

## GENDER ISSUES IN PROCUREMENT: A REVIEW OF CURRENT THEMES AND FUTURE RESEARCH DIRECTIONS

### NEMEK KÖZÖTTI EGYENLŐSÉG KÉRDÉSEI A BESZERZÉSBEN: ÁTTEKINTÉS AZ AKTUÁLIS TÉMÁKRÓL ÉS A JÖVŐBELI KUTATÁSI IRÁNYOKRÓL

This paper provides a comprehensive literature review of gender-related themes in procurement research, tracing their evolution over time. Analysis of 45 peer-reviewed articles focusing on both company and public procurement reveals the trends in publication focus, publishing frequency, top journals, key authors, keywords used, similarities between the public and the private sector, etc. Additionally, the paper highlights four major themes of existing gender-related issues addressed in the literature: the glass ceiling effect, team diversity, supplier diversity and skill sets. The study also suggests potential areas for future research in this field. Importantly, the article emphasizes the social significance of gender-related considerations in procurement research, particularly in light of the growing importance of socially responsible procurement for promoting sustainability objectives.

**Keywords:** gender, public procurement, company procurement, literature review

A nők helyzetével számos kutatás foglalkozik. Ez a cikk átfogó irodalmi áttekintést nyújt arról, hogy hogyan jelenik meg a téma a nemzetközi beszerzési és közbeszerzési kutatásokban. A vállalati és a közbeszerzésre egyaránt összpontosító 45 lektorált cikk elemzése feltárja a publikációs fókusz, a publikációs gyakoriság, a vezető folyóiratok, a legfontosabb szerzők, a használt kulcsszavak, a köz- és a magánszektor közötti hasonlóságok stb. tendenciáit. Ezen túlmenően a tanulmány kiemeli a szakirodalomban tárgyalt, nemekkel kapcsolatos meglévő problémák négy fő témáját: az üveglafonhatás, a csapat sokszínűsége, a beszállítói sokszínűség és a készségkészletek. A tanulmány ezen a területen a jövőbeni kutatások lehetséges területeit is felveti. Fontos, hogy a cikk hangsúlyozza a nők egyenlő esélyeivel kapcsolatos megfontolások társadalmi jelentőségét a beszerzési kutatásban, különösen annak fényében, hogy a társadalmilag felelős beszerzés egyre fontosabbá válik a fenntarthatósági célok előmozdítása szempontjából.

**Kulcsszavak:** gender, közbeszerzés, vállalati beszerzés, szakirodalmi áttekintés

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Gender issues are increasingly gaining prominence on the public sector agenda, and companies are actively addressing these issues both from a human resources perspective and in relation to their suppliers. It is essential

to recognize that gender issues are not isolated but rather intricately connected with socially responsible procurement. In practice, these aspects seldom stand alone, and understanding the interplay between gender issues and

socially responsible procurement is crucial for a comprehensive analysis of the topic. Therefore, this introduction will contextualize the study within the broader framework of gender-responsive procurement.

International organizations have emphasized the significance of considering gender issues within the broader context of sustainability goals. The World Bank, for example, has drawn attention to the profound impact of unequal treatment, limited opportunities for women in management roles, and the challenges faced by women-owned companies in securing contracts. These factors have significant implications for economic development and poverty eradication (World Bank, 2012).

Recognizing the intrinsic link between gender equality and sustainable development, in 2015, the United Nations established goal 5 in its set of 17 sustainable development goals (SDGs) specifically aimed at achieving gender equality and empowering women and girls (United Nations, 2017). With nine targets and 14 indicators, this goal seeks to eliminate gender-based discrimination and ensure equal rights and opportunities for women and girls.

In line with these global efforts, the European Institute of Gender Equality (EIGE, 2021) advocates for a gender-responsive public procurement approach. This approach acknowledges that gender issues are not separate from social procurement but are intertwined with it. It calls for conscious efforts by buyers and suppliers to address and reduce gender inequality actively. Governments, too, are taking steps to address social and environmental problems in supplier management. Examples include the Modern Slavery Act of the UK and the German Supply Chain Due Diligence Act, which emphasize women's need for equal rights and opportunities.

Moreover, beyond its business objectives, procurement plays a critical role in supporting social objectives such as diversity and sustainability in the supply chain (Gelderman et al., 2017; Silva & Ruel, 2022). By recognizing that equal opportunity to work and fair pay are fundamental human rights, procurement can act as a catalyst for facilitating these rights among the suppliers and sub-suppliers (Kirton, 2013). Understanding the gender dynamics within procurement processes is key to achieving targeted outcomes and informed policy-making processes. By integrating gender issues into the broader social and environmental responsibility framework, we can advance sustainable development goals while promoting gender equality.

Although some previous studies attempted to summarize the policies and government actions to create a gender balance, none focused exclusively on the gender issues reviewed in the literature. The earliest attempt was made by McCrudden (2004), who tried to map the existing efforts undertaken by several countries to empower minority ethnicity as well as genders. Post and Byron (2015) limited the focus of their meta-analysis to the relationship between female board members and the financial performance of companies. Two gender-specific reviews were done by Medina-Arnaiz (2010), whose focus was only on Spanish procurement policies and by Sarter (2020) whose focus was on German public procurement facilitation. All

these reviews were limited, either because of focus on a specific country or a specific aspect affecting gender issues.

With the current work, we aim to overcome this by compiling the findings of our study conducted to synthesize prior gender-centric research in the realms of purchasing and supply management for procurement activities to help direct further exploration of this topic which could benefit both the public and the private sector. Comparing the practices of the corporate sector and public procurement is the subject of more research, as the two sectors can learn from each other (e.g., Hawkins et al., 2011; Vörösmarty & Tátrai, 2019). As there is a low number of studies in public procurement and company procurement, we decided to extend the literature analysis by including both. By acknowledging the interconnectedness between gender issues and socially responsible procurement, this study aims to comprehensively understand the topic and its implications for sustainable development goals.

The structure of the paper will be the following. First, the search and data analysis methodology is described. In section 3, some basic statistics of the papers are analyzed. Section 4 summarises the results of the keyword analysis, the theme model developed summarising the topics of identified papers and the comparison of private and public sector procurement. Section 5 describes the research results according to the four identified themes. Finally, results are summarised, and research gaps are highlighted.

## Methodology

The literature review is an increasingly common analytical tool in business literature (Snyder, 2019). In order to ensure that the results reflect the actual results of scientific research as closely as possible, many studies also use methods that promote reproducibility and objectivity in procurement-related topics. Examples include the PRISMA method (e.g., used by Vejaratnam et al., 2020), Denyer & Transfield's (2009) approach (used by, e.g., Wetzstein et al., 2019) or Durach's (2017) method. These methods have in common that they seek to answer a predefined research question by selecting articles from well-known databases (usually Scopus and Web of Science in the business field) according to given criteria (e.g., keywords, year, language). The search commonly results in a broader literature, so an essential step in each method is to check and validate the relevance of the database results by experts.

## Drafting Research Questions

Our research aims to review the gender-related topics in procurement research to find out what issues have been addressed in the literature, how they have changed over the period under study and what differences and similarities can be identified in research on the public procurement sphere and the business sector. Thus, the following research questions related to public procurement were formulated:

- What gender-related issues have been addressed in literature?

- How have they changed over time?
- What differences and similarities can be identified when comparing public-sector and private-sector procurement?

**Determine the Characteristics Required for the Studies**

The current efforts aim to analyze and synthesize research findings related to procurement, including procurement practitioners, their practices and their impact. For this reason, we selected articles from peer-reviewed publications in scientific journals for our database. The database therefore excludes, e.g., publications of public organizations or conference presentations.

**Sample of Potentially Relevant Literature**

We started by searching the well-known Scopus and Web of Science (WoS) databases for articles published in scientific journals in English published from 2000 to the date of the search (30 July 2022). We searched for the phrases: “gender” or “woman” or “women” and “procurement” or “purchasing” or “sourcing” in the title, abstract and keywords of the documents. The search in the Scopus database without specifying the subject area resulted in 2948 papers. However, among the possible subject areas, only Business, Management and Accounting and Decision Sciences were relevant, resulting in 656 papers. When searching the WoS database, we limited the search to Management, Business and Public administration topics. This gave us 1076 results.

After screening the focus of the papers and their relation to gender issues in procurement as well as accounting for duplicates, we were able to form an initial shortlist of 50 papers for our review.

**Identification of Relevant Literature and Coding**

We first narrowed down the database by title and abstract. Most of the articles we excluded dealt with consumer buying-related topics. This was followed by the detailed reading of the papers. Each was read and evaluated by two researchers. In some cases, to ensure interrater reliability, the article was re-read, and the three authors jointly decided to include an article in the database resulting in the final inclusion of 45 papers. The evaluation and coding of each paper followed this. Here again, the principle of double independent assessment and joint decision by the three evaluators in ambiguous cases was applied.

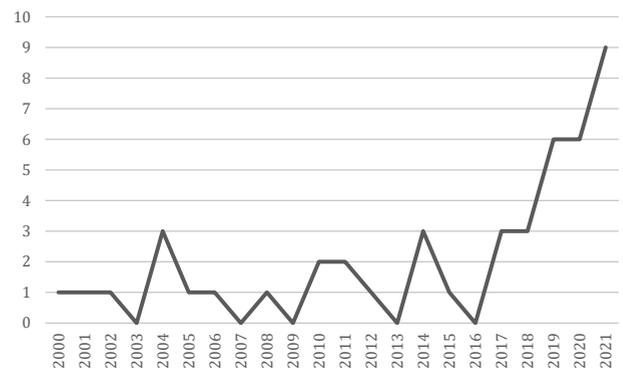
**Descriptive analysis of the database**

First, the most important demographic characteristics of the sample were analyzed.

There has been a mixed trend in the field, with a growing number of publications in the last decade (Figure 1). While merely one article was published in the year 2000, and no publication in the field was made for five years in between (Years: 2003, 2007, 2009, 2013, and 2016), gradual interest in the field has developed with as many as nine

articles published in the year 2021, totalling 45 articles between the year 2000 and 2021. This increased interest may be attributed to the growing willingness of organizations to incorporate gender issues in procurement to comply with government regulations and have a better brand image. (See Figure 1 for the yearly data.)

Figure 1  
Number of papers published annually in selected sources



Source: own compilation

Most of the major journals dealing with issues of supply chain management and public procurement published several articles representing gender issues in procurement, but the Journal of Purchasing and Supply Management dominated the field by publishing five articles, Journal of Supply Chain Management published four papers and five more journals published two papers each during this period. A further 25 journals each published only one gender-related article. Table 1 contains the list of journals that published at least two papers.

Table 1  
Top journals

Name of the journals	No. of papers
Journal of Purchasing and Supply Management	5
Journal of Supply Chain Management	4
International Journal of Gender and Entrepreneurship	2
International Journal of Procurement Management	2
Journal of Business Ethics	2
Journal of Public Procurement	2
Public Money & Management	2

Source: own compilation

It is also worth highlighting the most influential authors. In all, 106 authors contributed to the 45 articles. The names of those who co-authored more than one article are listed in Table 2. Two authors (Barbara Orser and Allan R. Riding, who were co-authors) contributed to three articles. The majority of the authors (95 out of 106) appear as authors of only one article.

Table 2

Top authors

Authors name	No. of papers
Orser, B.	3
Riding, A. L.	3
Aloysius, J. A.	2
Andre, J. M.	2
Husser, J.	2
Lespinet-Najib, V.	2
Newell, S. J.	2
Plank, R. E.	2
Reid, D. A.	2
Riding, A.	2
Sarter, E.K.	2
Wright, T.	2

Source: own compilation

In terms of geographical distribution, 20 of the 45 papers are related to the Americas, including two from Canada and one on the comparison between the USA and Europe. A relatively high proportion of papers are in the European context (13 out of 45, including one article from Russia). Seven papers are from Asia and only three are from Africa (Zimbabwe, Senegal, and Uganda).

The most common mode of data collection was through surveys (n=23); in person, online, via mail, or telephone while interviews also supplemented a few of the studies. One of the studies involved negotiation role-playing (Faes et al., 2010), and another used case study research method (Bomani et al., 2021). 3 articles used existing secondary data sources (Wright & Conley, 2020; Strang, 2021; Ryu & Sueyoshi, 2021). We also included two review articles by McCrudden (2004) and Medina-Arnáiz (2010), to get a comprehensive understanding of the field.

Analysis of research topics

The content of the articles was analysed in three ways. First, we analyzed the keywords of the articles and their changes over time. Then we identified the main topics and examined their frequency of occurrence and compared the results of research on public procurement and corporate procurement.

Figure 2

Overall keywords used



Source: own compilation

Analysis of the keywords

We analyzed the keywords since they highlight the most important topics of the articles. Gender, women, SMEs, and public procurement were the most frequently used keywords overall. Figure 2 indicates the most important words in a word cloud.

The use of keywords has also changed over time. Between 2000 and 2011, except for the above keywords, some commonly occurring keywords were ethics, purchasing, supply, buyer, seller, decision-making, men and morality. After 2010, the common keywords gradually shifted to diversity, equality, and buyer-supplier relationship. This shows that the focus of research also changed during the period under review, while first, the focus was mainly on individuals attributes, it moved to more general issues.

Analysis of the main topics

When analyzing the data, we coded our results according to four themes.

The first is the glass ceiling phenomenon, which suggests that women face more difficulties in thriving and advancing within an organization.

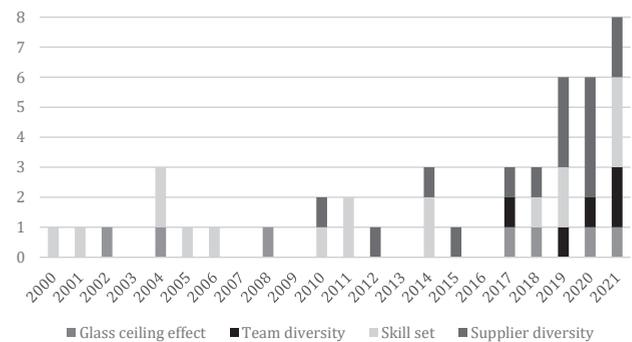
The second theme is team diversity; procurement personnel often work in diverse teams both within the company and while dealing with suppliers.

The third theme relates to skill sets; the different skills and personality traits of men and women.

The fourth theme relates to Supplier Diversity to see if the diversity of suppliers leads to better outcomes.

Figure 3

The focus on different themes by year



Source: own compilation

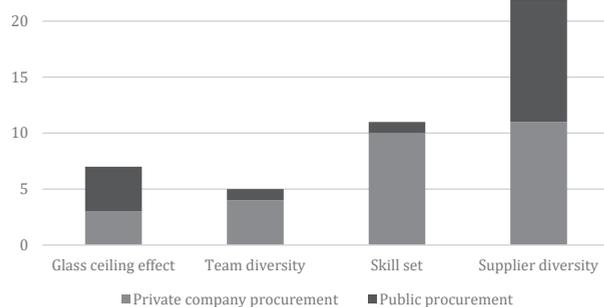
Figure 3 shows that the first theme (glass ceiling) and the theme of skill set are constantly present in the sample over the period. Team diversity and supplier diversity are relatively new topics in gender-related procurement research. The frequency shows a change in the research focus and the vocabulary over the last decades. While before 2010, the focus was more on negotiations between sellers and buyers of different genders and somewhat on the glass ceiling, in recent years, there has been a slight increase in the number of publications, which tend to focus on the other identified focal points. Both public procurement and purchasing and supply management practices of companies were addressed.

### Procurement in the public and the private sector

Public procurement and private sector procurement are often separated in research. However, in the case of research on gender, we felt it was important to compare the topics of the two research strands. From this analysis, we found that the articles clearly chose their sides, dealing with the private sector or public procurement. 18 articles discussed gender issues in public procurement, while 27 of them stuck to the purchasing practice of the private sector. Until 2019, company procurement was the more promising area of research as it had a greater number of issues and consistency in publishing (average of one article per year). An interesting observation was found for the year 2020 when all six articles published on this topic dealt with public procurement, while for 2021, one less article was published in public procurement than in private sector procurement. Overall, there were a growing number of publications in both areas.

Figure 4

#### The focus of themes by private sector procurement (CP) and public procurement (PP)



Source: own compilation

Based on Figure 4 the substantial differences between the most researched themes in the private sector and public procurement should be noted. Studies analyzing the private companies' practice address all four focal issues identified, and the largest number of the studies are clustered in the supplier diversity domain. For public procurement, the focus is also on supplier diversity to a large extent, along with the glass ceiling effect. The four themes are more evenly balanced in the research on private-sector procurement. However, the share of research on 'skill set' and 'team diversity' themes is significantly higher than for public procurement.

### Overview of the literature

As indicated earlier, the articles in our database are grouped around four themes. However, the research focus of each of these topics is very diverse and will be reviewed here.

#### Glass ceiling effect

Overall, the literature on the glass ceiling effect tried to bring to light the disadvantaged positions of women in so-

ciety. A common theme in gender research is that women are disadvantaged in terms of promotion within an organization, with fewer women in management positions and the difference in pay. Similar research has been done in the area of procurement.

Lawrence et al. (2018) search for the reasons of lower representation of women among senior purchasing managers in the UK. The findings suggested that female advancement within procurement is affected by both generic organizational and procurement-specific impediments, including inadequate work design, male-dominated cultures, negative stereotypes, high levels of travel and an aggressive ethos that characterizes many procurement functions. McCue et al. (2017) also indicate that females still face the glass ceiling while climbing ladders in the public sector and men were more clustered in higher-level management roles of procurement. According to their paper, although men and women were comparable in terms of education, experience, and other qualities, men were still paid better, evidencing the presence of discrimination. Here a glass ceiling is defined as invisible obstacles that hinder feminine progress to top management levels even after being equally competitive as their male associates.

The wage gap is an essential indicator of discrimination. There are several research findings on this, with somewhat contradictory results. Ogden et al. (2002) found no significant influence of gender on compensation when they evaluated factors affecting Chief Purchasing Officers' salaries. The results showed a difference, although not significant; however, the percentage of males involved in the assessment was large compared to their female counterparts (indirectly indicating the glass ceiling effect). Larson and Morris (2008) found being a male purchasing and supply professional in Canada meant higher yearly compensation (apart from factors like education and experience). However, these differences were more profound at the middle management level, where women received, on average, \$12000 less than men. At the same time, their career progression also showed that it was difficult for women to reach higher positions.

Gender differences are also found in smaller firms. Oluka et al. (2020) surveyed female-owned businesses and found that they were primarily small and medium-sized, and very often, they were disadvantaged, inter alia, due to lack of funds, landing them in disadvantaged positions also as suppliers. Increasingly women-centric, socially responsive procurement policies would help these female entrepreneurs to develop their business performance.

Not only as employees but also as entrepreneurs, women feel discriminated against. Identifying the barriers for small firms to capital access for fulfilling public procurement performance obligations, Rasheed (2004) found that female-owned enterprises had higher perceptions of barriers to accessing financial resources resulting in lower market share. One of the reasons cited for this was unfavourable lending terms of capital lenders towards female owners. They emphasize on more remedial support by the procurement agencies to deal with financing issues.

Even after governments acknowledge the need to boost women-owned enterprises and draft favourable policies to include them better in procurement activities, women entrepreneurs still face unprecedented hurdles. Bomani and Derera (2021) conducted in-depth interviews with female business owners to understand they faced hassles like lack of expertise and adequate knowledge, awareness of opportunities and shortage of funds and equipment to fulfil big orders while contracting with the public authorities. Their study shows a positive ray of hope as female entrepreneurs partner with male business owners and even bid for the contract as a group to exploit synergies. However, more provision of training and funding should be looked into by the public sector.

To summarise the results, we can see that women's unequal position is reflected in their advancement within organizations. Also, they have a harder time as entrepreneurs, as many of the conditions and opportunities they need to succeed as suppliers in the market are less available to them. While the studies within organizations are mainly related to developed countries, studying the difficulties of becoming a supplier is more of a research topic in the context of public procurement.

### Team diversity

Team diversity in the context of this review is the dispute between heterogeneity vs homogeneity through representativeness of all genders in business actions in an attempt to draw a positive image of the company while achieving economic, environmental, and social objectives. Broadly, it is about the consequences of ending workforce discrimination and facilitating inclusivity.

Swift and Gruben (2000) attempted to show how different genders vary in decision-making in the USA and realized that women purchasers attached greater importance to several relational attributes like support offered and dependability of vendors than men when selecting suppliers. These attributes can be considered useful when handling critical or complex items purchases. Complementing this, Park and Krishnan (2005) found even with individuals in the same organizational hierarchy, their gender influenced supplier selection behaviour: while male managers focused on profitability and capacities of suppliers, female managers were more emotionally involved in decision-making and considered the dependability and trustworthiness of suppliers along with their financial performance. These findings support increasing team diversity by including both genders in decision-making. Messner's (2017) study of IT employees in India found that overall, women were more committed to their work organization than men leading to less switching/retention cost for their companies and higher motivation.

The results of Jermisittiparsert and Srihirun (2019) implied that gender had an impact on the management of the supply chain, and it also moderated its relationship with leadership. Ruel and Fritz (2021) also add to the discussion of gender diversity by focusing on dissimilarity in consideration of sustainability aspects by purchasing managers of different genders because of their variation in

softer skills like empathy, listening skills, social aspects, well-being, and attention to risk considerations when adamantly following policies. However, they found no impact of diversity on the environmental aspects of sustainability issues in either cluster. One of the key contributors to the unequal representation of women in all supply chain management levels was variance in education. Group diversity is encouraged as it has a positive impact on organizational communication and social affiliation.

To foster diversity, Benjamin (2020) focused on how employee union representatives can be used as a medium to voice gender equality concerns, among other issues, when formulating public procurement contracts leading to more diversity-oriented policies, directly benefitting marginalized groups, such as women's career progression. Strang (2021) revealed experience, quality and certifications available were some of the determiners of the successful completion of upscale public procurement projects. However, gender, along with age, education etc., of the project manager had no significant impact, indirectly pointing towards no added value by virtue of the sex of the manager. We keep in mind that the author points out that the sample was significantly male-dominated which could have influenced the results, and this also directs us to the understanding that women are underrepresented as project managers.

To summarise the results, the research suggests that differences are also reflected in decision-making in many respects. Although a wide variety of perspectives are explored in the above studies, it is agreed that gender diversity in teams has an impact on the outcome of teamwork.

### Skill Sets

The research conducted in this sub-category focused primarily on examining whether skills like communication/negotiation abilities are gender dependent. Since these skills are key to successful business operation and profitability for both purchasing and sales professionals, knowing their association could be useful. Furthermore, studies tried to understand whether individual attributes and characteristics impact the relationship between buyers and sellers. Knowing whether gender has an influence can be helpful for both private and public procurers while making team selections.

One of the early studies in Asia was done by Sojka et al. (2001) in Pakistan, aiming to understand the influence of the perception of different genders of buyers on sales representatives in a variety of industries. The research found that gender-related norms for career choices were still prevalent, but there was no preference for a salesperson of the same gender as the purchaser, although differences in characteristic perceptions were found. For example, all the buyer groups considered the willingness to take risks, while assertiveness was higher among men; at the same time, women were held to be more sincere, understanding and good listeners. Similarly, Plank et al. (2006) found organizational purchasers perceived women to be less active in aggravating conflicts in a buyer-seller relationship compared to men as they had a less confronta-

tional leadership style, adding further to the debate of why women should be included in the buying-selling team.

Ma et al. (2021) suggest employing women in supply chain collaboration is advantageous as they perform better in collaboration exercises on both the retailer and the supplier side. Using multiple gender pairings, the authors demonstrated that women were more collaborative as buyers and sellers, and male and female agents worked better in teams with other women. In terms of ethicality, Husser et al. (2014) probed into the decision-making process of French purchasing professionals and students when confronted with ethical and non-ethical choices to find whether gender orientation had a bearing on ethicality. Among experienced buyers, women excelled on ethicality, while women were generally more ethical than men, which directly affects purchasing-selling decisions. Rottig et al. (2011) also investigated ethical issues and had to control gender as a variable impacting ethical decision-making during their study among university students because of mixed results of its influence in preceding literature.

McCrudden (2004) performed a cross-continent collection of historical developments to shed light on how social outcomes were promoted by different countries like the USA, South Africa, Ireland, etc. Using procurement as an enforcement tool to promote gender-compliant anti-discrimination policies. He illustrates that even if male workers were initially the primary beneficiaries, the use of procurement to attain goals like equal pay and good working conditions, creating employment, awarding contracts, etc., has also benefitted other minorities. Trade union activity has played a particularly important role in raising wages and job benefits for women (and other marginalized populations) to respectable levels.

An interesting outcome resulted when Newell et al. (2019) administered a survey to Chinese business professionals undertaking MBA classes with involvement in purchasing activities for their organizations to scrutinize whether the gender of the buyer-seller impacted the business. One of the highlights of their findings was the Queen-Bee phenomenon experienced where the feminine gender had a bias towards their fellow female buyers for aspects like trust perceptions and valued more favourably organizations with male representatives. However, results showed female buyers were significantly loyal to their organizations. But for the men, this bias was absent altogether while evaluating variables like trust and expertise. On the other hand, Ho and Lin's (2014) study of Chinese purchasing professionals reported no gender differences in terms of moral judgment while purchasing when organizational rules and ethics guided decision-making.

Contrary to the sales literature on gender, Pullins et al. (2004) found no contrast between buyers' attitudes to trust, reliability, customer orientation and conduct based on the diverse gender of salespeople. However, women were generally assumed to be associating themselves with more established companies and were more reliable. Also, the healthcare sector has become increasingly competitive, making strategic alliances the need of the hour. However, Oumlil and Williams (2011) showed that the gender of the

purchasing official had no hold on the degree of success of the partnerships formed. This emphasizes that men have no more significant contribution to an alliance's success, so perhaps other genders should be equally participating in such decisions. Ryu and Sueyoshi (2021) analyzed the awardees of research grants for small business innovation by the U.S. Department of Defence and found that, if women-owned businesses succeeded at networking and were given preferential treatment, they could accelerate their performance and outperform their counterparts in the public procurement market.

In terms of decision-making, women were found to be more inclined towards ethical considerations. Husser et al. (2019) reported women buyers fared better than men in recognizing ethical issues and behaving ethically. Complementing this, Croom et al. (2021) compared the personality traits of men and women in the U.K. as they seemingly affected buyer-supplier relations among procurement actors and found that men displayed slightly higher levels of corporate psychopathy, which made them more prone to being self-centred and unethical.

While Detkova et al. (2021) identified differences in insights on corruption among male and female government officials in Russia, where the women were more aware of its harmful effects on procurement, suggesting their higher probability to support anti-corruption practices while the men were unaffected. They also demonstrated that women were less likely to have high positions despite having almost similar expertise. Also, Faes et al. (2010) did a long time series analysis of data collected over 18 years during negotiation role-plays in buyer-oriented purchasing training sessions to conclude differences in negotiation characteristics of buying professionals. They found that, in a competitive environment, men were more ambitious in setting targets, while women set more achievable goals and tended to exceed their expectations comparatively. However, women often reach more no-deals than men as they tend to use less tactical communication.

To understand factors impacting employment retention, Ali et al. (2018) did an online survey in the USA to identify the underlying characteristics that provoked procurement officers to switch employment. They found if only the gender of a person was considered, men and women were equally likely to leave their jobs, but individually men were more likely to switch if their salaries contributed a small percentage of total household income and for better managerial positions while age, willingness to move, education, etc. motivated women more. The authors concluded that if sufficient growth opportunities are given, women are more loyal to the organization they belong to.

To summarise the results, the picture that the research paints of gender differences is highly complex.

### Supplier Diversity

Procurement and selling directly influence the economy by creating wealth and supporting social aims like a holistic growth of the population. Hence, in this sub-category, we tried to integrate research that focused on supporting

gender diversity via procurement. Public procurement is also a public policy tool to promote social welfare. Thus, support for disadvantaged suppliers is a priority, reflected in the research we have identified.

Medina-Arnaiz (2010) studied the case of Spain to showcase the provisions of the law on public sector contracts which included social clauses on gender equality. Through Act 3 of 2007 (Organic law), Spain desired to promote gender mainstreaming and equality by compelling public authorities to adopt corrective measures benefiting women in all activities, favouring social objectives over financial benefits. She also elaborated on various EU directives that clearly defined what social aspects meant and associated ways to promote inclusion which helped countries to further refine their policies with the possibility to incorporate a gender perspective in the contract award phase.

Similarly, Sarter (2020) did a review of policies in Germany and found trends of equality considerations in public procurement and concluded that policies needed to be transformed into laws if some concrete response was to be seen as a voluntary adaptation of policies failed to promote greater inclusion, hampering women's opportunity to fit-in in a male-dominated workforce.

Maertens and Swinnen (2012) administered one of the few studies on gender issues in the supply chain in Africa and claimed a direct link between gender equality and supply chain growth, helping to understand how unequal representation issues could be tackled at the supplier level in agrifood logistics. Through their extensive first-hand data collection, the authors describe women's disadvantaged position in gaining contracts for high-value outputs from food industries due to their limited access to resources like land, water, labour and machinery, forcing them to work as daily wage earners rather than owners. Even among labourers, there existed differences, although reduced, in terms of wages paid to men and women. Women were disadvantaged in their employment contract terms and penalized for being less educated, resulting in not being able to get permanent positions leading to occupational segregation.

Wu and Sirgy (2004) conducted a US-based industry-wide study of the attitude of purchasing managers towards suppliers; their findings, although inconclusive, revealed a pattern of gender discrimination where purchasing managers denoted more willingness to purchase from an unknown male-owned supply firm than from an unknown female-owned firm, even when the quality of their products was similar, highlighting the unconscious bias. Thus, they focused on networking for female-owned businesses to improve their chances of getting orders.

Buyer-supplier relations are critical for any successful procuring organization and frequent supplier switching can be costly if done without any explicit reason. However, Mir et al. (2016) found there was no impact of gender on the supplier switching decision of buyers suggesting that women as buyers would lead to no extra cost to the company due to supplier switching. Blount and Li (2021) analyzed survey data of buyers in the U.S. and the U.K.

to determine factors influencing procurement decisions. They realized that women tended to have a more optimistic attitude toward supplier diversity, helping to support the social and relational aims via procurement. Furthermore, they found male buyers were anticipated to elevate the buying costs by being stringent with the fulfilment of their procurement metrics.

Women are disadvantaged not only as employees but also as entrepreneurs. Orser et al. (2021)'s study of SME suppliers to the Canadian government revealed that, in many sectors, women-owned businesses were not sufficiently represented due to hindrances like the complexity of the contracting process itself, limited fulfilment capability and experience as well as lack of awareness of the available opportunities. A surprising revelation of the study was that mostly women-owned SME supplier organizations were highly underrepresented in sectors where women-owned firms had the highest concentration. The authors suggested measures like training to women business owners and more clarity on the government's reservation rules.

Although socially conscious policies were drafted to make procurement a driver of change looking beyond profit objectives, only a few studies voiced the opinion of subcontractors who employ the highest percentage of people in the construction sector. Loosemore et al. (2019) study of Australia's construction field is an exception to this where they tried to understand why subcontractors are not very enthusiastic about such policies. The results suggested that if there is no government support and adequate training and education deployment for disadvantaged groups like women, employing them is seen as an expense rather than a positive impact on the organization. Hence, compulsory measures should be taken to ascertain more participation rather than relying on the voluntary initiative of suppliers.

To show the constructive impact of gender inclusion policies, Wright (2015) dug into the construction sector of the UK to see if public procurement could be used to mitigate gender issues in a seemingly masculine world and presented the case of Women into Construction Project, which was initiated in 2008 for the development of London Olympic Park. He discusses the capacity of procurement to compel stakeholders to consider social aims like improving women's participation in the construction sector, reducing the gender pay gap, and employing under-represented groups.

Wright and Conley (2020) also refer to the Women into Construction Project of the UK to emphasize the numerous skill enhancement actions taken to improve the supply of female labourers in construction while efforts were also undertaken to provide placements to them once the project ended. Through semi-structured interviews, the authors documented the positive impact of such actions on female career development as well as on the contracting company's reputation. Likewise, Sarter and Thomson (2020) acknowledge the relevance of procurement practices to encourage gender balance in organizations. However, providing incentives is not enough for participating companies as the majority of the surveyed companies did

not adopt the policies in response to procurement guidelines. The authors raised concerns about the power of public procurement itself to foster equality in partner organizations and suggested supplementing it with other actions to enhance equality measures undertaken; however, the benefits of enforcing equality considerations are still found to be positive.

It has been voiced by women's advocate agencies that various certifications of women-owned businesses might improve their chances of winning contracts as the buyers become more aware of the supplier's status. But Orser et al. (2019) found contrary results and concluded that such certifications did not help motivate women-owned businesses to bid more or their chances of getting the bid accepted. Essentially, there was no advantage against male-owned businesses because of the certification.

Atal et al. (2019) emphasize the onus on the IT industry to support the gender diversity of supplier firms by developing a 7-step sourcing process to strategically evaluate the suppliers and give them an edge based on their higher gender diversity. Asking questions related to women participation in the workplace at several stages of sourcing may nudge the suppliers to improve their women-employee ratio.

Finally, sustainability is gaining prominence and is an important consideration for all stakeholders in society today. Purchasing managers need to evaluate the actions of their suppliers as it can also have an impact on the buying company. So, Goebel et al. (2018) checked if, among other factors the gender of purchasing managers impacted their willingness to pay more for certified sustainable and environmentally viable options, sustainability as a factor had positive appeal for both male and female purchasers.

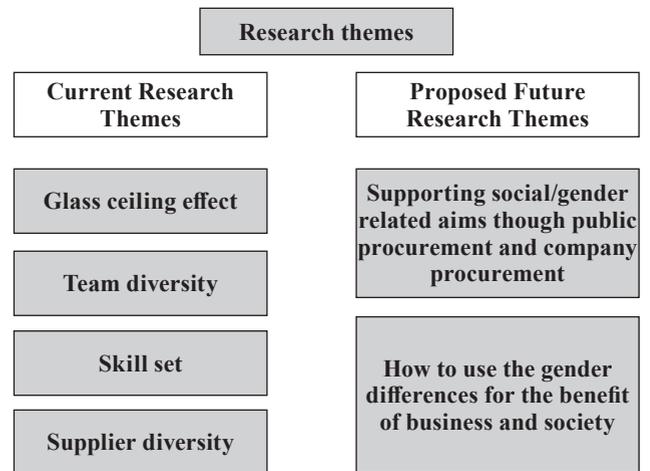
## Conclusion

The purpose of this paper was to review the existing studies conducted in the field of procurement relating to gender issues, to the best of our knowledge, this is the first such attempt. The paper focused on performing a comprehensive study to identify the current trends and suggest future research paths that upcoming studies can explore. These are summarised in Figure 5.

Our analysis highlights that gender is an emerging issue in procurement research, and the existing research can be categorized into four themes. Studies on the glass ceiling effect showed gender-specific disadvantages to advance within organizations and procurement-specific impediments. These include inadequate work design, male-dominated cultures, negative stereotypes, high levels of travel, and an aggressive ethos within procurement functions. The glass ceiling effect persists, as men tend to be clustered in higher-level management roles while women struggle to reach higher positions. Furthermore, women entrepreneurs, particularly in smaller firms, face challenges in accessing funds and resources, limiting their market share and performance. Discrimination in lending terms and lack of expertise, knowledge, and awareness of opportunities further hinder women's success as suppliers.

Collaborative efforts and supportive policies are required to address these barriers and promote gender equality in procurement activities.

Figure 5  
Framework of current and future themes on procurement research addressing gender equality



Source: own compilation

Similarly, the studies on team diversity highlight the influence of gender diversity on decision-making processes, including the increasingly important sustainability and ethical aspects of supplier relationship management. The studies emphasize the need for diversity-oriented policies to support the career progression of all employees, man or woman, and promote inclusive practices that support socially responsible procurement.

While for the studies focusing on skill sets, there are mixed views on the gender-based advantages for procurement, however, several studies showcase the gender differences in decision-making, such as communication and negotiation abilities, in purchasing and sales professionals. The research indicates that gender can impact perceptions, preferences, ethical considerations, and negotiation characteristics in buyer-seller relationships. Overall, the inclusion of both genders in procurement teams is seen as beneficial, as women perform better in supply chain collaboration exercises and demonstrate higher ethicality. The presence of diverse genders in teams can lead to improved outcomes and a broader range of perspectives.

Finally, the literature focusing on supplier diversity and gender emphasizes how the challenges such as limited access to resources, wage discrepancies, occupational segregation, and complexity of the contracting process hinder women's participation in procurement activities and their representation. Measures like training, clarity on rules, and government support are suggested to address these challenges. Furthermore, cases such as the Women into Construction Project in the UK demonstrated how public procurement could mitigate gender disparities, reduce the gender pay gap, and provide employment opportunities.

Based on our analysis, one of the emerging themes is the promotion of social objectives by promoting supplier

diversity, of which gender equality is a critical component, although the theme needs to be explored more by future research. In their approach, many of these papers address not just understanding the nature of inequalities but to gain insight into how to address problematic areas.

This review also revealed that the literature fails to address an additional topic: how procurement as a policy tool can support social/gender-related aims. In this respect, procurement naturally deals with the contracting partners, i.e., the suppliers. However, internal processes and opportunities for internal efficiency gains could also be the subject of research, of which gender is a natural subject. This is particularly true for public procurement, as public procurement research typically focuses on legal and efficiency issues rather than on the human factor or organizational aspects. Also, limited research focused on how companies are addressing these issues. They also have policy tools for internal management (e.g., glass ceiling) and suppliers (e.g., supplier codes of conduct). It could be of importance to see a full picture of these tools and their effectiveness in both sectors. Future research could also be advantageous to show how to use these differences in personality and skills for the advantage of the business and society.

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