Family business sustainability: the impact of governance and women's empowerment in Saudi Arabia

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Abstract

Due to their strong emotional interest and ownership control, family firm owners significantly influence their firm's strategies and governance, which has consequences for their business sustainability practices. The failure to establish or maintain formal organizational structures, and adopt good governance principles, may hinder family firms in their pursuit of long-term sustainability. This study empirically investigated the impact of corporate governance on family firms' sustainability, with women's empowerment and culture as moderating and mediating factors, respectively. Data for the study were obtained from a sample of 126 family firms from Saudi Arabia. The study adopted the partial least squares structural equation modelling (PLS-SEM) method. The study results empirically confirmed that corporate governance is positively associated with women's empowerment, which also assists in achieving business sustainability in family-controlled firms. The adoption of good corporate governance policies, and empowerment of women through their appointment on corporate boards operating in a supportive culture, can reinforce an organization's mission, purpose and strategies, which can create an enabling environment for family business sustainability.

Keywords Family firms, Corporate governance, Women's empowerment, Corporate, Family culture

Introduction

Family firms or businesses are the most common type of business in the world [1–3]. They also play a crucial role in contributing to national GDP and creating employment opportunities [4]. Family business operations involve the blending of two inherently different realms: the performance-based world of business and the emotion-based domain of the family. This dual relationship differentiates family businesses from others; especially in the protection of family (owners') socio-emotional wealth (SEW). According to SEW theory, family firms place significant emphasis on sustainable development and

long-term orientation, but this emphasis is driven according to the type of involvement chosen by the owning family [5]. This strong interest and ownership control allows family members to exert significant influence on a family firm's strategic change [6], governance and behaviour [7], which has consequences (positive/negative) on its business sustainability (SUS) practices [8, 9]. Elsbach and Pieper [10] are of the view that only by digging deeper into the motivations and the processes undertaken by family firms, can we improve current understanding of their behaviour, functioning and sustainability.

Sustainability (SUS) has been an enduring problem for businesses across the entrepreneurial landscape [1]. The pursuit of long-term sustainability for any business, especially family-owned, is a vital element that could lead to a competitive advantage [24, 25]. A shockingly high percentage of family businesses fail as a result of governance (e.g. board structure, composition, functions, etc.,) not only in developed countries, but also in developing

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economies, which poses challenges for economic stability, gender equality [26], and sometimes political stability. In the case of Saudi Arabia, more than 45% of the top 100 enterprises are family-owned [27]. On average, 90% of enterprises in Saudi Arabia are family-owned, with barely 5% surviving to the third generation, and the majority of profitable businesses are less than 65 years old [28]. This poses a great threat not only to the families involved, but also to the nation's economy [28]. Unfortunately, this position may be further compounded as the country, in line with its Vision 2030 and also in need of foreign direct investments (FDI), opens up its economy to attract multinational companies. Local family firms may not be able to compete with these multinational firms, not only in terms of resources, but also in organization and governance structures, and will hence face business sustainability problems. When enterprises collapse, unemployment rises, the owning family's source of income suffers, and consequently the ratio of poverty increases [29].

The growing body of research on family business has identified key and specific mechanisms and processes by which family businesses implement and achieve sustainable goals and practices [11]. Prominent among these measures is good (corporate) governance. Studies have empirically associated good governance with the prosperity and survival of business entities over the long term [1]. According to [14], corporate governance (CG) is a key determinant for success which encourages organizational sustainability or failure. While existing studies have explored various aspects of family business-such as SEW [30], strategic change [6], financial performance, environmental and social governance [3, 31], and sometimes women's succession in family firms [17, 19, 32]—a critical assessment of the role of WE, together with other variables and their impact on family business sustainability (SUS), is rare or notably absent. A particular interest in this study is the introduction empowerment of women through their involvement in corporate governance and their appointment to and active participation in corporate boards in terms of their management activities into the model. Hence, this study considers women's empowerment (WE) as a variable related to family business sustainability. Cultural issues which might influence family business sustainability [12] are also taken into account in this study, as cultural contexts and other considerations can play an important role in how family businesses behave [13], especially in emerging economies.

The adoption of CG principles also creates opportunities for women to be empowered. According to [15, 16], CG plays an important part in the empowerment of women, particularly in the business and corporate world, and women's contribution to the success of economic activities is also acknowledged, especially

on corporate boards. In the context of this study, WE' is first seen as women's involvement in family firms, defined as any act or process whereby women take part in the life of a family firm [17–19]. Aman and Nguyen [20] state that an effective board and board gender diversity are considered by investors as signals for a company's future performance and growth and also as evidence of business sustainability. Michelon and Parbonetti [21] and Ong and Djajadikerta [22] have also argued that when organizations have a critical mass of women's representation in the CG structure, then WE is improved, which could lead to enhanced business sustainability. Adams et al. [23] state that women are more independent, diligent, and responsible than men in the discharge of their duties.

This paper's contribution to the existing family business sustainability literature is multifaceted. First, besides governance, it considers a critical assessment and analysis of the role of WE' on SUS. It concurrently examines the moderating role of family and corporate culture in the association between WE and SUS, to further broaden our knowledge in this area. This research is, therefore, one of the few to comprehensively and simultaneously analyse WE and other factors, while also providing empirical results indicating how the implementation of good governance, appropriate policies to empower women, and the right family and corporate culture enhance SUS. Second, this study adopts the use of important management and CG theories (agency, stewardship, and resource dependence), and SEW theory in the context of an emerging economy. This contribution helps to close a gap in the literature and further broaden theoretical insights into SUS, as well as improving understanding of SEW theory in family firms in a developing market context. Filling this gap is crucial not only to consolidate existing findings and understand WE or gender's role in family business sustainability but also to guide future research directions.

The main research question in this study is as follows:

Do governance and women's empowerment, moderated by family and corporate culture, have a significant impact on family business sustainability?

Hence, the aim of this study is to:

- Investigate the impact of CG—represented by five corporate board features: board diversity (BD), board meetings (BM), board committees (BC), board size (BS) and board independence (BI)—on family business sustainability (SUS).
- 2. Investigate WE' as a mediating factor, and family and corporate culture as moderating factors
- Investigate the interrelationships among these variables.

The rest of the paper is organized as follows: the next section reviews relevant theoretical and empirical literature. This is followed by the methods employed in carrying out the study. The result and discussion of analysis of the data are then presented. The study ends with conclusion, limitations and recommendation for future studies.

Review of relevant literature

Theoretical considerations

Several theories underpin and explain the relationship between principals (owners) and agents (managers) in business governance. According to Mensching et al. [30], although academic interest in family business research is sharply increasing, the field still lacks sufficient theoretical integration. SEW is the theory most referred to in family business literature, as it is seen to assess family firm heterogeneity and helps to differentiate between family and non-family firms. In this instance, it is used to describe the association between a family business's attributes, governance and sustainability. The concept of SEW [34] has the potential to become the dominant paradigm in the field of family business [35]. SEW theory postulates that decisions in family businesses are motivated by a desire to protect not only financial, but also non-financial resources [36, 37]. According to Berrone et al. [38], the value of socio-emotional wealth to the family is more intrinsic, its preservation becomes an end in itself, and it is anchored at a deep psychological level among family owners whose identity is inextricably tied to the organization. It lies in concepts such as identity, the ability to exercise family influence, and the perpetuation of the family dynasty [30]. Besides strategic family influence and control, sustainability is also at the core of family businesses. The concept of sustainability is therefore not new to such firms [39], as they are also concerned with long-term business viability. Berrone et al. [35] and other authors adopting a SEW perspective have suggested that family businesses are more attuned to sustainability activities (e.g. growth, profitability etc.) than their non-family counterparts, due to their multi-generational orientation and their relationship with the local community. In addition, whatever CG decision a family business (private or public) makes is geared towards the preservation of their SEW.

The second related theory is agency. This theory explains, among other things, the costs associated with the resolution of conflicts of interests; in this case, between family business owners and their agents (employed as managers of the organization). To monitor and reduce agency costs, several internal and external CG mechanisms are adopted [40]. Among internal governance mechanisms is the board of directors (BOD) and its attributes. The BOD serves as a mechanism to monitor

managerial behaviour and reduce agency problems [41], in businesses, whether private/public or family-/nonfamily-owned. Gender diversity (evidence of WE) is associated with an effective BOD [42], and a more diverse BOD may be better in terms of monitoring functions. An effective BOD contributes to company growth, and encourages non-financial activities such as those concerning environmental and social governance issues, and acting in a socially responsible manner: hence, business sustainability [32]. Another theory, providing a foundation for the role of the BOD and also in favour of board gender diversity as a resource that can add value to an organization [43], is resource dependence. Qualified and experienced board members (male and female) are considered strategic resources who can contribute to organizational success [44]. Women's involvement in family businesses, based on their background, experience and links to external resources, is essential for effective board monitoring, which can ensure business sustainability.

Two other theories that relate to CG, and especially to board control and monitoring, are stakeholder and stewardship theories. Stakeholder theory considers not only equity shareholders, but also other outsiders who can affect or be affected by the achievement of the organization's objectives [45]. It is closely linked to organizational strategy as it encompasses valuable information for strategic planning and implementation, and ensuring that each stakeholder is satisfied through the organization's operations [46]. Stewardship theory sees managers as sharing the same organizational interest as owners, hence seeing no conflict of interest or agency costs. In family businesses, whether private or public, family owners' identity is inextricably tied to the organization [38]. Family owners are in most cases the management. There is no real separation of ownership from control, and the traditional conflict of interest associated with the expropriation of minority shareholders' rights [47] may not necessarily arise. However, weak BOD control and ineffective monitoring will have consequences on organizational performance, and hence, business sustainability. These theories, therefore, form the theoretical framework and perspective for the relationship between family business governance, WE and sustainability, on which the hypotheses and the interpretation of results in subsequent sections of this study are based.

Corporate governance, women's empowerment and family business sustainability

The complexity of managing modern business organizations has given rise to the separation of ownership from control [48]. To avoid consequent conflict of interests, CG structures are put in place to monitor managers' activities [49]. Family firms also experience

this conflict, although in a milder or different dimension, as a result of their ownership structure. Whether public or private, family-owned businesses have a long history and substantial prevalence in the modern corporate sector, making a strong contribution to the economy and society [50].

SUS is the ability of these organizations to remain in operation for a long period. Institutional theory posits that firms are governed by rules, structures, and social norms, enabling them to thrive and endure over the long term [51]. In this context, family business sustainability must depend, among other factors, on good governance and coordinated structures, and strong long-term orientation. Family firms are defined by a number of criteria. According to Miller and Le Breton-Miller [52], a family business can be public or private, but must be controlled by large shares owned by family members, with one or more family members in key positions in the top management team. The members of a specific family can control the business, even without a majority. Lumpkin and Bacq [50] are of the view that, to understand family business and sustainability activities, the focus must first be on their motivation for existence. For example, some family businesses have a strong long-term orientation: defined as the tendency to prioritize the long-range implications and impact of decisions and actions that come to fruition after an extended time period [53]. The second requirement is the ability to understand the source of the perceived conflict of interest in family-controlled businesses. Rovelli et al. [3] see this as a conflict of interest between corporate managers and family honour.

The other concept is empowerment: the process of increasing the capacity of individuals or groups to make choices, and to transform these choices into desired actions and outcomes. This study focuses on women's empowerment. Empowering women and encouraging their entrepreneurial spirit has been identified as a vital aspect of business growth and sustainability [17, 54]. In the corporate world, women holding senior managerial positions, especially on boards (gender diversity) are considered a feature of an effective board [42]. According to Skaf et al. [135], the higher involvement of women in managerial positions enhances the leadership style that supports and empowers workers. Hence, the adoption of good CG principles encourages women's participation and empowerment, which also reflects on company values and other corporate outcomes. However, for female directors to effectively influence board decisions as a sign of their empowerment, their representation on the board must exceed a certain level [55].

Hypothesis development

Corporate governance and women's empowerment

CG, which involves a set of relationships between a company's management, its board, its shareholders and other stakeholders, is the primary independent variable, represented by five board features in this study. It is the system of checks and balances, both internal and external, which ensures that companies discharge their accountability to all their stakeholders and act in a socially responsible way in all areas of their business. The choice of these five internal CG mechanisms: board size (BS), board independence (BI), board diversity (BD), board meetings (BM) and board committees (BC), among several other CG variables, is also to fully capture the role of women and their empowerment in the context of this study. For the BS and BD, these variables can be associated with the number and the proportion of women on the board. The BM and BC variables can also be associated with active participation of women on the board. Finally, is the BI variable; the overbearing influence of family members on board may affect BI and consequently governance in family business.

According to Pradhan and Tripathy [16], good governance and WE are inextricably interlinked in a modern democratic society. Generally, "WE" indicates actions improving the status of women in society through education, literacy, job opportunities, etc. [56]. This study considers WE through women's roles, responsibilities and opportunities in the business and corporate world, e.g. gender diversity on corporate boards. Conflicts of interests arising from separation of ownership and control can be minimized through CG mechanisms to monitor management activities [41]. CG is a system (principles and structures) put in place to monitor the activities of corporate managers transparently and efficiently, and to control a company's business procedures [57]. The success of CG systems is generally influenced indirectly by a country's historical and cultural factors, and directly by its legal and regulatory frameworks [58]. Familyowned businesses are managed and governed such that the objectives of both the family and the business are achieved. This pursuit of both profits and maintenance of family values could sometimes breach other governance principles, and in some cases violate the protection of other (minority) shareholders' rights and the environment.

In the current literature, few studies are available on the dynamics of WE, as well as its connection to CG [59]. Previous studies have generally considered the evolution and percentage of women on corporate boards [60], and recently, women's succession in family firms [17]. Nevertheless, a small number of previous studies [16, 61] have established an association between CG and women's

involvement in governance and empowerment, with mixed results. The inconclusive findings may be due to different environmental conditions, methodology [62] or ownership structures [63, 64]. On women's involvement in corporate activities, [65] argue that CG quality is significantly connected with organizational WE, and the amount of adjustment is driven by shareholders' demands. This study considers the theoretical and empirical focus for each board characteristic and WE, within the context of SUS, before the hypotheses are developed.

Board size and women's empowerment

An organization's BS, whether family-controlled or not, should be determined by its complexity [49], along with company law or governance regulations. Stewardship and agency theorists prefer small BODs, as large boards are more likely to have communication problems. On the other hand, stakeholder theory prefers large BODs, as they are more likely to include members with the requisite experience and time to perform their statutory functions [66]. A large and diverse BOD composed of men and women has not only been identified as influencing company performance and growth, but is also associated with WE [20]. However, according to Konrad et al. [55], and in line with the critical mass principle, female directors are only likely to affect board decisions when their representation exceeds a "critical mass". Empirical evidence on the relationship between corporate BS and WE is scarce and inconclusive, although Liao et al. [65] establish a positive relationship, as a large BS may include more women. The first hypothesis is stated as follows:

H1 Board size has a significant and positive impact on women's empowerment.

Board independence and women's empowerment

From agency and stakeholder theory perspectives, a BOD made up of a good proportion of independent directors is more likely to serve as an effective CG mechanism [67], and perform its statutory role, whether in a family or non-family business. Such a board will also reduce agency problems for both shareholders and other stakeholders [68]. The presence of female independent directors is an indication of WE. Studies on BI and WE are limited, but Ararat et al. [69] confirm that female presence on a corporate board, which is evidence of WE, ensures better control and enhancement of the board's decision-making process. Aman and Nguyen [20] also concluded that investors react positively to independent and female directors' inclusion on boards. The second hypothesis is stated as follows:

H2 Board independence has a significant and positive impact on women's empowerment.

Board diversity and women's empowerment

There are two main theoretical perspectives underlying the rationale for favourable board gender diversity: agency and resource dependence theories. Resource dependence theory considers the BOD as a resource that can add value to an organization. BD indicates the presence of women on the BOD, which encourages WE and is also used as a proxy for board monitoring effectiveness; women's representation in corporate decision making is an important issue for policy-makers [32]. Literature on board configuration also suggests that gender diversity brings unique perspectives to the boardroom [70].

Empirical studies show that women appointed to corporate boards encourage WE, as they are directly involved in the organization's management and governance. Li and Li [71] confirm that women on boards are found to be more independent, diligent, and responsible than men in discharge of their duties. In addition, Adams et al. [23] argue that WE, as reflected in women's presence in top management positions (especially on the board), reduces agency conflicts, as women are more independent and stricter monitors than their male counterparts. According to Milliken and Martins [42], a gender-diverse board, particularly in family-owned firms, improves credibility and provides better monitoring. Hays-Thomas [135] also observed that the presence of women in top managerial positions in non-pandemic periods improved the decision-making process. A systematic review of gender diversity and its impact on the performance of microfinance institutions (MFIs), conducted by Hossain et al. [51], revealed that existing studies present conflicting results, suggesting that the impact of gender diversity on MFI performance is nuanced and complex. This complexity stems largely from the varying roles women play within the organizational structure. In a related study on MFIs, which are usually associated with family business, Hartarska et al. [72] assert that gender diversity in the top management of MFIs is closely linked with social and financial performance. Financial performance is crucial to business sustainability, including in family businesses. However, [73] consider a gender-diverse BOD to be a likely source of increased friction among board members. Also, El-Chaarani et al. [136], using CG variables among them, the presence of women on boards, confirmed no significant impact on bank performance during the COVID-19 crisis period. If a diversified board can bring opportunity for women on corporate boards, then a more diverse board will also encourage and enhance WE. The third hypothesis is stated as follows:

H3 Board diversity has a significant and positive impact on women's empowerment.

Board meetings and women's empowerment

Agency theorists consider a board that meets regularly as efficient and has the ability to monitor managers' behaviour. According to Zhang et al. [74], among the features of an effective corporate BOD is regular BMs, which are also considered an evaluation of due diligence. Empirical results are not conclusive on the relationship between BMs and WE, although Carter et al. [75] state that the presence of women on boards influences performance and corporate behaviour, which ensures better attendance and low agency conflicts. Furthermore, [73] confirm that companies with stronger female representation hold more meetings have better attendance rates and greater engagement in the decision-making process, and conduct more rigorous monitoring.

H4 Board meetings have a significant and positive impact on women's empowerment.

Board committees and women's empowerment

Theoretically, agency and stakeholder theorists view the formation of BCs by the BOD, and their respective activities, as important CG mechanisms in checking managerial behaviour. Governance literature also suggests that the attributes of these committees (e.g. meetings and gender diversity) can affect their effectiveness [76]. The presence of women, their roles and responsibilities on BOD-appointed committees and their actual participation is a reflection of WE. They can and do have impact (positive or negative) on committee performance, whether in family or non-family businesses. Empirical results on the relationship between BCs and WE have not been conclusive even when available, but Adams and Ferreira [73] are of the view that gender-diverse BCs (indicating WE) increase effectiveness, promote openness and facilitate effective communication among committee members more than non-diverse BCs. Ali et al. [77] agree that a gender-diverse BC, such as an audit committee, could often prevent or reduce audit report issues. Finally, Gul et al. [78] confirm that female presence on BCs not only encourages information sharing among committee members, but is also an action that encourages WE.

*H*5 Board committees have a significant and positive impact on women's empowerment.

Women's empowerment and family business sustainability Empowering women to achieve their full potential, especially in economic activities, is important [79], particularly in developing economies. Nhamo et al. [80] describe how African countries will implement the United Nations (UN) Sustainable Development Goals (SDGs) by 2030, particularly in tracking progress on SDG 5 on gender equality and the empowerment of women and girls. A survey conducted by the International Finance Corporation on women on boards in Nigeria identified strong financial performance and improved board effectiveness as key benefits of women in the boardroom: having women on the board sends a strong message that a company is progressive. Boards that mirror society can better understand the needs and preferences of their clients, and this can lead to improved product development, more effective product marketing, and better customer relations [81].

Several studies have explored the nexus of WE and economic development, but the association between WE and sustainability, and particularly SUS, remains unexplored. Indeed, previous studies have focused on women's political participation and modernization [82, 83]. Ergas and York [84] also considered the role of women in global warming and sustainability. Achuo et al. [83] and Okolo-Obasi et al. [85] also highlight how women's economic empowerment is intertwined with issues of globalization, inequality, access to capital, and tax income. This study further extends this line of literature to include an analysis of the mediating role of WE on SUS. Langnel et al. [86] opine that "WE" has a positive and significant effect on sustainability. This indicates that when women are empowered, they play significant roles in national sustainability. They further argue that economic sustainability is likely to be achieved when women are involved in financial and non-financial decision making in organizations, which also includes family-owned organizations. Skaf et al. [135] also confirmed a significant interaction between women's empowerment and the performance of family entrepreneurships. In addition, the results showed that women holding managerial positions in family entrepreneurships are positively associated with firm performance. Gender diversity, as a proxy for WE, gives a positive signal to stakeholders that a company recognizes societal diversity in its governance [87]. According to [88, 89], a higher representation of women, especially in senior management positions, indicates a firm's commitment to a positive working environment. Quality employment and acknowledging societal diversity contributes to business success, and hence sustainability. Vieira [90] specifically showed that female directors on corporate boards affect profitability and sustainability more in family-controlled businesses than their counterparts. This position agrees with that of [72], who also confirm that gender diversity in the top management of MFIs is closely linked with social and financial performance. Posting of good and improved financial result is a key variable for business sustainability.

On the other hand, [91] observes that WE' has a negative association with sustainability, arguing further that favourable perception towards female leaders may not be widely accepted in a society with strong cultural leanings, especially in developing economies. Lee et al. [92] argue that the appointment of a non-prototypical leader is a signal to stakeholders that a firm is undertaking change or reorganization. Similarly, Certo [93] states that women's appointments in senior positions may be interpreted by investors as a signal of organizational difficulties or decline. These perceptions may negatively affect business sustainability in the short run. Finally, Khan et al. [94] and Olayide et al. [95], in separate studies, found no significant relationship between WE and business sustainability. The sixth hypothesis is stated as follows:

H6 Women's empowerment has a significant and positive impact on sustainable development.

The above literature and hypotheses H1–H6 show the association between CG, WE and business sustainability. This study therefore also assumes that the presence of women in CG, as a proxy for WE, will positively moderate the relationship between CG and SUS.

Women's empowerment, culture and business sustainability

WE' is multi-layered and incorporates intersecting social and economic dimensions, but generally involves processes and actions to improve the status of women in society through education, job opportunities, etc. [56]. In the context of this study, WE' was considered in respect of their job opportunities, and their presence and roles on corporate boards in family businesses. SUS is long-term success as a result of adopting a value-driven approach to business planning with less negative impact on society [96, 97]. The sustainability of any enterprise depends on it having a strong long-term orientation [53].

Previous studies have identified a relationship between WE and business sustainability, and especially SUS [11, 98, 135]. Culture has also long been identified as a factor associated with how businesses perform, and especially family businesses. Does culture (family and corporate) play a moderating role in the relationship between family businesses and sustainability? Generally, there is no entirely bad or good culture, and none may be considered superior to others. Specifically, if cultural (family or corporate) values or tendencies enable a management style that creates an enabling, conducive work environment and motivates people, employees' work performance will

be enhanced. Conversely, a work environment influenced negatively by societal values will be a stressor on employees' work performance. This thinking is further emphasized by Wallach [98], who conclude that there is no good or bad culture per se; a culture is good–effective—if it reinforces the mission, purposes and the strategies of the organization. Finally, a culture that recognizes women as an important segment of society will assign roles and responsibilities to them not only in social, but also economic activities.

Some authors have identified ethnic and cultural influences on family businesses [1], but few studies have explored the moderating role of culture on the association between WE and SUS. The empirical results of these limited studies are also not conclusive. Nevertheless, [99] state that culture has an impact on the emergence and growth of WE, through roles which could lead to longterm sustainability in businesses. Other studies [1, 100, 101] also find that culture has a significant and positive impact on WE, which influences business sustainability. In contrast, some studies have found negative and insignificant impact [102], while others observe an insignificant relationship with sustainability [103]. This study extends this line of literature to empirically examine the moderating roles of two dimensions of culture, family and corporate, on the WE and SUS nexus.

Family culture, women's empowerment, and business sustainability

"Every family has a unique belief system (family culture) and family paradigm. Through these paradigms, not only can the family culture be better understood, but also the culture of the business owned and managed by the family, perception of their competence and how they would handle crises and conflicts" ([104], p.3). As culture-bearing units, ethnic groups' shared values contribute greatly to identification and certain modes of decision making that may lead to WE [105], especially in settings where there are no clear distinctions regarding male and female roles. Women empowered through their roles, responsibilities and entrepreneurial spirit contribute to a business's longterm viability and sustainability, as the company adopts the culture of the family that owns it. Family culture (FC), which is a sub-set of national culture or its system of values, influences the leadership and management style of most organizations, including family businesses, which in turn influence employee job performance [106] and attendant social and economic benefits. The leadership style in most organizations is a reflection of the society and family from which the managers come. This position is firmly emphasized by [107], who argues that the cultural foundation of an organization is directly linked to the value system of its founding members, especially

in family-controlled businesses. These leaders are the architects and main players who establish and continuously influence the organization's culture or work characteristics. The protection of family SEW' and its various dimensions in family businesses has a direct link with family culture, which, as [38] puts it, is more intrinsic, its preservation becomes an end in itself, and it is anchored at a deep psychological level among family owners. Family values (culture) may directly moderate the protection of SEW, which exerts significant influence on firm's strategies, governance and behaviours [108].

Although studies that empirically establish the moderating role of family culture on the WE and SUS relationship are limited, Dyer [109] confirms that family culture has a lasting impact on family businesses. It facilitates uniform and harmonious behaviour by creating a shared understanding for family business management and governance, hence encouraging sustainability [110]. Adendorff and Halkias's [1] study on immigrant family businesses' survival, growth and sustainability confirms the role of family culture in shaping and pursuing a vision of the business that is potentially sustainable across generations. This finding is in line with Dettori et al. [111], who agree that family businesses are usually motivated by long-term orientation, which implies an inclination to adopt strategies that can guarantee successful longevity. In addition, Ferreira et al.'s [101] bibliometric study on SUS identifies that culture, in the form of family values and deep-rooted traditional practices, affects the sustainability of such businesses. On the other hand, some authors agree that family orientation as a result of deepseated cultural values that deny some segment of the society of their full potentials is generally considered to be negatively associated with innovation and performance (as well as profitability), which may work against sustainability practices. Family businesses consider new practices a deviation and violation of family tradition, culture and history, which may extend to WE policies. According to Lumpkin and Brigham [112], the general impression is that family owners are risk-averse and prefer proven strategies and activities to new pursuits, as long as their SEW is preserved. The hypothesis developed is:

H7 Family culture significantly moderates the relationship between women's empowerment and business sustainability.

Corporate culture, women's empowerment, and business sustainability

According to Wallach [98], corporate culture (CC) is the shared understanding of an organization's employees—how we do things around here. These beliefs, values,

norms and philosophies determine how things work. It is also viewed as the value system that influences the leadership and management style of most corporate organizations, which in turn influences employee job performance [113] and, in some instances, the formation and composition of BODs so as to involve women in corporate decision making. Moreover, if the cultural belief system contains positive approaches, such as "People really care if you do a good job in this outfit" or "Winners are rewarded here", or encouragement of WE in the work environment that will also be reflected in the family's business performance and sustainability practices. The influence of corporate culture on employees' work attitudes is also supported by Buchanan and Huczynski [114]. Jung et al. [115] emphasize that the behaviour, attitudes and value systems of employees are shaped by the practices (corporate culture) of the organization. According to Brooks and Wallace [116], leadership style takes different forms in terms of the dimensions of national culture and further refined by organizational values. Generally, if these cultural values or tendencies enable a management style that creates a good work environment and motivates people, employees' work performance will be enhanced. Conversely, a work environment influenced negatively by societal values will be a stressor on employee work performance, with an attendant gradual reduction in firm value and eventual sustainability risk. In conclusion, Denison [117] states that corporate culture is not just an important factor; it is the central driver of superior business performance, which ensures longterm value creation, enabling business sustainability.

There are several studies on the corporate culture and business sustainability nexus, but empirical results are inconclusive. Hadj [118] confirms that a supportive corporate culture encourages employee creativity and efficient production processes, and adopts superior quality governance and management styles that are likely to ensure business sustainability. Manning et al. [119] study, on Dutch firms for the period 2012 to 2016, concludes that companies' entrepreneurial culture and governance systems that align with employees' (including women's) interests can facilitate governance and business sustainability. Similarly, Crifo et al. [120] reveal that employees' entrepreneurial ability supported by company values contributes not only to a company's financial growth, but also to its social and environmental performance, and hence business sustainability. Finally, Achim et al. [121] conclude that a corporate culture that considers the principles of good governance (e.g. accountability, transparency and protection of stakeholders' interests), including an independent and gender-diverse corporate board, can gain the trust of stakeholders, bring consistency and improvement in business processes and consequently achieve business sustainability. The final hypothesis states:

H8 Corporate culture significantly moderates the relationship between women's empowerment and business sustainability.

Accordingly, Fig. 1 summarizes the research model of the present study.

Research methodology

Data collection and sample

A guestionnaire with a 5-point Likert scale was adopted and utilized the online mode for data gathering. An online approach ensures the possibility of reaching as many respondents as possible and also reduces interview bias [122]. The questionnaires addressed SUS, CG, WE, FC and CC. A non-probabilistic sample of 126 family businesses was selected from different locations of the country for a period of five months (October 2022-January 2023), based on purposive sampling. Simple random sampling was used for the selection of the respondents, who were usually the principal managers/executives or owners of family businesses, as they tend to have a deep understanding of their business. The response rate was 65% (246 respondents) of the 378 questionnaires sent. Responses from 235 participants (62.17%) were eventually used for the final empirical analysis (Table 1).

Variables and measurement

Four main sets of variables were used for the analysis, namely (i) dependent: SUS; (ii) independent: CG mechanisms; (iii) mediating: WE; and (iv) moderating: FC and CC. These were measured in line with previous literature. Respondents were asked to rate indicators for their respective variables on a 5-point Likert scale

Table 1 Sample characteristics of respondents

Demographic variable	Туре	Number	Proportion (%)
Education level	Bachelor	62	26.38
	Masters	32	13.67
	PhD	7	2.98
	Others	134	57.02
Gender	Male	172	73.19
	Female	63	26.81
Age	20-30	14	5.96
	31-40	48	20.42
	41-50	94	41.70
	50 and above	79	33.62
Position	Executive	181	77.02
	Non-executive	54	22.98

(5 = strongly agree; 1 = strongly disagree). Table 2 indicates the variables, their respective indicators (items) and source.

Partial least squares structural equation model

We adopted the PLS-SEM method in this study. It was designed as a prediction-oriented approach to SEM that relaxes the demands on data and specification of relationships set by covariance-based SEM [123]. PLS-SEM has enjoyed steady popularity as a key multivariate analysis method in management information systems and other fields of business research [124]: "... PLS-SEM meets the challenges faced by family business researchers who are confronted with an increasing complexity of theories and cause-effect models, oversurveyed respondents and decreasing response rates" [33, p. 107]. To test the model, we utilized SmartPLS [125].

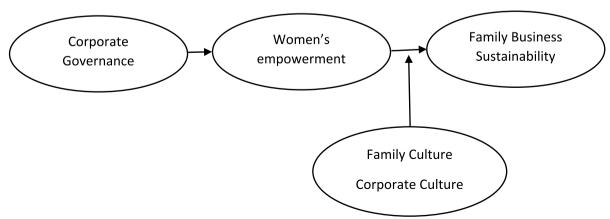


Fig. 1 Research model. Source: Authors

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Table 2 Variables and indicators

Variables Indicators (Items) Source Dependent SUS 5 Zhang et al. (2019) Independent CG 1. BD 6 Honghui (2017) 2. BM 4 Honghui (2017) 3. BC 4 Honghui (2017) 4. BS 5 Honghui (2017) 5. BI 3 Honghui (2017) Moderator 8 Chandrarathna & WE Sumanasiri, 2021 Mediator CC 7 Wallach (1983) FC 13 Bhat & Shah (2013)

Evaluation of PLS-SEM results

The implementation of PLS-SEM in this study entailed two stages. First, we examined the measurement models to confirm whether they were made up of reflective or formative measures, or both. The second stage depended on the satisfactory examination and results of the measurement models. After the construct measures were confirmed as reliable and valid, the second stage was to assess the structural model results. The study utilized SmartPLS, and followed the guidelines for PLS-SEM given by [33] in evaluating and reporting the results.

Empirical results

Before the data analysis, the data were prepared after collection by data entry, coding, and cleaning. We followed two sequential stages: assessment of the measurement models and evaluation of the structural model [126].

Measurement model assessment

The measurement model was measured according to two specific criteria, convergent validity and discriminant validity, which are discussed below.

Convergent validity

Table 3 indicates the results of the assessment of the measurement models. As a guide, the value of Cronbach's alpha for each sub-scale should be at least 0.70 [127]. Our results are higher than 0.70. For the factor loadings, the values should be more than 0.50 [127], and the results are all above 0.50. Content validity is therefore satisfied. The results of the average variance extracted (AVE) are also above the required minimum of 0.5 [128]. Furthermore,

Table 3 Convergent validity

Itoms

Loadings

Cronbach's

Constructs

Constructs	Items	Loadings	Cronbach's Alpha	CR	AVE
SUS	SUS1	0.921	0.891	0.901	0.672
	SUS2	0.783			
	SUS3	0.807			
	SUS4	0.893			
	SUS5	0.817			
WE	WE1	0.786	0.791	0.831	0.772
	WE2	0.568			
	WE3	0.650			
	WE4	0.781			
	WE5	0.945			
	WE6	0.505			
	WE7	0.675			
FC	FC1	0.834	0.836	0.873	0.663
	FC2	0.717			
	FC3	0.916			
	FC4	0.743			
	FC5	0.812			
	FC6	0.843			
	FC7	0.852			
	FC8	0.838			
	FC9	0.879			
	FC10	0.790			
	FC11	0.703			
	FC13	0.811			
BS	BS1	0.572	0.807	0.863	0.561
	BS2	0.687			
	BS3	0.81			
	BS4	0.826			
BI	BI1	0.73	0.798	0.865	0.683
	BI2	0.879			
	BI3	0.862			
BD	BD1	0.737	0.897	0.921	0.659
	BD2	0.822			
	BD3	0.837			
	BD4	0.797			
	BD5	0.849			
	BD6	0.826			
BC	BC1	0.835	0.863	0.906	0.708
	BC2	0.869			
	BC3	0.869			
	BC4	0.79			
ВМ	BM2	0.789	0.805	0.885	0.719
	BM3	0.890			
	BM4	0.784			

Table 3 (continued)

Constructs	Items	Loadings	Cronbach's Alpha	CR	AVE
CC	CC1	0.645	0.815	0.863	0.516
	CC2	0.605			
	CC3	0.801			
	CC4	0.801			
	CC5	0.769			
	CC7	0.663			

values for composite reliability (CR) are all higher than 0.7, which indicates that our results exceeded the minimum threshold of 0.7 [128]. The results in Table 3 confirm that the constructs fulfil the criteria for convergent validity.

Reliability

For a study of this nature, the internal consistency of the scales is very important. The Cronbach's alpha value is recommended to be equal or higher than 0.70 [127].

Table 3 reflects that the Cronbach's alpha values are higher than the minimum threshold. The internal consistency (reliability) test results are therefore considered acceptable.

Discriminant validity results

Tables 4 and 5 show the results for the discriminant validity: This needs value of the latent variables correlation below 0.9 for the variables [129]. This condition is fulfilled and demonstrated in Table 4 (the Fornell–Larcker criterion value) and Table 5 (Heterotrait-Monotrait ratio of correlations criteria). These results therefore confirm that the constructs have discriminant validity.

Structural model assessment

Table 6 shows the results of the endogenous constructs' predictive power (R^2). We applied the rule of thumb suggested by [130], ($\leq 0.19 = \text{weak}$; $\geq 0.33 \text{ good}$; $\geq 0.67 \text{ excellent}$) in the interpretation of our R^2 . The SUS value (the primary outcome measure of the model) is 0.475. Prediction of WE is higher, with an R^2 value of 0.562. However, considering the numerous antecedents of SUS and WE, the results appear to be significant.

Table 4 Fornell and Larcker

Constructs			ВС	BD	BS	ВІ	ВМ	сс
SUS	0.891							
WE	0.349	0.781						
FC	0.154	0.235						
BC	0.352	0.672	0.841					
BD	0.193	0.184	0.748	0.812				
BS	0.341	0.293	0.379	0.422	0.749			
BI	0.269	0.231	0.032	0.103	0.099	0.826		
BM	0.134	0.339	0.626	0.612	0.441	0.051	0.848	
CC	0.552	0.154	0.257	0.327	0.317	0.119	0.31	0.718

Table 5 Heterotrait-Monotrait correlation

Constructs	sus	WE	FC	ВС	BD	BS	ВІ	ВМ
SUS								
WE	0.241							
FC	0.201	0.230						
BC	0.154	0.119	0.143					
BD	0.352	0.234	0.443	0.841				
BS	0.194	0.032	0.054	0.449	0.467			
BI	0.331	0.173	0.354	0.054	0.105	0.12		
BM	0.238	0.273	0.393	0.752	0.719	0.526	0.071	
CC	0182	0.470	0.841	0.293	0.364	0.368	0.136	0.355

Table 6 R^2 of endogenous latent constructs

Constructs	R square	Result
Women's Empowerment (WE)	56.2%	Substantial
Sustainability (SUS)	47.5%	Substantial

Finally, we considered the relevance and significance of the structural model relationships by adopting the bootstrapping procedure in line with [33], with most of the relationships being significant (p < 0.05). Table 7 shows the results of the PLS-SEM (Path coefficients). First are the direct effects. The predicted values indicate that BS (B=0.248, p < 0.001); BI (B=0.247, p < 0.001); BD: (B=0.247, p<0.001); BM (B=0.157, p<0.001); and BC (B=0.224, p<0.001) have a positive and statistically significant impact on WE. Therefore, H1 to H5 are accepted. H6 is also accepted because WE' has a positive and significant relationship with SUS. The results of the indirect mediating effect also show that WE positively and significantly mediated the relationship between BS, BI, BC, BM, BD, and SUS, as also indicated in Table 7. The indirect moderating effects showed that FC significantly moderates the relationship between WE and SUS, which confirms H7. However, the effect is smaller compared to H6 (direct relationship between WE and SUS). H8 is also supported, as CC significantly moderated the relationship between WE' and SUS (Figs. 2 and 3).

Discussion

The study results empirically confirm that CG is positively associated with WE in family-controlled businesses in Saudi Arabia. This also assists in achieving

business sustainability [131, 133]. (This confirms H1–H5). The result is in line with Pradhan and Tripathy [16], who confirm that good governance and WE are inextricably interlinked, especially in a modern democratic society. Specifically, the CG mechanisms or BOD features (diversity, meetings, size, independence and committee) are positively associated with WE. Our result is in line with Adams et al. [23], who state that a more diversified BOD will encourage and enhance WE. This result also confirms the findings of some previous studies that the appointment and presence of women on BOD committees [73], attendance at BODs and committee meetings [75], and female independent directors' positions on corporate issues [20] are governance features that encourage WE.

The results also support the agency and resource dependence theories. These two theoretical perspectives underlie the rationale in favour of board gender diversity. The presence of women on BOD (indicating board diversity) is linked to WE, which is also used as a proxy for board monitoring effectiveness [32]. This result is consistent with [16, 65], who acknowledge an interlink between CG and WE. For this study's context of Saudi Arabia, the result is as expected because of the renewed focus by authorities on an improved CG environment in the Kingdom, as reflected in the revised and updated CG code and other statutory corporate guidance, especially regarding BOD composition and responsibilities. Although these moves may not be sufficient for full, WE, they may be considered as traveling in the right direction to empower women, not only in social, but also in corporate activities, and especially in their involvement in SUS.

 Table 7 Direct and indirect effect results (path coefficients and significance)

	Original sample	Standard deviation	T statistics	P values	Decision
BC≥WE	0.224	0.054	4.155	0.000	Supported
BD≥WE	0.247	0.067	3.665	0.000	Supported
$BI \ge WE$	0.247	0.067	3.701	0.000	Supported
$BM \ge WE$	0.157	0.045	3.532	0.000	Supported
BS≥WE	0.248	0.052	4.777	0.000	Supported
CC≥SUS	0.098	0.042	2.364	0.018	Supported
FC≥SUS	0.192	0.042	4.613	0.000	Supported
WE≥SUS	0.781	0.035	22.303	0.000	Supported
BC≥WE≥SUS	0.175	0.041	4.26	0.000	Supported
BD≥WE≥SUS	0.224	0.054	4.176	0.000	Supported
$BI \ge WE \ge SUS$	0.193	0.053	3.633	0.000	Supported
$BM \ge WE \ge SUS$	0.224	0.054	4.176	0.000	Supported
$BS \ge WE \ge SUS$	0.194	0.041	4.68	0.000	Supported
FC*WE≥SUS	0.095	0.026	3.687	0.000	Supported
CC*WE≥SUS	0.199	0.045	4.222	0.001	Supported

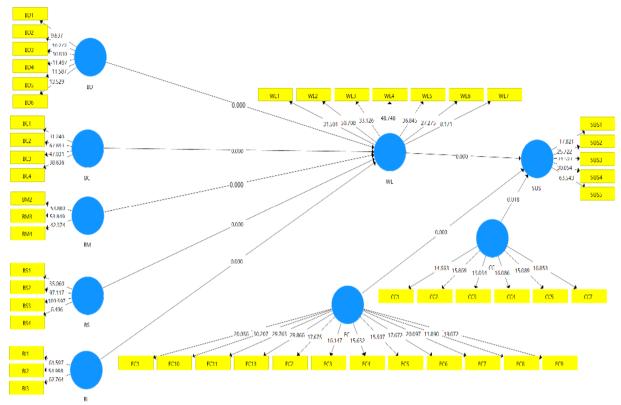


Fig. 2 Direct effect. SUS=Business Sustainability; WE=Women's Empowerment; CC=Corporate Culture; FC=Family Culture; BD=Board Diversity; BM=Board Meeting; BC=Board Committee; BS=Board Size and BI=Board Independence

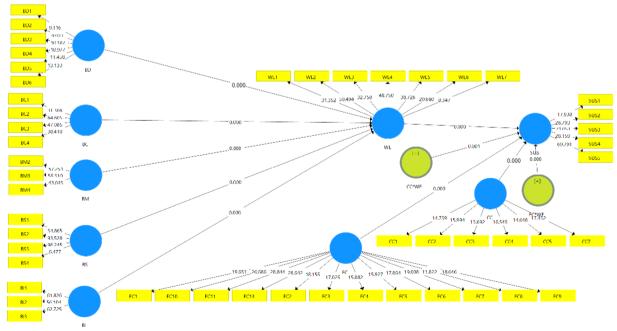


Fig. 3 Moderating effect. SUS = Business Sustainability; WE = Women's Empowerment; CC = Corporate Culture; FC = Family Culture; BD = Board Diversity; BM = Board Meeting; BC = Board Committee; BS = Board Size and BI = Board Independence

Between the WE and SUS variables, the results show a positive and statistically significant relationship (This confirms H6). It is in line with the findings of [86, 134], which report that WE' has a positive and significant effect on sustainability. They further argue that when empowered women are involved in financial and nonfinancial decision making in an organization (including family-owned businesses), they can play a vital role in the organization's economic sustainability. Furthermore, our result is consistent with Vieira's [90] study, which showed that female directors on corporate boards have a higher level of positive impact on performance and sustainability in family-controlled firms than in non-family firms. However, our results are inconsistent with Olayide et al. [95] study in Nigeria (a developing economy) which found no significant relationship between WE and business sustainability.

Finally, our results are in line with resource dependence theory, which views qualified and experienced board members, especially women who are empowered by virtue of their membership of corporate boards, as a strategic resource that can not only contribute to organizational success, but also ensure business sustainability. This positive and significant relationship between WE and SUS in Saudi Arabia may also be attributed to the current emphasis on the country's implementation of certain gender non-discriminatory policies and the UN Sustainable Development Goals (SDGs), and especially SDG-5 (gender equality). Saudi Arabia's Vision 2030 aspires to increase women's employment, particularly in the health and education sectors [132]. In addition, the Saudi government has launched a training programme (named Daroob) to develop women's employability skills [133]. These, and other practical efforts, are geared towards WE, which has a positive and significant effect on sustainability [86]. Empowered women therefore have a key role to play, especially in developing economies.

Furthermore, our results on the moderating role of culture, both family and corporate, in the relationship between WE and SUS revealed various degrees of positive relationships (This confirms (H7 – H8). This is in line with [1, 111]. For the FC variable, the result is in line with Ferreira et al. [101], who identify family values and deeprooted traditional practices as factors that affect SUS. However, the positive relationship between WE and SUS is less pronounced when FC is a moderator. This indicates that FC, and especially "family loyalty", sometimes exceeds economic considerations in the preservation of family SEW. In the context of Saudi Arabia, this finding reveals there are still some aspects of family culture that require review, in particular women's involvement in family businesses. This study also found that corporate culture enhances the relationship between WE and SUS,

in line with Manning et al.'s [119] study on Dutch SMEs. A corporate culture that encourages WE in CG (especially in management positions and on the corporate board) may be seen by stakeholders as an institution to rely on, likely to be consistent in its business operations and consequently to achieve business sustainability [121]. This assertion is also correct for an emerging country such as Saudi Arabia.

Conclusion

The current study improved previous studies by investigating the association between women empowerment and family business sustainability, which remains not fully explored. The study used four theories as its theoretical foundation and development of hypotheses. Family businesses because of their two different orientations (performance and emotional or socio-emotional wealth), their business transactions are not purely economic, leading to sustainability problems [9]. A family business's ability to incorporate good governance into its operations gives it the capacity not only to generate more revenues and produce a competitive advantage, but also to sustain itself in the long term [25].

This study empirically investigated the impact of CG (represented by five corporate board features) on SUS, with women's direct involvement in corporate board activities as a proxy for WE as a mediating factor, and FC and CC as moderating variables in the context of Saudi Arabia with its unique features. The study also considered the interrelationships among these variables. The study results empirically confirm that CG is positively associated with WE in family-controlled firms in Saudi Arabia, which also assists in achieving business sustainability [130]. The findings also agree with [16] that good governance and WE are inextricably interlinked in a modern democratic society. Furthermore, the findings indicate that the presence of women in CG (especially in management positions and on corporate boards, which could be regarded as a proxy for WE) is positively associated with family business sustainability. This result supports the argument of [86] that the presence of women on corporate boards positively affects business success and hence sustainability. However, this positive significance level is reduced when family culture is used as a moderating factor. Finally, the results also reveal a consistent positive relationship between WE and SUS when corporate culture is introduced as a moderating variable.

Family businesses, both from theoretical perspectives and in practice, despite their family-centric aims, still remain the dominant form of businesses worldwide, and also contribute substantially to national economies [25]. Their emergence, effective operations and sustainability are of interest not only to business practitioners

and regulatory authorities, but also researchers. The dynastic succession or trans-generational domain of family SEW [37] considers SUS as one of its intrinsic interests and may therefore strive towards it. This can create an enabling environment for SUS, in addition to the adoption of good CG policies, Women, through their nomination and subsequent appointment on corporate boards and into other senior management positions, when operating in a supportive culture (family, corporate) that recognizes women as an important segment of society and assigns roles to them in both social and economic activities, will reinforce the organization's mission, purpose and strategies. This study has empirically established significant and positive links between CG, WE, culture (family, corporate), and SUS, which has implications for operators of family businesses and regulatory authorities, not only for the context of the study (Saudi Arabia), but also for other developing economies with similar features.

Theoretical implications

The study contributes to the family business literature by drawing from different theoretical perspectives besides SEW theory, such as agency, resource dependence, stakeholder and stewardship theories, to advance current knowledge in family business. It also adds to prior research on family business, by highlighting the relevance and influence of culture on family or organizational behaviour, particularly in settings where cultural values are sacrosanct and have tremendous influence on daily activities. The conceptualization of WE' was also used as a unique corporate board resource, in line with an internal resource dependence perspective, to increase our understanding of the distinctive features and operations of family businesses. Finally, the study adopted the use of PLS-SEM, suited to estimating theoretically established cause-effect relationship models [123]. According to Sarstedt et al. ([23], p. 106), its statistical properties make PLS-SEM particularly useful for exploratory research settings that are "simultaneously data-rich and theory-primitive". PLS-SEM's capabilities also support its use for theory testing [126]. With this approach of simultaneously estimating and testing complex theories with empirical data, the study has expanded the existing knowledge on SUS research. Finally for academics, more theoretical perspectives of SUS need to be developed beyond SEW theory as the dominant paradigm in the field of family business [35]. As rightly pointed out by Mensching et al. ([30], p.1), "Although academic interest in family business research is sharply increasing, the field still lacks sufficient theoretical integration".

Managerial and practical implications

The empirical results of this study, which establishes links between SUS, CG and WE, have implications for research, policy-makers and regulatory authorities in Saudi Arabia. For CG, the Saudi Arabian regulatory authority should continue to improve on the CG environment, through updated CG codes with sections targeted at effective management and governance of family-owned businesses to ensure their sustainability, as a large number of family-owned businesses exist and play a significant role in job and wealth creation in the Saudi economy [27]. For operators of family businesses in Saudi Arabia, whether old or new, the focus should be on high levels of long-term orientation to perpetuate transgenerational goals, predicated on business decisions that are future-focused, and governance structures that can enable SUS. Another area of interest based on the findings of this study, and on which regulatory authorities and indeed the government should focus, is the role of women in corporate business activities. WE' has a positive and significant effect on business sustainability [86]. Therefore, an emphasis on the country's implementation of gender non-discriminatory policies and legislation should be encouraged, especially in sectors where women are disadvantaged with respect to training, development and employment opportunities. The empowerment of women through their appointment into senior corporate management positions and roles on corporate boards could be attained through diversification of board appointments. A diversified BOD not only empowers women [20], but also plays a vital role in organization's economic sustainability, including for family-owned businesses. In this regard, the Kingdom may consider reforms to its CG codes, making the presence of female directors mandatory on corporate boards.

Finally, the finding that the positive relationship between WE and SUS is less pronounced when family culture is a moderator has implications not only for business owners, but also for the government and regulatory authorities. This reveals there are still some aspects of family culture that require review, especially regarding women's involvement in family businesses. It may not be possible to completely remove family influence on family firms, especially in the context of this study, as a result of deep-seated cultural values and other interests. Nevertheless, to ensure sustainability, the separation of business and family loyalty is important. Also family firms should engage only the most qualified family members as managers, and developing resources for the best managerial techniques and adoption of sound CG principles; among them the empowering of women by employing them in senior management positions and on corporate boards (board diversity).

Limitations

This study is not free from limitations, on which future studies can improve. First is variable measurement. Several measures (indicators) for the variables were used in this study; the use of different indicators may give different results. This is particularly the case for the WE variable, which might represent an overarching concept, and therefore any other consideration outside its interpretation in this study may raise the question of whether or not to include it in the analysis of family business. Second is the use of the selected explanatory variables in the model, as there are several other factors that influence family business sustainability, and therefore, overgeneralization of the findings should be taken with caution. Third, this study used only internal CG mechanisms. Finally, the study did not separate family businesses into public and private, to estimate the impact of the identified variables on these sectors.

Future research directions

Some of the above limitations may create opportunities for future research. First, future studies may consider the use of both internal and external CG mechanisms and other variables to build a stronger model. Second, they may consider a triangulated approach: the use of a statistical data source (historical) with insights from interviews conducted with study respondents. Third, they may consider a cross-country study, specifically for Gulf Cooperation Council countries, to isolate the relative business sustainability practices of member countries, since they share common business and cultural features. Finally, future research may also draw from other disciplines to investigate new aspects relevant to family businesses, such as crisis management (e.g. COVID-19, etc.) and its implications for family firm sustainability.

Abbreviations

AVE Average variance extracted BC Board committees

BD Board diversity
BI Board independence
BM Board meetings
BOD Board of directors
BS Board size
CC Corporate culture
CR Composite reliability

ESG Environmental and social governance

FC Family culture
IFC International Finance C

IFC International Finance Corporation
MFIs Microfinance institutions

PLS-SEM Partial least squares structural equation modelling

SDGs Sustainable Development Goals SEW Socio-emotional wealth SUS Family business sustainability UN United Nations WE Women's empowerment

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None

Author contributions

AF made the conceptualization and methodology of manuscript. RR interpreted the data regarding the survey. RR tested and validated results by using software. All authors read and approved the final manuscript.

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Data availabilit

The data that support the findings of this study are available from the corresponding author, Abdulaziz Alfalih, upon reasonable request.

Declarations

Ethics approval and consent to participate

This study was approved by the Ethics Committee of the Qassim University.

Consent for publication

All the authors voluntarily agree to participate in this research study.

Competing interests

The authors declare that they have no conflict of interest.

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References

- Adendorff C, Halkias D (2014) Leveraging ethnic entrepreneurship, culture and family dynamics to enhance good governance and sustainability in the immigrant family business. J Dev Entrepreneur 19(02):1–24
- Chiang H, He L, Yu HJ (2022) Family firm's succession and firm's sustainability. J Family Eco Issues 43(3):637–646. https://doi.org/10.1007/ s10834-021-09778-0
- 3. Rovelli P, Ferasso M, De Massis A, Kraus S (2021) Thirty years of research in family business journals: status quo and future directions. J Fam Bus Strat 100422:1–17
- Mandl I (2008) Overview of Family Business Relevant Issues, Final Report, Austrian Institute for SME Research, Vienna, http://ec.europa.eu/ enterprise/entrepreneurship/craft/family_business/family_businessen. html
- Sun J, Pellegrini MM, Dabić M (2023) Family ownership and control as drivers for environmental, social, and governance in family firms. Rev Manager Sci 18:1015–1046. https://doi.org/10.1007/s11846-023-00631-2
- Schweiger N, Matzler K, Hautz J (2023) Family businesses and strategic change: the role of family ownership. Rev Manager Sci. https://doi.org/ 10.1007/s11846-023-00703-3
- Chrisman JJ, Chua JH, Pearson AW, Barnett T (2012) Family involvement, family influence, and family-centered non-economic goals in small firms. Entrepreneur Theory Pract 36(2):267–293
- De Massis A, Kotlar J, Chua JH, Chrisman JJ (2014) Ability and willingness as sufficiency conditions for family-oriented particularistic behavior: implications for theory and empirical studies. J Small Bus Mgt 52(2):344–364
- Fendri C, Nguyen P (2019) Secrets of succession: how one family business reached the ninth generation. J Bus Strategy 40(5):1–20. https://doi.org/10.1108/jbs-08-2018-0130
- Elsbach K, Pieper T (2019) How psychological needs motivate family firm identification and identifiers: a framework and future research agenda. J Family Bus Strategy 10(3):100289

- Oudah M, Jabeen F, Dixon CJ (2018) Determinants linked to family business sustainability in the UAE: An AHP approach. Sustainability 10(1):246
- 12. Alkahtani AW (2021) Family-owned businesses in Saudi Arabia: challenges and Solutions from a Legal Perspective. Int J Contempor Magt Infor Tech 1(2):16–22
- 13. Sharma P, Chua J (2013) Asian family enterprises and family business research. Asian Pacific J Mgt 30:641–656
- Steier L, Chrisman J, Chua J (2015) Governance challenges in family businesses and business families. Entrepreneur Theory Pract 39(6):1265–2128
- Thabhiranrak T, Jermsittiparsert K (2019) Towards sustainable functioning of organization: women empowerment and corporate management culture. J Security Sustainabil 9(1):321–332
- Pradhan LR, Tripathy S (2013) Corporate and women's empowerment in Odisha. Odisha Rev LXX(5):1–106. https://www.ova.gov.in/landPRDept Repository/24032022210529
- 17. Meroño-Cerdán A (2023) Unexpected successor in family firms: opportunity or trap for women? J Family Eco Issues 44:313–324
- Campopiano G, Massis A, Rinaldi F, Sciascia S (2017) Women's involvement in family business: progress and challenges for future research. J Family Bus Strategy 8(4):200–212
- Gupta V, Levenburg N (2013) Women in family business: three generations of research. In: Smyrnios KX, Poutziouris PZ, Goel S (eds) Handbook of res on family bus, 2nd edn. Edward Elgar Publishing, Cheltenham, pp 346–367. https://doi.org/10.4337/9781848443228.00027
- Aman H, Nguyen P (2013) Does good governance matter to debtholders? Evidence from the credit ratings of Japanese firms. Res Int Bus Finance 29:14–34
- 21. Michelon G, Parbonetti A (2012) The effect of corporate governance on sustainability disclosure. J Manage Governance 16(3):477–509
- Ong T, Djajadikerta G (2018) Corporate governance and sustainability reporting in the Australian resources industry: an empirical analysis. Soc Responsib J16(1):1–14
- Adams RB, de Haan J, Terjesen S, van Ees H (2015) Board diversity: moving the field forward. Corp Govern An Inter Rev 23(2):77–82. https://doi.org/10.1111/corg.12106
- 24. Bonini S, Görner S (2011) The business of sustainability. McKinsey and Company: London. [Online] Retrieved from: https://www.mckinsey.com/capabilities/sustainability/our-insights/the-business-of-sustainability-mckinsey-global-survey-results
- Ferasso M, Beliaeva T, Kraus S, Clauss T, Ribeiro-Soriano D (2020) Circular economy business models: the state of research and avenues ahead. Bus Strategy Environ 29(8):3006–3024
- Wagner-Tsukamoto S (2018) In search of ethics: from Carroll to integrative CSR economics. Soc Responsib J 15(4):469–491
- Mohammad A (2015) Employee recruitment, selection and retention in Saudi Arabian family owned small and medium scale enterprises (SME's). Kuwait Chapt Arab J Bus Mgt Rev 4(6):30–45
- 28. Al-Ghamdi M, Rhodes M (2015) Family ownership, corporate governance and performance: evidence from Saudi Arabia. Inter J Eco Fin 7(2):78–89
- Kaslow FW (2006) Handbook of family business and family business consultation: a global perspective, 1st edn. Routledge, New Jersey
- 30. Mensching H, Kraus S, Bouncken RB (2014) Socioemotional wealth in family firm research: a literature review. J Inter Bus Eco 14(4):165–172
- Al Rawaf RA, Alfalih AA (2023) The role of governance in achieving sustainability in family-owned business: do responsible innovation and entrepreneurial culture matter? Sustainability 15:5647. https://doi.org/ 10.3390/su15075647
- Terjesen S, Sealy R, Singh V (2009) Women directors on corporate boards: a review and research agenda. Corp Govern: An Inter Rev 17(3):320–337
- Sarstedt M, Ringle C, Smith D, Reams R, Hair JF (2014) Partial least squares structural equation modeling (PLS-SEM): a useful tool for family business researchers. Family Bus Res 5(1):105–115
- Gómez-Mejía LR, Haynes KT, Núnez-Nickel M, Kathyrn JLJ, Moyano-Fuentes J (2007) Socioemotional wealth and business risks in familycontrolled firms: evidence from Spanish olive oil mills. Admt Science Quarter 52(1):106–137. https://doi.org/10.2189/asqu.52.1.106

- 35. Berrone P, Cruz C, Gomez-Mejia LR (2012) Socio-emotional wealth in family firms: theoretical dimensions, assessment approaches, and agenda for future research. Family Bus Rev 25:258–279
- Gerken M, Hulsbeck M, Ostermann T, Hack A (2022) Validating the FIBER scale to measure family firm heterogeneity – A replication study with extensions. J Family Bus Strategy. https://doi.org/10.1016/j.jfbs.2022. 100497
- 37. Zellweger TM, Astracha JH (2008) On the emotional value of owning a firm. Family Bus Rev 4:347–363
- 38. Berrone P, Cruz C, Gomez L (2010) Socio-emotional wealth and corporate responses to institutional pressures: do family-controlled firms pollute less? Admt Sci Quarter 55(1):82–113
- 39. Kuckertz A, Wagner M (2010) The influence of sustainability orientation on entrepreneurial lintentions–Investigating the role of business experience. J Bus Venture 25:524–539
- 40. Jensen MC, Meckling WH (1976) Theory of the firm: managerial behavior, agency costs and ownership structure. J Financ Econ 3(4):305–360
- Davidson R, Goodwin-Stewart J, Kent P (2005) Internal governance structures and earnings management. Acct Finance 45(2):241–267
- Milliken F, Martins L (1996) Searching for common threads: understanding the multiple effects of diversity in organizational groups. Academy Mgt Rev 21(2):402–433. https://doi.org/10.5465/amr.1996.9605060217
- 43. Daft R (2006) Organisation theory and design, 10th edn. South-Western College, New York
- Hillman AJ, Dalziel T (2003) Boards of directors and firm performance: integrating agency and resource dependence perspectives. Academy Mgt Rev 28(3):383–396
- Freeman R, Harrison J, Wicks A, Parmar BL, de Colle S (2010) Stakeholder theory: the state of the art Illustrated. Cambridge University Press, Cambridge
- El-Menawy S, El-Sayed N (2024) Corporate social responsibility marketing: a way to firm performance; an empirical study: case of Egypt.
 Future Bus J 10(20):1–25. https://doi.org/10.1186/s43093-024-00302-y
- 47. Young M, Peng M, Ahlstron D, Bruton G, Jiang Y (2006) Corporate governance in emerging economies: a review of the principal-principal perspective. J Mgt Stud 45(1):196–220
- 48. Fama EF (1980) Agency problems and the theory of the firm. J Pol Eco 88:288–307. https://doi.org/10.1086/260866
- 49. Fama E, Jensen M (1983) Separation of ownership and control. J Law Eco 26(2):301–325
- Lumpkin GT, Bacq S (2022) Family business, community embeddedness and civic wealth creation. J Family Bus Strategy 13(2):100469
- Hossain M, Mia M, Pellegrina L (2024) A systematic review of gender diversity and its impact on the performance of Microfinance Institutions. Future Bus J. https://doi.org/10.1186/s43093-023-00294-1
- Miller D, Le Breton-Miller I (2006) Family governance and firm performance: agency, stewardship, and capabilities. Family Bus Rev 19(1):73–87
- 53. Lumpkin G, Brigham K, Moss T (2010) Long-term orientation: implications for the entrepreneurial orientation and performance of family businesses. Entrepreneurship and Regional Dev 22:241–264
- Mahmood Z, Kouser R, Ali W, Ahmad Z, Salman T (2018) Does corporate governance affect sustainability disclosure? A mixed methods study. Sustainability 10(1):207
- Konrad AM, Kramer V, Erkut S (2008) The impact of three or more women on corporate boards. Organ Dyn 37(2):145–164
- Farah NH (2006) Arab women's development: how relevant are UNDP measurements? Middle East Policy 13(2):38–47
- Abu-Tapanjeh AM (2009) Corporate governance from the Islamic perspective: a comparative analysis with OECD principles. Critical Perspect Acct 20(5):556–567
- Robertson C, Al-AlSheikh S, Al-Kahtani A (2012) An analysis of perceptions of western corporate governance principles in Saudi Arabia. Int J Public Admnt 35(6):402–409
- Metcalfe BD (2011) Women, empowerment and development in Arab Gulf States: a critical appraisal of governance, culture and national human resource development (HRD) frameworks. Human Res Dev Inter 14(2):131–148
- Burgess Z, Tharenou P (2002) Women board directors: characteristics of the few. J Bus Ethics 37:39–49. https://doi.org/10.1023/A:1014726001

- Dave M (2015) Women's empowerment: women directors on corporate boards (a step towards effective corporate governance). Indian Acct Assoc Past Presid 47:182
- 62. Ferreira D (2014) Board diversity: should we trust research to inform policy. Corp Govern: An Inter Rev 23(2):108–111. https://doi.org/10. 1111/corg.12092
- Saidat Z, Silva M, Seaman C (2019) The relationship between corporate governance and financial performance: evidence from Jordanian family and non-family firms. J Family Bus Mgt 9(1):54–78
- 64. Cortes D, Botero I (2016) Corporate governance in family businesses from Latin America, Spain and Portugal: a review of literature. Academia Revista Latinoamerica de Administracion 29(3):231–254
- Liao L, Luo L, Tang Q (2015) Gender diversity, board independence, environmental committee and greenhouse gas disclosure. The British Acct Rev 47(4):409–424
- Kang YS, Kim BY (2012) Ownership structure and firm performance: evidence from the Chinese corporate reform. China Eco Rev 23(2):471–481
- Fan JP, Wei KJ, Xu X (2011) Corporate finance and governance in emerging markets: a selective review and an agenda for future research. J Corp Finance 17(2):207–214
- Chen JC, Roberts RW (2010) Toward a core Coherent understanding of the organisation—society relationship: a theoretical consideration for social and environmental accounting research. J Bus Ethics 97:651–665. https://doi.org/10.1007/s10551-010-0531-0
- Ararat M, Aksu M, Cetin A (2015) How board diversity affects firm performance in emerging markets: evidence on channels in controlled firms. Corp govern: An intern Rev 23(2):83–103. https://doi.org/10.1111/ corg.12103
- Van Der Walt N, Ingle C, Shergill GS, Townsend A (2006) Board configuration: are diverse boards better boards? Corpor Governance: The Inter
 J Bus Society 6(2):129–147. https://doi.org/10.1108/147207006106551
 41
- Li X, Li Y (2020) Female independent directors and financial irregularities in Chinese listed firms: from the perspective of audit committee chairpersons. Finance Res Lett 32:101320. https://doi.org/10.1016/j.frl. 2019.101320
- Hartarska V, Nadolnyak D, Mersland R (2014) Are women better bankers to the poor? Evidence from rural microfinance institutions. Am J Agric Eco 96(5):1291–1306
- 73. Adams R, Ferreira D (2009) Women in the boardroom and their impact on governance and performance. J Financial Eco 94(2):291–309
- Zhang JQ, Zhu H, Ding H (2013) Board composition and corporate social responsibility: an empirical investigation in the post Sarbanes-Oxley era. J Bus Ethics 114:381–392
- Carter DA, D'Souza F, Simkins BJ, Simpson WG (2010) The gender and ethnic diversity of US boards and board committees and firm financial performance. Corp Govern: An Inter Rev 18(5):396–414. https://doi.org/ 10.1111/j.1467-8683.2010.00809.x
- Nekhili M, Gull AA, Chtioui T, Radhouane I (2020) Gender-diverse boards and audit fees: what difference does gender quota legislation make? J Bus Finance Acct 47(1–2):52–99. https://doi.org/10.1111/jbfa.12409
- Ali A, Ali R, Rehman R, Naseem MA, Ahmad MI (2022) Female presence in corporate governance, firm performance, and the moderating role of family ownership. Econ Res-Ekonomskalstraživanja 35(1):929–948
- 78. Gul FA, Srinidhi B, Ng AC (2011) Does board gender diversity improve the informativeness of stock prices? J Act Eco 51(3):314–338
- Chant S (2016) Women, girls and world poverty: empowerment, equality or essentialism? Inter Deve Planning Rev 38(1):1–25
- 80. Nhamo G, Nhamo S, Nhemachena C (2018) What gets measured gets done! Towards an Afro-barometer for tracking progress in achieving Sustainable Development Goal 5. Agenda 32(1):60–75
- 81. International Finance Corporation (2019) Women on boards in Nigeria. Inter Finance Corp report, 1–28. Retrieved 24/4/2023 from https://www.ifc.org/wps/wcm/connect/7f01fe3c-21e2-4653-98f6-b82e0f8833 cb/Women on Boards in Nigeria.pdf
- 82. Nchofoung T, Asongu S, Tchamyou V (2021) The political implication of women and industrialisation in Africa. MPRA Paper No. 111555
- Achuo E, Asongu S, Tchamyou V (2022) Women empowerment and environmental sustainability in Africa. ASPROWORDA Working Paper 003/22. Retrieved from https://ssrn.com/abstract=4000269. doi: https://doi.org/10.2139/ssrn.4000269

- 84. Ergas C, York R (2012) Women's status and carbon dioxide emissions: a quantitative cross-national analysis. Social Sci Res 41(4):965–976
- 85. Okolo-Obasi EN, Uduji JI, Asongu SA (2020) Strengthening women's participation in the traditional enterprises of sub-Saharan Africa: The role of corporate social responsibility initiatives in Niger delta, Nigeria. African Dev Rev 32:78–90
- Langnel Z, Amegavi GB, Agomor KS (2021) Environmental degradation and female economic inclusion in sub-Saharan Africa: effort towards sustainable development goal 5. Deve Southern Africa 38(5):717–730
- Daily CM, Dalton DR (2003) Women in the boardroom: a business imperative. J Bus Strategy 24(5):205–209. https://doi.org/10.1108/jbs. 2003.28824eaf.002
- 88. Bernardi RA, Bosco SM, Vassill KM (2006) Does female representation on boards of directors associate with Fortune's "100 best companies to work for" list? Bus Soci 45(2):235–248
- 89. Martin LM, Warren-Smith I, Scott JM, Roper S (2008) Boards of directors and gender diversity in UK companies. Gender Mgt 23(3):194–208
- 90. Vieira ES (2018) Board of directors' characteristics and performance in family firms and under the crisis. Corpor Govern: Inter J Bus Soci 18(1):119–142
- 91. Duflo E (2012) Women's empowerment and economic development. J Eco Lit 50(4):1051–1079
- Lee PM, James EH (2007) She'-E-OS: gender effects and investor reactions to the announcements of top executive appointments. Strat Mgt J 28(3):227–241. https://doi.org/10.1002/smj.575
- Certo ST (2003) Influencing initial public offering investors with prestige: signalling with board structures. Acad Mgt Rev 28(3):432–446. https://doi.org/10.5465/AMR.2003.10196754
- 94. Khan MT, Anwar S, Sarkodie S, Yaseen MR, Nadeem AM, Ali Q (2022) Comprehensive disaster resilience index: pathway towards riskinformed sustainable development. J Cleaner Prod 366:132937
- Olayide OE, Obisesan D, Nitturkar H, Adesida A, Alegieunu B, Obisesan O (2021) Cassava seed preneurship, determinants of varietal adoption, profitability, and women's empowerment in Nigeria. Resour, Environ Sustainabil 6:10004. https://doi.org/10.1016/j.resenv.2021.100041
- 96. Liu Y, Zhu Q, Seuring S (2020) Recent technologies in operations and supply chains: Implications for sustainability. Inter J Prod Eco 229-107889
- Pereira-Moliner J, Font X, Tarı JJ, Molina-Azorin JF, Lopez-Gamero MD, Pertusa-Ortega EM (2015) The holy grail: environmental management, competitive advantage and business performance in the Spanish hotel industry. Inter J Contemp Hospit Mgt 27(5):714–738
- Wallach EJ (1983) Organizations: the cultural match. Training Dev J 37(2):29–36
- 99. Bierema LL, Cseh M (2003) Evaluating AHRD research using a feminist research framework. Human Res Dev Quarter 14(1):5–26
- 100. Ghasemi M, Badsar M, Falahati L, Karamidehkordi E (2021) The mediation effect of rural women's empowerment between social factors and environment conservation (combination of empowerment and ecofeminist theories). Environ, Dev Sustainab 23(9):13755–13777
- Ferreira JJ, Fernandes CI, Schiavone F, Mahto RV (2021) Sustainability in family business—a bibliometric study and a research agenda. Technol Forecast Soc Chang 173:121077
- Arsyad SK (2020) Patriarchal culture: A Study of the lampung muslim women's movements in women's empowerment. Inter J Special Edu 37(3):9776–9788
- Barros-Contreras I, Palma-Ruiz JM, Torres-Toukoumidis A (2021) Organizational capabilities for family firm sustainability: the role of knowledge accumulation and family essence. Sustainability 13(10):5607
- 104. Bhat MA, Shah J (2013) The influence of family culture on performance of family business: an empirical study. Inter J Commerce, Bus Mgt 2(1):1–9
- Norenzayan A, Dar-Nimrod I, Hansen IG, Proulx T (2009) Mortality salience and religion: divergent effects on the defense of cultural worldviews for the religious and the non-religious. Eur J Soc Psychol 39(1):101–113
- Wilderom CP, House RJ, Hanges PJ, Ruiz-Quintanilla SA, Dorfman PW, Javidan M, Dickson M (1999) Cultural influences on leadership and organizations: Project GLOBE. Adv Global Leader 1:171–233
- Robbins SP (2005) Organizational behavior, 11th edn. Prentice Hall, Upper Saddle River, NJ

- Chrisman JJ, Chua JH, Pearson AW, Barnett T (2012) Family involvement, family influence, and family-centered non-economic goals in small firms. Entrep Theory Pract 36(2):267–293
- Dyer WG Jr (1986) Cultural change in family firms: anticipating and managing business and family transitions, 1st edn. San Francisco, Jossey-Bass
- Jacob S (2019) Do corporate governance impact firm Value? An Indian Perspective. Retrieved from https://doi.org/10.2139/ssrn.3491551
- Dettori A, Floris M, Dessì C (2020) Sustainable development in family firms in Yang, P. (Ed), Cases on Green Energy and Sustainable Development, IGI Global: Hersey, PA, USA 230–252
- 112. Lumpkin GT, Brigham KH (2011) Long-term orientation and intertemporal choice in familyfirms. Entrep Theory Pract 35(6):1179–1197
- 113. Jaskiewicz P, Combs J, Rau S (2015) Entrepreneurial legacy: toward a theory of how some family firms nurture transgenerational entrepreneurship. J of Bus Venturing 30(1):29–49
- 114. Buchanan D, Huczynski A (2004) Organizational behavior: an introductory text, 5th edn. Prentice Hall, Essex
- Jung D, Wu A, Chow C (2008) Towards understanding the direct and indirect effects of CEOs' transformational leadership on firm innovation. The Leadership Quarter 19:582–594
- Brooks G, Wallace J (2006) A discursive examination of the nature, determinants and impact of organisational commitment. Asia Pacific J Human Res 44(2):222–239
- Denison DR (1990) Corporate culture and organizational effectiveness,
 1st edn. Wiley, New York
- Hadj TB (2020) Effects of corporate social responsibility towards stakeholders and environmental management on responsible innovation and competitiveness. J Cleaner Prod 250:119–137. https://doi.org/10. 1016/j.jclepro.2019.119490
- 119. Manning B, Braam G, Reimsbach D (2019) Corporate governance and sustainable business conduct—effects of board monitoring effectiveness and stakeholder engagement on corporate sustainability performance and disclosure choices. Corp Social Responsib and Environ Mgt 26(2):351–366. https://doi.org/10.1002/csr.1687
- Crifo P, Escrig-Olmedo E, Mottis N (2019) Corporate governance as a key driver of corporate sustainability in France: the role of board members and investor relations. J Bus Ethics 159(4):1127–1146. https://doi.org/10. 1007/s10551-018-3866-6
- Achim MV, Văidean VL, Sabau Al, Safta IL (2022) The impact of the quality of corporate governance on sustainable development: an analysis based on development level. Eco Res-Ekonomska Istraživanja 8:1–30. https://doi.org/10.1080/1331677X.2022.2080745
- Oltmann M (2016) Qualitative interviews: a methodological discussion of the interviewer and respondent contexts. Forum Qualitative Sozialforschung/Forum: Qualitative Soc Res 17(2):1–16. https://doi.org/10.17169/fqs-17.2.2551
- 123. Rigdon EE (2012) Rethinking partial least squares path modeling: in praise of simple methods. Long Range Plan 45(5/6):341–358
- Ringle CM, Sarstedt M, Straub DW (2012) A critical look at the use of PLS-SEM. MIS Quarter 36(1):iii–xiv
- Ringle CM, Wende S, Will A (2005) SmartPLS 2.0. University of Hamburg: Hamburg, Germany. Retrieved from http://www.smartpls.com
- Hair JF Jr, Sarstedt M, Hopkins L, Kuppelwieser V (2014) Partial least squares structural equation modelling (PLS-SEM): an emerging tool in business research. European Bus Rev 26(2):106–121. https://doi.org/10. 1108/EBR-10-2013-0128
- 127. Nitzl C (2010) Eine anwenderorientierte Einführung in Partial Least Square (PLS)-Methode (A User-Oriented Introduction to Partial Least Squares (PLS) Method). Available at SSRN: https://ssrn.com/abstract=2097324 or https://doi.org/10.2139/ssrn.2097324
- Hair JF, Sarstedt M, Ringle CM, Mena JA (2012) An assessment of the use of partial least squares structural equation modeling in marketing research. J Acad Mark Sci 40(3):414–433
- Hair J, Hollingsworth CL, Randolph AB, Chong AY (2017) An updated and expanded assessment of PLS-SEM in information systems research. Ind Mgt Data Syst 117:442–458
- Cohen J (2013) Statistical power analysis for the behavioral sciences,
 2nd edn. Routledge, New York, pp 52–152

- Westman L, Moores E, Burch SL (2021) Bridging the governance divide: the role of SMEs in urban sustainability interventions. Cities 108:1029– 1047. https://doi.org/10.1016/j.cities.2020.102944
- Saudi Gazette (2016) Full text of Saudi Arabia's Vision 2030. Al Arabiya English. Retrieved from https://english.alarabiya.net/en/perspective/ features/2016/04/26/Full-text-of-Saudi-Arabia-s-Vision-2030.html
- 133. Saudi National Portal. (2021) Sustainable Development Goals and the Saudi Efforts to Achieve Them. *United National Platform* Retrieved from: https://www.my.gov.sa/wps/portal/snp/content/SDGPortal
- Skaf Y, El Abiad Z, El Chaarani H, El Nemar S, Vrontis D (2024) Exploring the influence of gender diversity and women's empowerment on family entrepreneurship performance: the moderating impact of firm characteristic. J Asia Bus Studies 18(2):318–339
- Hays-Thomas R (2004) Why now? The contemporary focus on managing diversity in the psychology and management of workplace diversity. Edited by Margaret S. Stockdale and Faye J. Crosby Blackwell: Malden, Mass
- El-Chaarani H, Abraham R, Skaf Y (2022) The impact of corporate governance on the financial performance of the banking sector in the MENA (MiddleEastern and North African) Region: an immunity test of banks for COVID-19. J Risk Fin Mgt 15(2):82. https://doi.org/10.3390/ jrfm15020082

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