entrepreneurs on export intensity Number of destination countries Other outcomes (e.g., personal growth, income, turnover, and number of customers) (marginal)	Effect of women managers and directors on export intensity Characteristics of destination countries (e.g., distance, culture, and legislation) Other outcomes (e.g., women's confidence level)

Table 5 (continued)

Level of analysis	Current focus	Areas for future research
Foreign direct investment	Percentage of foreign equity ownership (marginal) Number of foreign direct investments and of destination countries considering the number of women directors and the characteristics of the country of origin and destination (marginal) Investment success and performance (marginal)	Clarify the effect on the percentage of foreign equity ownership Influence of the country of origin and destination on the number of foreign direct investments and of destination countries Investment success and performance

Source: Our elaboration



and not to an identification of the real mechanisms that underlie causal relationships (Foss & Pedersen, 2019). This attitude may lead to the propagation of theorising that is speculatively carried out to explain the correlation found by the authors in their results. To address this limitation, we advocate for adopting a theoretical approach.

Despite gender playing a crucial role in shaping the identity of organisational actors and internationalisation patterns (Frenkel, 2017; Koveshnikov et al., 2019), existing studies on women in top echelon positions and internationalisation have generally overlooked the role of gender (Ratten & Tajeddini, 2018) and considered gender merely as a variable and a stable trait (Ahl, 2006). Few publications have explored the issue by considering the process of “doing gender” and referring to feminist theories.

Merely considering gender as tied to individuals with particular sexes and comparing women and men overlooks how gender influences self-perception, decisions and social structure. Additionally, women in top echelon positions face similar challenges as men, but they also encounter additional difficulties (e.g., lack of support and respect, perception of women’s ability) (Akter et al., 2022). Since international business theories do not fully account for the influence of gender differences on internationalisation, combining feminist theories with entrepreneurship and internationalisation theories is recommended (Akter et al., 2019). Disregarding feminist theories has three main implications: women in top echelon positions are assessed using masculine values; the societal problems and challenges faced by women are ignored; women are perceived as less competitive in international business than men (Akter et al., 2019). Among various feminist theories, we suggest leveraging the theoretical and methodological advances offered by the social and liberal feminist theories, which taken together may provide a more comprehensive explanation than a single approach (Akter et al., 2019; Koveshnikov et al., 2019). These theories can guide the examination of women’s role in international business by exploring “how gender is accomplished” (Ahl, 2006, p. 612) and considering how gender is represented in processes and organisations.

## 7.2 Contexts

*Women’s top echelon position* All top echelon positions that women can assume have received attention in the literature. However, the roles of managers and directors have been comparatively understudied despite potentially being able to exert a strong influence on the internationalisation choices. Therefore, we recommend further investigation into their role, particularly in topics where their effect remains unclear such as export propensity, export intensity, and percentage of foreign equity ownership.

*Country* Existing studies have covered a diverse geographical range and include both single-country and multi-country analyses. To advance the field, we propose exploring additional contexts since country-level factors may moderate the effect of women in top echelon positions on firm internationalisation. For instance, exploring the dynamics in both developed and developing countries as well as in countries

with distinct cultures and institutions would provide insights into the key determinants of firm internationalisation and its outcomes (Cai et al., 2019).

### 7.3 Methods

*Research methods* Our review underscores a deficiency in conceptual and qualitative studies. Since relying solely on quantitative methods may limit the comprehension of the intricate interplay between women in top echelon positions and firm internationalisation (Creswell & Plano Clark, 2018), we advocate for the adoption of qualitative methods and mixed-method approaches. The combination of quantitative and qualitative research techniques not only yields in-depth insights pertaining, for example, to how difficulties are perceived or addressed and decisions are made (Bryman, 2008) but also enables the triangulation of findings, which, in turn, increases both result reliability and the validity of theoretical tests (Kazancoglu et al., 2021).

*Consideration and measurement of gender* Our review reveals that the prevailing approach considers gender as a matter of biological sex and includes it in the analysis as a demographic factor. Most publications examine the presence of women in top echelon positions through a variable in a variety of quantitative methods (i.e., they assign organisational actors to one of the two sex categories, i.e., women or men) or make comparisons between women and men. In this way, woman and man models of entrepreneurship and management are opposed and the “woman entrepreneur or manager” category is essentialised. However, there are differences even among women in top echelon positions. Therefore, we suggest overcoming this way of considering gender and making a more nuanced discussion of gender topics in international business research. This discussion should not be limited to the issue of women and men, but instead encompass all gender concerns (e.g., lesbian, gay, and transgender).

Moreover, we encourage research that interacts women’s role with other dimensions of inequality and diversity (e.g., other socio-demographic nuances such as age, disability, ethnicity, religion, and belief). Giving due space to these dimensions ensures plurality of procedural, content and research viewpoints, guaranteeing a comprehensive analysis of firm internationalisation.

Finally, we want to emphasise that language plays a key role in all knowledge-based activities, including research. The choice of words can shape scientific practice, the questions asked, the results obtained, and the interpretations made. “Sharing a language means sharing a conceptual universe within which assumptions, judgments, and interpretations of data can be said to make sense” (De Gregorio Hurtado, 2017). Rethinking language also involves rethinking concepts and theories (Keller, 1992). Concerning gender studies, historically, “female” has been broadly accepted as the adjective form of “woman”. However, this use is exclusive and frankly inaccurate (Keller, 1992). “Female” means a biological category typically referring to the sex attributed to birth according to the anatomy, while a “woman” is an entire human person. Therefore, while “woman” is technically a noun, we suggest using it as an adjective to create a more inclusive meaning that emphasises gender overbiological sex. Same for “man” and “male”.

*Sample* While existing studies have relied on samples regarding various firm types, more research on non-manufacturing firms is encouraged to deepen our understanding of how industry impacts firm internationalisation, given that services differ greatly from manufactured products (Chen et al., 2016). Moreover, delving into SMEs and family firms is recommended, as in these firms the effect of women in top echelon positions on the internationalisation process may manifest differently (e.g., more intensely) in these contexts (Berenguer et al., 2016). Family SMEs, with their distinctive organisational goals, risk-taking propensities, and resources (Arzubiaga et al., 2018), warrant particular attention. Additionally, the debate about women's involvement in family SMEs and their effect has to be further analysed (Arzubiaga et al., 2018). Considering family firms is also crucial given their prevalence worldwide (Family Firm Institute, 2020).

*Years* The use of both cross-sectional and panel data in existing research has proven valuable in investigating how women in top echelon positions affect firm internationalisation. We advocate for the continued use of these types of data, as they offer both a static and dynamic approach to examine the issue. For instance, their use allows researchers to explore whether women in top echelon positions face prolonged barriers and how these are overcome and to understand the temporal aspects of internationalisation, including the gradual nature of the process and the time required to realise its benefits.

## 7.4 Antecedents

*Microfoundation: characteristics of women in top echelons positions* Future studies should elucidate whether gender stands out as a primary determinant influencing the internationalisation of women-led firms and how it interacts with context's characteristics. This analysis is crucial for discerning whether gender-related factors should be prioritised to promote the internationalisation of women-led firms.

Additionally, while the traits of women entrepreneurs have been extensively explored, characteristics of women managers and directors in terms for instance of their entrepreneurial personality, knowledge, education and skills remain understudied. Investigating whether women managers and directors share the same characteristics relevant to firm internationalisation is a valuable avenue for research.

Finally, the effect of women's international work or study experience, a pivotal factor of internationalisation (Chen et al., 2016), merits deeper exploration. Further analysis could delve into how such experience facilitates firm internationalisation (e.g., by reducing knowledge barriers or increasing confidence) and whether its benefits vary across different top echelon positions.

*Discrete context: firm characteristics* To better inform policies supporting the internationalisation of small and young women-led firms, future studies should scrutinise whether firm size and age are pivotal determinants as the current evidence is insufficient. While various firm resources and capabilities (e.g., financial capital, R&D and innovation) have been examined, there is a notable gap in the analysis of, for instance, marketing capabilities and strategies, which play a mediating role

between internal and external factors and internationalisation outcomes (Chen et al., 2016).

The influence of the sector on the internationalisation of women-led firms, despite its potential significance, has been marginally explored. Future research should delve deeper into its role, considering additional sector characteristics such as concentration levels and maturity stages.

Lastly, beyond firm location considered through the proximity to other women-owned firms, domestic firms and foreign-owned firms, it would be insightful to investigate the impact of proximity to critical resources (e.g., infrastructural support) on facilitating firm internationalisation.

*Omnibus context: characteristics of the countries of origin and destination and Public stimulation programmes* Further exploration is needed to understand the influence of country-level characteristics on firm internationalisation. Previous studies have considered legislation, discrimination, demand, culture, and language. However, existing research is still insufficient and not thorough. Moreover, other factors affecting firm internationalisation should be taken into account (e.g., infrastructure quality and local market characteristics). Future research should also clarify the extent of the stimulus from public stimulation programmes, understand why their usefulness is perceived to be negligible and why they benefit only women already operating in foreign markets. Answering these questions is essential for designing effective programmes.

## 7.5 Decisions

*Entry mode* While previous studies have identified various factors regarding both the discrete context (e.g., firm sector and location) and the omnibus context (e.g., country of origin) that influence the entry mode of women-led firms, there remains a gap in fully comprehending the reasons behind the preference for a specific entry mode in different situations. Insufficient knowledge exists on how the characteristics of both discrete context and omnibus context influence this decision. Gaining insights into these dynamics is crucial to pinpoint the factors that can be targeted to promote specific entry modes effectively.

*Export (export propensity)* A deeper analysis is warranted to enhance our understanding of how women in top echelon positions affect export propensity, especially given the inconsistent (as regards women entrepreneurs) or insufficient (as regards women managers and directors) results found in existing studies. Further exploration should consider how the relationship is moderated by factors such as firm size, age, and available resources. Clarifying these moderating effects is essential for a more nuanced understanding of the role of women in top echelon positions in shaping export propensity.

*Foreign direct investment (propensity to foreign direct investment)* Given the limited attention on foreign direct investments and their critical importance, additional analysis is necessary. Confirming whether the effect of women in top echelon positions on foreign direct investments is negative and, if so, identifying the underlying reasons, is vital for a comprehensive understanding.

## 7.6 Outcomes

*Exports* While the impact of women entrepreneurs on export intensity has been extensively studied, also considering the influence of firm's and context's characteristics, there is a need for more research concerning women managers and directors. Exploring why women managers outperform entrepreneurs and directors in internationalising across multiple countries requires additional investigation. Moreover, the characteristics of destination countries should be scrutinised in more detail, encompassing not only geographical and cultural factors (e.g., legislation). Lastly, analysing how successful internationalisation affects firm characteristics (e.g., available resources) and the confidence levels of women in top echelon positions facing strategic decisions (e.g., firm growth) would be valuable.

*Foreign direct investment* Future research efforts should focus on clarifying how women managers and directors influence the percentage of foreign equity ownership, given that conflicting results have been obtained in previous studies. Investigating how the characteristics of the countries of origin and destination influence the number of foreign direct investments and the selection of destination countries is crucial, given the potential impact of contextual characteristics. Lastly, the success and performance achieved through foreign direct investments merit further attention to provide a more comprehensive analysis.

## 8 Contributions and implications

Our review unveils insights that contribute significantly to the existing literature, offering valuable information for practitioners and policymakers.

### 8.1 Contributions to literature

To the best of our knowledge, this study represents one of the initial attempts to systematically review the literature dedicated to the internationalisation of women-led firms, with the aim of comprehending the recent developments and the evolution of research in this domain. Advancing the previous studies by Moreira et al. (2019) and Ratten and Tajeddini (2018), our review delves into the impact of women across all top echelon positions (i.e., entrepreneurs, managers, and directors).

To interpret and synthesise the fragmented and inconsistent findings on this subject, we adopted the ADO–TCM framework (Lim et al., 2021) and the microfoundational approach (Foss & Linder, 2019). This allowed us to bring clarity and structure by providing a novel perspective on existing studies and specific thematic and methodological issues. The ADO framework guided the categorisation of emerging evidence into the antecedents of firm internationalisation, the characteristics of decisions made, and their outcomes, offering a comprehensive view of the entire internationalisation process driven by women in top echelon positions. Concurrently, the TCM framework provided a thorough understanding of the gender-related

theories, contexts (i.e., positions held by women and country), and research methodologies (i.e., research methods, considerations and measurements of gender, sample, and years) that have guided research on this subject. Moreover, the adoption of the microfoundational approach allowed us to scrutinise the effects of micro, meso, and macro-level factors on internationalisation decisions. This review provides an advancement since previous literature has focused mainly on the “context” at the macro level (considered through a moderating or explanatory variable), thus overlooking micro-oriented aspects and their role in explaining the broader context (Foss & Pedersen, 2019).

Lastly, our review extends beyond the existing literature on the impact of women in top echelon positions on firm internationalisation by identifying major research gaps and proposing avenues for future investigation. A call to make a step forward in this direction is currently justified by theoretical, practical and policy considerations (e.g., Bullough et al., 2017).

## 8.2 Managerial implications

Practitioners can benefit from the comprehensive knowledge about women in top echelon positions and firm internationalisation provided by this review.

To foster internationalisation, women-led firms should address various antecedents that either encourage or hinder this process. It is crucial for firms to nurture the entrepreneurial personality of women top echelons, for instance, by seeking to enhance their ability to identify the most promising investments and their confidence and mitigating any unwarranted risk aversion. Moreover, firms should provide women top echelons with relevant knowledge, education, and skills concerning aspects such as knowledge of foreign markets in terms of their current characteristics, opportunities, and potential, solutions to reduce any administrative, cultural, and linguistic barriers to internationalisation, and the existence of public stimulation programmes or trade fairs that can provide assistance during the internationalisation process. This support and information are indeed essential for building the necessary readiness for firm internationalisation.

Practitioners should also focus on the characteristics of women-led firms (e.g., size, resources, and capabilities) as they significantly affect internationalisation. Specifically, firms should promote the firm’s dimensional growth, increase financial resources, and enhance firm capabilities regarding innovation, the use of technology, and knowledge. This can significantly facilitate the internationalisation process led by women entrepreneurs, managers, and directors, enabling the achievement of better results.

Moreover, practitioners can gain insights into how the characteristics of the countries of origin and destination influence the decision to internationalise and its outcomes. It has indeed emerged that the characteristics of the institutional context in terms of regulatory, political, and cultural barriers, the level of discrimination, and political instability can give rise to difficulties in the internationalisation process led by women. These challenges must be taken into consideration and addressed effectively. Practitioners should also recognise that public stimulation programs may be

effective only in certain situations, and therefore, sometimes, the assistance they provide should not be overlooked.

Concerning the internationalisation decisions made by women in top echelon positions, firms should be mindful that factors related to the discrete (e.g., firm sector and location) and omnibus contexts (e.g., country of origin) influence both the decision to internationalise and the entry mode of women-led firms. Encouraging women in top echelon positions to engage in exports and undertake foreign direct investments requires addressing these contextual factors and overcoming hindrances, so that these factors do not prevent women from undertaking the internationalisation mode best suited to their needs, goals, and the characteristics of their firms.

Regarding outcomes, firms are encouraged to support women in top echelon positions to increase export intensity and expand the number of destination countries. What has emerged is that having more women in top echelon positions contributes to increased foreign direct investments in various destination countries and enhances investment success and performance. To achieve better results from internationalisation, firms should, therefore, promote the inclusion of women in top echelon positions.

In summary, despite limited evidence clearly indicating the positive effects of women in top echelon positions on firm internationalisation, firms are strongly encouraged to promote greater gender diversity and provide support (Bader et al., 2022). Doing so can lead to better strategic outcomes and optimise the use of firm resources.

### 8.3 Policy implications

Our review reveals that, under specific circumstances, women in top echelon positions can yield good results in terms of, for instance, export intensity, percentage of foreign equity ownership, number of foreign direct investments, number and characteristics of destination countries, investment success and performance. However, during the internationalisation process, women may encounter challenges at various levels and stages that warrant attention and should be removed.

Concerning the antecedents of firm internationalisation, policymakers should design programmes aimed at providing women in top echelon positions with the requisite knowledge, education, and skills necessary for internationalisation and understanding global markets. These are knowledge and skills that women may not always possess but play an essential role in building the necessary readiness for firm internationalisation. Policies should also address the characteristics specific to women-led firms that contribute to lower internationalisation levels. For instance, initiatives can assist firms in raising their financial capital by enhancing the support from financial institutions. Additionally, initiatives in the form of seminars and trade fairs should provide firms with knowledge to enhance their R&D and innovation capabilities and technological proficiency. Firms and women in top echelon positions should also receive knowledge in areas such as industry dynamics, the characteristics of destination countries (e.g., culture, level of discrimination, political situation), and administrative aspects. Policymakers should also actively work towards

eliminating barriers and challenges related to destination countries while enhancing the effectiveness of public stimulation programs.

Policymakers can further intervene to support women in top echelon positions in making informed decisions and achieving favourable outcomes in firm internationalisation. Diverse initiatives that provide women with relevant information on this matter should be introduced. Policies should also focus on removing all existing barriers and challenges (e.g., administrative, cultural, and linguistic barriers and discrimination) that discourage women-led firms from participating in exports and foreign direct investments, hindering their success in these endeavours.

Ultimately, our review reinforces the importance for policymakers to implement measures that encourage the presence of women in top echelon positions and eliminate obstacles preventing them from realising their full potential. It is a just and necessary intervention to achieve a more equal and inclusive society.

## 9 Conclusion

This review delved into the effect of women in top echelon positions (i.e., entrepreneurs, managers, and directors) on firm internationalisation, adopting the ADO–TCM framework and the microfoundational approach to synthesise existing research and present emerging findings.

The analysis reveals that the influence of women in top echelon positions on firm internationalisation is an underexplored area, and the limited existing studies have generated inconsistent results, irrespective of the specific position women occupy within the firm (Orser et al., 2010; Amoros et al., 2016). This exploration also underscores the presence of numerous unresolved questions and identifies potential avenues for future research that can contribute to advancing this particular line of research.

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## Declarations

**Conflict of interest** The author(s) declare none.

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