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The influence of ownership structure on the extent of CSR reporting: An emerging market study

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Abstract
To examine how different ownership structures, varying from diverse ownership bases to narrow ownership bases, influence the extent of corporate social responsibility (CSR) reporting by companies in emerging market. The motivation for this study is the reported inconsistent results for this association in developing countries and the lack of research in emerging markets. Eight hundred observations of 80 nonfinancial sector listed companies in the Amman Stock Exchange for the period 2006 to 2015 were used for a content analysis to assess the extent of CSR reporting. Ordinary least square multiple regression analysis was undertaken to examine the association between five different ownership structures and their extent of CSR reporting. The results reveal three separate associations between the types of ownership and the extent of CSR reporting. First, the two types of ownership (foreign and government) have a significant and positive influence on the extent of CSR reporting. Second, another two types of ownership (Family and managerial) have a significantly negative association. Finally, institutional ownership has an insignificant and negligible influence on the extent of CSR reporting. These findings provide

insights into how ownership structure influences the CSR reporting extent by emerging market companies such as Jordan. These findings suggest that policy makers, regulatory bodies, companies, and investors should increase their awareness about how different concentration of company ownership influences the extent companies voluntarily disclose CSR reporting. The evidence adds to the limited body of knowledge about different ownership groups' influence on the extent of CSR reporting in a developing country because few empirical studies have undertaken such a comprehensive analysis of this association.

KEYWORDS

corporate social responsibility reporting, developing country, Jordan, legitimacy theory, ownership structure

1 | INTRODUCTION

Moscardo et al. (2013) have identified economic, environmental, social, and governance performance as pillars of corporate social responsibility that underpin business sustainability. Following this framework, it is necessary to consider, prudently, how the governance components influence corporate social reporting practices. In particular, according to Oh et al. (2016), the presence of strong corporate governance practices is needed to enable confidence and trust building between the company and its stakeholder groups and society as whole. Therefore, they argue that corporate social responsibility (CSR) and corporate governance reporting are important because the existence of robust corporate governance practices is essential for economic growth and building investors' confidence (OECD, 2004).

Corporate governance and CSR reporting blending have its basis in ethical norms and accountability issues, which has led to some companies developing new constitutions (Sharif & Rashid, 2014). The aim of corporate governance is to improve companies' best practices, with all stakeholder groups, through the provision of mechanisms, processes, and practices (Jordan Securities Commission, 2009; OECD, 2004). CSR reporting is a mechanism for companies to provide information to different stakeholder groups about their social activities and also identify public social priorities (Guthrie & Parker, 1990). For corporate governance structures to be effective, they should not only enable the co-ordination of all stakeholder groups' interest but also enhance CSR reporting disclosure's integrity, quality, and reliability (Alnaser et al., 2014; Zaman et al., 2021).

A key corporate governance mechanism is the company's ownership structure because it has been found to affect both the quality of reporting practices and the extent of disclosure (Eng & Mak, 2003; Kiliç et al., 2015). However, a company's ownership structure may increase legitimacy gaps because varying ownership types may assert different influences on the decisions, strategies, policies as well as different extents of disclosure (Haniffa & Cooke, 2005). Additionally, the company's ownership structure has been argued to be an influence on the extent of CSR engagement (Khan et al., 2013; Oh et al., 2011). Therefore, the extent of CSR disclosures varies among companies and can be influenced by both ownership group's demands and public expectations (Alshirah et al., 2021; Ghazali, 2007; Oh et al., 2011). Zadeh and Eskandari (2012) identified literature that has provided evidence of differencing or inconsistent disclosure levels among and between companies of different ownership types in developing countries (UK, Canada, Germany, Japan, The Netherlands, and Italy) compared with developing countries (Malaysia and Portugal). They recommend increasing the number of studies on risk disclosure in more countries. The paucity of investigation in emerging market has motivated the undertaking of the current study.

Therefore, the aim of this study is to explore how ownership structure effects the extent of CSR reporting in Jordanian public listed companies, which is an emerging market. To test the effect of different ownership groups on the extent of CSR reporting in a developing country context, five categories ownership types have been identified from the literature: family, managerial, institutional, foreign, and government. Eight hundred observations of 80 nonfinancial sector listed companies in the Amman Stock Exchange (ASE) for the period 2006 to 2015 were used for a content analysis to assess the extent of CSR reporting. Ordinary least square (OLS) multiple regression analysis was undertaken to examine the association between five different ownership structures and their extent of CSR reporting. Jordan provides a suitable setting for this study for several reasons.

First, Jordan is located in the Middle East and is categorized as a civil law country where regulatory, economic and cultural environments vary from developed or common law countries (Barakat et al., 2015; Ibrahim et al., 2016). Second, Jordan, when compared with surrounding Arab countries in the Middle East, has been more politically stable for decades (Barakat et al., 2015; Ismail & Ibrahim, 2008; Naser et al., 2002). Third, the instability of Arabic countries, such as the Syria and Iraq crises, has affected the Jordanian economy and its limited resources (Haddad et al., 2017). Fourth, Jordanian publicly listed companies' ownership structure frequently consists of a high concentration of managerial and institutional ownership, which have, generally, a dominance of family members on the board of directors (Al-Najjar, 2010; Haddad et al., 2015; Ibrahim et al., 2016; Sartawi et al., 2014; Zeitun, 2009). This ownership type has played a significant role in molding the structure of Jordanian public listed companies (Zeitun, 2009).). Haddad et al. (2015) reported that an average of 20% of companies are controlled by family members on the board of directors. Sartawi et al. (2014) found that managerial ownership and institutional ownership control, respectively, an average of 53% and 45% of Jordanian public listed companies. Thus, these shareholders have significant power over the companies' extent of CSR reporting (Al-Najjar, 2010; Barakat et al., 2015; Haddad et al., 2015). Conversely, foreign ownership and government ownership is less common in Jordanian listed companies with an average of 14.5% and 5.34%, respectively (Al-Hamadeen & Badran, 2014; Ismail & Ibrahim, 2008). This demonstrates that there is a narrow spread of the ownership structures in Jordan when compared with countries where company ownership is normally widely dispersed. Therefore, it is important to understand how this narrow spread of the ownership affects the extent of CSR reporting.

Finally, legislation issued in July 2008 creating a new Jordanian Corporate Governance Code (JCGC) (Jordan Securities Commission, 2009). This required public listed companies to include social and environmental information in their annual reports and took effect from January 1, 2009 (Shanikat & Abbadi, 2011). This code adopted a "comply or explain the reason for noncompliance" approach, which was not previously required by the environmental regulations in Jordan (Ibrahim et al., 2016). Therefore, this study explores whether there is any evidence that the ownership type has an influence on the extent of CSR reporting, despite the existence of this legislative requirement. This association has received little attention from previous studies in developing countries (Ahmed Haji, 2013; Habbash, 2016; Rashid & Lodh, 2008), particularly in Jordan where it is not yet been explored. Consequently, this study contributes to the CSR reporting literature within the corporate governance legislative environment in a developing country context.

The balance of this paper is organized as follows. Section 2 provides an overview of CSR reporting practices in Jordan. Section 3 summaries the theoretical framework. Section 4 comprises of a review of the literature and discusses this literature to develop the five hypotheses. Section 5 furnishes an explanation of the study design and methodology. The study's empirical findings are discussed in Section 6. The conclusion discussion and future research directions are offered in the Section 7.

2 | CSR REPORTING PRACTICES IN JORDAN

Prior studies has found that the extent of CSR reporting varies between Jordanian public listed companies. This extent ranged from 13% (Suwaidan et al., 2004) to 30% (Ibrahim et al., 2016), while studies have reported 22.68% (Ismail & Ibrahim, 2008) and 19% (Al-Hamadeen & Badran, 2014). The Jordanian government has required CSR reporting through the enactment of legislation and regulations (Barakat et al., 2015). Earlier regulation enacted the Environmental Protection Law in 1995 and the Securities Commission Law No.1 (1998) to ensure compliance of companies with environmental control standards by requiring companies to disclose social and environmental issues in their annual reports (Al-Khadash, 2003; Suwaidan et al., 2004). The Environmental Protection Law was amended in 2006 by the Jordanian government for the purpose of enhancing compliance. These laws require companies' activities to be undertaken in a manner which protects the environment (Haddad et al., 2017).

Instructions and guidelines for preparing annual reports, issuing company disclosures, applying accounting practices, and adhering to auditing standards were issued in 2004 by the Jordan Securities Commission (JSC). Article (5) of the Disclosure and Transparency chapter provides a clear statement that *"The Company shall disclose its policy regarding the local community and the environment"*; that is, ASE publicly listed companies must disclose in their annual reports from 2009, all the services they provide to the local community as well as disclose the company's role in the protection of the environment. Any noncompliance should be detailed clearly in companies' annual report (Ibrahim et al., 2016). However, there was no requirement for companies to explain the reason for noncompliance in their annual report. The JSC's move to require explicitly compliance or explanation was intended to achieve full compliance gradually (Jordan Securities Commission, 2009). Consequently, in subsequent years, the expectation is that companies will provide clear reasons for noncompliance in their annual report. Therefore, CSR reporting in Jordan remains a voluntary disclosure for companies that they may employ as a means of legitimizing their presence and operational activities.

3 | THEORETICAL FRAMEWORK

Legitimacy theory derives from a "social contract" notion which acknowledges that company activities should meet society norms and values (Gray et al., 1996). Suchman (1995, p. 574) described legitimacy as “a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions.”. When a company's actions do not satisfy societal expectations, then the contract is breached (Mullerat, 2010) and their legitimacy questioned (Deegan et al., 2002). Lindblom (1994) argued that companies may adopt a strategy to influence external stakeholders' perceptions and the general public's acceptance of their legitimacy. CSR reporting may be used to create of a positive image of a company's operations (Deegan et al., 2002; Gray et al., 1996).

The link between legitimacy theory and CSR reporting is amplified when there is a change in policy or regulations which affects public expectations (Azizul Islam & Deegan, 2008; Patten, 1992). The change to the JCGC was an event which required Jordanian companies to manage effectively their response in order to be seen as meeting society's expectations. Accordingly, companies pursuing a high level of legitimacy may need to disclose more CSR information in their annual or CSR reports (Deegan et al., 2002; Deegan & Gordon, 1996; Gray et al., 1996; Patten, 1992). Additionally, Haniffa and Cooke (2005) suggested that diverse ownership may give rise to a legitimacy expectation gap, because a company's ownership structure may influence the type, and extent of reporting. Therefore, legitimacy theory is used to explain the different ownership groups' influences on the extent of variation of CSR reporting in Jordanian publicly listed companies.

4 | LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

There has been a lack of corporate governance and CSR reporting research in developing countries (Abdullah et al., 2011; Darus et al., 2009; Habbash, 2016; Haniffa & Cooke, 2002; Muttakin & Khan, 2014; Muttakin & Subramaniam, 2015), and previous studies in developing countries such as Malaysia, Bangladesh, and Saudi Arabia have found mixed results when considered the influence of different ownership groups on the levels of reporting. For example; studies by Said et al. (2009) and Ahmed Haji (2013) on the influence of managerial ownership on levels of CSR reporting found an insignificantly negative relationship, while other studies revealed a significant negative association with the extent of CSR reporting (Ahmad et al., 2017b; Ghazali, 2007; Isa & Muhammad, 2016; Khan et al., 2013; Oh et al., 2011). Naser et al. (2006) and Abdullah et al. (2011) found government ownership to have an insignificant positive relationship, whereas Ahmed Haji (2013) reported a negatively significant relationship. Conversely, other studies revealed a significant positive relationship between government ownership and the extent of CSR reporting (Darus et al., 2009; Ghazali, 2007; Habbash, 2016; Muttakin & Subramaniam, 2015; Said et al., 2009).

Similarly, studies found inconsistent results for foreign ownership's influence on levels of CSR reporting. While research has found a positive but insignificant influence of foreign ownership on levels of CSR reporting (Darus et al., 2009; Said et al., 2009), other studies revealed a positive significant association with the extent of CSR reporting (Haniffa & Cooke, 2005; Khan et al., 2013; Muttakin & Subramaniam, 2015; Naser et al., 2006; Oh et al., 2011). Similarly, research into the effect of family ownership and the extent of CSR reporting research has provided mixed results. Habbash (2016) found that the level of family ownership has positive and significant influence on the extent of CSR reporting, while other studies found that the level of family ownership has a significantly inverse association with the extent of CSR reporting

(Abdullah et al., 2011; Darus et al., 2009; Muttakin & Khan, 2014). Institutional ownership provides similar uncertainty. This has been found to have a negative insignificant association with the extent of CSR reporting (Majeed et al., 2015; Oh et al., 2011), while other studies revealed a positive and significant relationship with the extent of CSR reporting (Habbash, 2016; Naser et al., 2006). Accordingly, the inconsistency of theses prior results provides no guidance about how ownership structure influences CSR reporting, including in Jordan (Al-Hamadeen & Badran, 2014; Ismail & Ibrahim, 2008; Suwaidan et al., 2004).

In the Jordanian context, there is a paucity of consistent results on the influence of different ownership groups on CSR reporting. Prior studies have considered only the effect of one type of ownership at a time and consequently provided mixed results. Suwaidan et al. (2004) revealed a significant positive relationship between ownership groups and CSR reporting. Conversely, Ismail and Ibrahim (2008) found a significant negative association between government ownership and the extent of CSR reporting. Al-Hamadeen and Badran (2014) found an insignificant positive relationship between foreign ownership and the extent of CSR reporting. The impact of institutional ownership, family ownership, and managerial ownership on CSR reporting extent has not yet been examined in the Jordanian context. Therefore, prior findings provide limited consensus as to the influence of ownership types on CSR reporting extent in the Jordanian context.

4.1 | Family ownership and CSR reporting

High ownership concentration and family dominance on the board of directors is present in a high percentage of companies in developing countries (Ahmed Haji, 2013; Habbash, 2016; Haddad et al., 2015; Ho & Wong, 2001; Khan et al., 2013). Consequently, there is generally a low requirement or expectation from these shareholders for voluntary reporting and disclosing CSR information (Haniffa & Cooke, 2002). The reason being that a substantive proportion of shareholders and of the board are members of the controlling family, which have sufficient access to the company's information (Adhikari & Tondkar, 1992; Darus et al., 2009; Chau & Gray, 2010; Biswas et al., 2022) and do not need to garner information via annual reports.

Past studies have reported mixed results regarding the influence of family ownership on the extent of CSR reporting in developing countries (Abdullah et al., 2011; Darus et al., 2009; Habbash, 2016; Muttakin & Khan, 2014; Muttakin & Subramaniam, 2015). For example; Habbash (2016) revealed that family ownership is positively associated with CSR reporting. In contrast, many prior studies found a negative relationship exists between family ownership and CSR disclosures. They reason that high family ownership companies have incentives to decrease investment costs in CSR by decreasing the extent of CSR reporting thus maximizing shareholders' wealth (Abdullah et al., 2011; Darus et al., 2009). Findings by Muttakin and Khan (2014) support this reasoning because they report that concentrated family ownership companies disclose less CSR activities information compared with companies with wider ownership.

Legitimacy theory predicts that companies' CSR disclosures should increase where there has been a perceived loss of legitimacy. However, a legitimacy gap is less likely to emerge where there are concentrated family ownership and family dominance on the board of directors. The reasoning being that the perceived loss of legitimacy is minimal, and the incentive to provide voluntary CSR information is relatively low compared with companies with broarder ownership (Haniffa & Cooke, 2002; Muttakin & Khan, 2014). This type of company has less concern about its legitimacy and public expectations in regard to CSR voluntary reporting (Muttakin & Khan, 2014). This discussion leads to the following hypothesis:

H1. There is a negative relationship between the level of family ownership and the extent of CSR reporting.

4.2 | Managerial ownership and CSR reporting

Where a significant percentage of companies' shares are owned by managers and/or directors, their own interests might influence the managerial decision-making process, prioritizing policies that benefit themselves (Chang, 2003; Ghazali, 2007). Managers may reduce investment in CSR, to improve their own wealth (Oh et al., 2011). The majority of prior studies have discovered a negative significant association between managerial ownership and the extent of CSR reporting in developing countries (Ahmad et al., 2017b; Ghazali, 2007; Isa & Muhammad, 2016; Khan et al., 2013; Oh et al., 2011; Said et al., 2009). However, a few studies found this association insignificant in developing countries. (Ahmed Haji, 2013; Said et al., 2009).

It is common in developing countries for companies to have a high concentration of managerial ownership (Khan et al., 2013). In this type of company ownership structure, managers have dominance over the company's decisions and reporting policy, which embraces the extent of reporting CSR information (Abdullah et al., 2011; Ho & Wong, 2001). Companies with this type of ownership in developing countries may be less concerned about reducing the legitimacy gap by reporting voluntary CSR information compared with companies operating in developed countries where there may be more diverse share ownership. Consequently, companies with high concentration of managerial ownership are more likely to provide a lower extent of voluntary CSR disclosures (Eng & Mak, 2003; Ghazali, 2007), and therefore, the following hypothesis is developed:

H2. There is a negative relationship between a high concentration of managerial ownership and the extent of CSR reporting.

4.3 | Institutional ownership and CSR reporting

Oh et al. (2011) distinguished between securities firms, banks, pension funds, and insurance companies as four types of institutional investors. Institutional investors often have a substantial role in the monitoring of companies' performance and therefore contribute to companies' motivations for higher levels of CSR disclosures (Haniffa & Cooke, 2002). Therefore, companies with a significant number of institutional investors may be expected to respond proactively to the corporate governance code and disclose more CSR information (Habbash, 2016; Naser et al., 2006).

There is conflicting evidence from the extant literature in relation to institutional investors and CSR reporting. First, Habbash (2016) findings support that there is no significant associate between institutional investors and the extent of CSR reporting. However, other studies have contrary evidence, indicating that a positive association exists between institutional ownership and the extent of CSR disclosures (Majeed et al., 2015; Oh et al., 2011). Majeed et al. (2015) results support a preference by institutional investors to invest in good CSR performing companies. Therefore, companies with institutional ownership may be encouraged to accentuate their CSR strategy and reveal additional CSR information to reduce any perceived or apparent legitimacy gap. This argument is supported by Oh et al. (2011) who found that companies, characterized by long-term institutional investor ownership, are inclined to provide more CSR activities information and thus increase the related disclosures.

The motivation for this higher disclosure may be posited by legitimacy theory where the purpose is to enhance the public's perception about the companies' legitimacy (Deegan et al., 2002). Therefore, the following hypothesis has been developed from the provided discussion:

> **H3.** There is a positive association between the level of institutional ownership and the extent of CSR reporting.

4.4 | Foreign ownership and CSR reporting

According to Ghazali (2007), prior studies have found that companies with foreign ownership may be more transparent to the public. The motivation for this higher extent of CSR disclosure by companies with foreign ownership was identified in previous research findings as being due to increased scrutiny in the host country (Ghazali, 2007). Past research has found that companies having foreign shareowners reflect shareholders' confidence in the companies and indicate a higher extent of CSR reporting (Oh et al., 2011). Such companies therefore are expected to participate in more CSR activities and disclose more CSR information in an attempt to build trust and confidence with its stakeholder groups (Khan et al., 2013). That is, such foreign ownership companies' higher levels of CSR information disclosure may be a strategy to legitimize their existence (Ghazali, 2007; Muttakin & Subramaniam, 2015; Oh et al., 2011).

Prior findings support this reasoning. For example, results support more information disclosure in their annual reports by companies with a significant percentage of their shares held by foreign owners (Haniffa & Cooke, 2005; Khan et al., 2013; Muttakin & Subramaniam, 2015; Oh et al., 2011). From a legitimacy theory viewpoint, increasing the extent and the quality of the CSR information can be seen as a proactive strategy to attract more foreign capital (Haniffa & Cooke, 2002; Muttakin & Subramaniam, 2015).

Contrary to these findings, there are prior studies that have reported inconsistent results. An insignificant relationship has been reported between foreign ownership and CSR reporting by several authors (Al-Hamadeen & Badran, 2014; Darus et al., 2009; Said et al., 2009). The mixed results and paucity of studies noted in the preceding discussion leads to the following hypothesis:

> **H4.** There is a positive relationship between the level of foreign ownership and the extent of CSR reporting.

4.5 | Government ownership and CSR reporting

Where a high percentage of government owned shares occurs in companies, there is an incentive for such companies to demonstrate good corporate governance practices because they are likely to be highly conscious of regulations issued by their shareholders. Hence, companies with government ownership may display a propensity to release a higher extent of CSR reporting to meet accountability requirements and to create trust with its stakeholders (Habbash, 2016). Said et al. (2009) and Habbash (2016) provided a discussion about the importance of government ownership. They argue that a substantial corporate governance process should help establish the extent a company complies with regulation requirements and accounting standards. Hence, additional voluntary CSR activities and disclosures are more likely to occur with this type of company ownership compared with other types of ownership.

However, mixed results have been reported by earlier studies examining government ownership's impact on CSR reporting in developing countries. First, Ismail and Ibrahim (2008) and Ahmed Haji (2013) found the association between government ownership and CSR reporting to be significant and negative; second, Abdullah et al. (2011) found it to be insignificant. Third, other studies of the relationships between government ownership and the extent and quantity of CSR reporting showed significant and positive results (Darus et al., 2009; Ghazali, 2007; Habbash, 2016; Muttakin & Subramaniam, 2015; Said et al., 2009).

Ghazali (2007) argued, from an ethical stakeholder branch theoretical perspective, that companies with government ownership are owned, not only by government but also by a wider range of stakeholders, including the general public. Therefore, this type of company is expected to engage in more CSR activities and provide related disclosures to enhance the public perception about their legitimacy (Ahmed Haji, 2013). This discussion supports the development of the following hypothesis:

> **H5.** There is a positive relationship between government ownership and the extent of CSR reporting.

5 | RESEARCH METHODOLOGY

In this section, the discussion will explain the collection process, the measurement of variables, and the models used for this study.

5.1 | Data collection

Data for this study were collected from all nonfinancial shareholder companies that are listed on the ASE. Financial institutions within four industries (banking, insurance, diversified financial services, and real estate) were omitted for two reasons highlighted by prior studies (Abed et al., 2012; Ahmed Haji, 2013; Ghazali, 2007; Goodwin-Stewart & Kent, 2006; Haddad et al., 2015; Haniffa & Cooke, 2005; Ho & Taylor, 2013). First, the applications of accounting policies are significantly different and in contrast to nonfinancial companies. Second, the sets of instructions and rules of disclosure requirements are distinguished from nonfinancial companies. Companies also eliminated from the sample were either not listed companies or suspended, during the period of the study. Finally, companies were eliminated where annual reports were unobtainable from the ASE website. Eighty companies met the research selection criteria, and the process of identifying this sample is shown in Table 1.

Specific data (including ownership variables, company characteristics, governance factors, and CSR information) were gathered from the sample companies' annual reports on the ASE website for the 2006–2015 period. The time period for the data collection started in 2006 because prior to 2006, annual reports were not available on the ASE website. The year, 2015 was selected as the end date because it was the most recent data available at the time of the study. The study collected data from the companies' annual reports because it is considered to

TABLE 1 Study population

Study population summary	No. of ASE listed companies
Total number of ASE-listed companies as on December 31, 2015	228
Lees: financial companies	(111)
Less: companies which were not listed for entire study period	(23)
Less: companies with unavailability of annual reports	(11)
Less: suspended companies during the study period	(3)
Total number of nonfinancial companies in this study	**80**

Note: The same database used by other recent studies by these author(s); Table 3: Al Fadli et al. (2020), Table 1: Al Fadli et al. (2019), and Table 2: Al Fadli (2020).
Abbreviation: ASE, Amman Stock Exchange.

be the most dependable source for financial and nonfinancial data (Haniffa & Cooke, 2005; Neu et al., 1998).

Prior research, investigating corporate governance and CSR disclosures, have used this data collection method (Ahmed Haji, 2013; Isa & Muhammad, 2016; Majeed et al., 2015; Milne & Adler, 1999; Rashid & Lodh, 2008; Said et al., 2009). Companies were categorized using the two-digit Standard Industrial Classification (SIC) codes. Table 2 shows a total of 80 companies as of December 31, 2015 resulting in a balanced panel data of 800 observations.

5.2 | Dependent variable's measure

The CSR reporting index is the dependent variable in this study. This index signifies the issues of disclosure in companies' annual reports, including community involvement reporting, workplace reporting, marketplace reporting, and environment reporting (See Appendix). CSR external media disclosures were not studied because there were duplications when compared with annual report disclosures. Also, the timing of these disclosures was difficult to precisely identify.

A content analysis method was used to analyze annual reports, which is empirically appropriate in the CSR reporting fields (Guthrie & Parker, 1990). Thus, the data gathered were codified into categories using a content analysis method (Guthrie & Abeysekera, 2006). This was performed by carefully evaluating the nature of the evidence reported to create a checklist and build the index. Prior research on CSR reporting used the same method (Barakat et al., 2015; Isa & Muhammad, 2016; Omar et al., 2016; Rashid, 2015; Rashid & Lodh, 2008).

Forty-eight voluntary CSR items, based on previous research, were incorporated in a checklist for developing context in this study (Barakat et al., 2015; Ghazali, 2007; Rashid, 2015; Rashid & Lodh, 2008; Rouf, 2011). Thirty-five companies were included in the pilot test to verify the proposed checklist's validity. Checklist items were amended accordingly to ensure its applicability to Jordanian nonfinancial sector companies. Following Khan (2010), two independent research assistants repeated the coding procedure to ensure reliability.

When developing a CSR score, Haniffa and Cooke (2005) have suggested that adopting a weighted method may lead to scoring bias or scaling problem issues. Thus, an unweighted method is used as the basis for the CSR score. Consequently, there is an equal value for each

TABLE 2 Companies of nonfinancial sectors

Sector	Number of companies in the study	Observed companies years	Observation in %
Agricultural production-livestock	1	10	1.25
Metal mining	3	30	3.75
Nonmetallic minerals, except fuels	3	30	3.75
Food and kindred products	6	60	7.50
Tobacco products	1	10	1.25
Apparel and other textile products	4	40	5.00
Lumber and wood products	1	10	1.25
Paper and allied products	3	30	3.75
Printing and publishing	1	10	1.25
Chemicals and allied products	11	110	13.75
Petroleum and coal products	1	10	1.25
Stone, clay, and glass products	3	30	3.75
Primary metal industries	6	60	7.50
electronic and other electric equipment	3	30	3.75
Transportation equipment	2	20	2.50
Transportation services	4	40	5.00
Communications	2	20	2.50
Electric, gas, and sanitary services	1	10	1.25
Holding and other investment offices	7	70	8.75
Hotels and other lodging places	8	80	10.00
Health services	3	30	3.75
Educational services	6	60	7.50
Total	**80**	**800**	**100.00**

Source: Nonfinancial listed companies on the Amman Stock Exchange as of December 31, 2015.

item of information regardless of its importance or relevance to any particular user group (Ahmed Haji, 2013; Barakat et al., 2015; Ghazali, 2007; Haniffa & Cooke, 2005; Omar & Simon, 2011). Therefore, if an item in the checklist is disclosed by the company, then a value of 1 was given; otherwise, a value of 0 was given. The total binary variables score given to each company times a maximum number of checklist items are used by this approach to compute the ratio of CSR reporting index. Sharif and Rashid (2014) used the following equation to calculate this index:

$$\mathrm{CSRRI} = \sum d_i^{48} / n_j$$

CSRRI = Corporate Social Responsibility Reporting Index
n_j= Total number of items for j^{th} companies $n_{j\leq}$ 48
d_i= Equals 1 if items are included in the checklist and 0 if otherwise

5.3 | Independent variables' (IVs) measures

Five IVs are examined: family ownership, managerial ownership, institutional ownership, foreign ownership, and government ownership. First, the family ownership ratio (IV 1) refers to the total shares owned by a family member divided by the total number of shares issued. This is consistent with Block and Wagner (2014) and Habbash (2016). Following prior studies (Isa & Muhammad, 2016; Khan et al., 2013; Oh et al., 2011), the managerial ownership ratio (IV 2) refers to the total shares owned by a manager or director on the board divided by the total number of shares issued.

Institutional ownership ratio (IV 3) is computed as the total ratio of shares owned by institutional investors divided by the total number of shares issued. This is consistent with Majeed et al. (2015) and Habbash (2016). Also following prior studies (Khan et al., 2013; Oh et al., 2011), foreign ownership ratio (IV 4) is calculated by the total ratio of shares held by a foreign owner divided by the total number of shares issued. The government ownership ratio (IV 5) refers to the total shares owned by the government, or any of its agencies, divided by the total number of shares issued. This calculation follows prior studies (Ahmed Haji, 2013; Habbash, 2016).

5.4 | Control variables' measures

This study considers company attributes and governance components as control variables that may affect the extent of CSR reporting. Thus, the model incorporates a company's attributes, for example, the existence of CEO duality, its audit committee, the size of the company, the profitability of the company, the age of the company, and its debt ratio. Prior research included these variables in CSR reporting and corporate governance examinations (Barakat et al., 2015; Isa & Muhammad, 2016; Majeed et al., 2015; Oh et al., 2016; Rashid & Lodh, 2008; Stuebs & Sun, 2015).

The CEO and chair duality role has been found to encourage management influence, weaken monitoring power (such as reporting policies), and diminish the probability of investment in CSR activities and reporting disclosure (Ahmad et al., 2017b; Habbash, 2016; Oh et al., 2016). CEO duality role, as a categoric variable measure, equals 1 if there is CEO duality and 0 if otherwise. This dichotomous variable was used in previous studies (Habbash, 2016; Khan et al., 2013; Liao et al., 2016). An audit committee existence has been found to enhance monitoring and controlling of managers' decision-making as well as enhance disclosure quality including CSR reporting (Barakat et al., 2015; Habbash, 2016; Khan et al., 2013). This dichotomous variable (equalling 1 if there was an audit committee, and 0 if otherwise) was used in earlier studies (Barakat et al., 2015; Khan et al., 2013).

Large companies are more observable by the public and are inclined to receive greater public scrutiny (Muttakin & Subramaniam, 2015). This size of company is presumed to release more CSR reporting to legitimize their actions (Barakat et al., 2015; Khan et al., 2013). Following applications used in prior research (Barakat et al., 2015; Habbash, 2016; Khan et al., 2013), a natural logarithm of total assets represents the size of the company. It has been argued that profitable companies have the resources to meet the CSR activities' investment costs and thereby meet expectations by disclosing CSR data (Barakat et al., 2015). Similarly, to past studies, this study computes profitability as a return on assets (ROA) (Barakat et al., 2015; Khan et al., 2013). Additionally, companies, which have been established longer, disclose more CSR information to maintain a good relationship with the general public than newer companies (Habbash, 2016; Muttakin & Subramaniam, 2015). Following Rashid and Lodh (2008) and Oh et al. (2011), the total years the company has been established is used to measure the company age. Companies calculated to have a high debt ratio tend to disclose more CSR reporting to legitimize their action with stakeholders such as creditors (Muttakin & Subramaniam, 2015; Rashid & Lodh, 2008). Measuring a company's debt ratio as the ratio of total liabilities divided by the total assets is identical to earlier research (Habbash, 2016; Khan et al., 2013; Rashid & Lodh, 2008). Table 3 summaries measurements and definitions of the study's variables.

TABLE 3 Table of variables and measurements

Variables	Symbols	Measurement
Dependent variable		
Corporate social responsibility reporting index	**CSRRI**	The ratio of the total items disclosed divided by the total items included in the checklist.
Independent variables		
Family ownership	**FOWN**	The ratio of total shares owned by family members of shareholders to total number of shares issued.
Managerial ownership	**MGTOWN**	The ratio of total shares owned by directors and managers to total number of shares issued.
Foreign ownership	**FOROWN**	The ratio of total shares owned by foreigners to total number of shares issued.
Institutional ownership	**INSTOWN**	The ratio of total shares owned by of institutional owners to total number of shares issued.
Government ownership	**GOVOWN**	The ratio of total shares owned by government agencies to total number of shares issued.
Control variables		
Company size	**SIZE**	The natural logarithm of total assets.
Audit committee	**AC**	Refers to dichotomous variable equal 1 if there exists an audit committee and 0 otherwise.
Company profit	**ROA**	Return on assets.
Company age	**AGE**	Refers to years of establishment.
Debt ratio	**DR**	The total liabilities divided by total assets.
CEO duality	**CEOD**	Refers to dummy variable equal 1 if there is CEO duality and 0 otherwise.

Note: The same dependent variable and control variables are listed by these author(s) in Table 4: Al Fadli et al. (2020).

5.5 | Models

Two multivariate OLS regression models estimate Jordanian companies' level of CSR reporting. All independent and control variables are included in model 1. The extent of voluntary CSR disclosure in companies' annual reports may differ depending upon to the industry type in which companies operate (Ghazali, 2007; Haniffa & Cooke, 2005). For example, service sector companies may select to disclose more community and workplace-based information compared with environmental-related data by manufacturing sector companies (Barakat et al., 2015; Habbash, 2016).

Model (1)

$$CSRRI = \beta_0 + \sum \beta_1 (OWNERSHIP_{i,t}) + \sum \beta_2 Controls_{i,t} + \varepsilon_{i,t}$$

where:

CSRRI represents the corporate social responsibly index.
$OWNERSHIP_{i.t}$ symbolizes: (i) Family Ownership (FOWM), (ii) Managerial Ownership (MGTOWM), (iii) Institutional Ownership (INSTOWN), (iv) Foreign Ownership (FOROWN), and (v) Government Ownership (GOVOWN).
CONTROLS are company characteristics: Company Size (SIZE), Return on Assets (ROA), Company Age (AGE), and Debit Ratio (DR).
CONTROLS are governance characteristics: Chief Executive Office Duality (CEOD), the existence of an Audit Committee (AC).

In addition, Rashid (2018) suggests that CSR reporting by companies may vary across time because companies may change the extent of their reporting if something alters, for example, policy or regulations amendment. Model 2 includes the variables in Model 1 plus controls industry and time effects. Two multivariate OLS regression models are illustrated below:

Model (2)

$$CSRRI = \beta_0 + \sum \beta_1 (OWNERSHIP_{i,t}) + \sum \beta_2 Controls_{i,t} + \sum \beta_3 \boldsymbol{INDUSTRY}_{i,t} + \sum \beta_4 \boldsymbol{TIME_{i,t}} + \varepsilon_{i,t}$$

where:

CSRRI represents the corporate social responsibly index.
$OWNERSHIP_{i.t}$ symbolizes: (i) Family Ownership (FOWM), (ii) Managerial Ownership (MGTOWM), (iii) Institutional Ownership (INSTOWN), (iv) Foreign Ownership (FOROWN), and (v) Government Ownership (GOVOWN).
CONTROLS are company characteristics: Company Size (SIZE), Return on Assets (ROA), Company Age (AGE), and Debit Ratio (DR).
CONTROLS are governance characteristics: Chief Executive Office Duality (CEOD), the existence of an Audit Committee (AC).
CONTROLS for industry and time effects: time dummy variable (TIME) and an industry dummy variable (INDUSTRY).

β = Beta coefficient. **ε** = Error term.

Ownership structure influence on the extent of CSR reporting was tested using longitudinal data (panel data). Multiple regression models (OLS) were utilized as component of the analyses (Barakat et al., 2015; Bhaduri & Selarka, 2016; Habbash, 2016; Isa & Muhammad, 2016; Rashid, 2015). Caution has been exercised to control for problems such as nonnormality, multicollinearity, heteroscedasticity, and endogeneity. Therefore, the statistical analysis' assumptions (such as normality, no multicollinearity, and homoscedasticity) have been met by the above regressions' equations and no endogeneity problem was identified (Habbash, 2016; Khan et al., 2013; Rao & Tilt, 2016; Rashid, 2015).

The Jarque–Bera test shows that the range of probability is 0.00 across all variables and therefore satisfies the assumption of normality. The correlation coefficients between sets of variables were run to help diagnose any collinearity problems (Weisberg, 2005). The variance inflation factors (VIF) statistics show that the VIF values ranged from 1.07 to 2.40 across all variables demonstrating no serious multicollinearity problem in the data as shown in Table 6. Gujarati (2003) states that a VIF value of more than 10 denotes a multicollinearity problem. The scatter plot of the residuals (ZRESID) against the dependent value (ZPRED) as well as the results of the Breusch–Pagan and chi-square test statistics provide evidence that heteroscedasticity was present in the sample data. The study employed White's (1980) heteroscedasticity-consistent standard errors in the results.

6 | RESEARCH RESULTS AND DISCUSSION

The descriptive and models' statistical results and analyses are provided in the following subsections.

6.1 | Descriptive statistics

Descriptive statistics for variables used in the study is summarized in Table 4. The extent of CSR reporting by Jordanian public listed companies, on average, is 39%, which has increased compared with prior similar studies in Jordan (Al-Hamadeen & Badran, 2014; Ibrahim et al., 2016; Ismail & Ibrahim, 2008; Suwaidan et al., 2004). This average extent of CSR reporting is comparatively higher than the evidence from other developing countries: 24% in Saudi Arabia (Habbash, 2016), 22% in Malaysia (Ahmad et al., 2017a), and 22% in Bangladesh (Muttakin & Subramaniam, 2015). Figure 1 illustrates the change in the extent of CSR reporting index in Jordan across the period of this study.

Also, the greatest company ownership concentrated in Jordan are by managers and institutional investors (on average 50% and 43%, respectively). Family ownership and foreign ownership in companies are both 10%; on average, Government investment is the lowest level of company ownership concentration at an average of 7%.

With an average of 21% occurrence, there is a lower level of CEOD in Jordanian companies compared with the findings of studies of other developing countries. The following results show a very high level of CEOD in Saudi Arabia with an 85% average occurrence of CEOD (Habbash, 2016) and a higher occurrence of 43% in Bangladesh (Muttakin et al., 2015) and India with on average 32% occurrence (Muttakin & Subramaniam, 2015). The existence of an

TABLE 4 Descriptive statistics

	Observations	Mean	Median	Std. dev.	Maximum	Minimum
Dependent variable						
CSRRI	800	0.39	0.40	0.17	0.88	0.01
Independent variables						
FOWN	800	0.10	0.02	0.17	1.00	0.00
MGTOWN	800	0.50	0.47	0.27	1.00	0.01
INSTOWN	800	0.43	0.42	0.27	1.00	0.00
FOROWN	800	0.10	0.00	0.18	0.93	0.00
GOVOWN	800	0.07	0.00	0.16	0.99	0.00
Control variables						
CEOD	800	0.21	0.00	0.41	1.00	0.00
AC	800	0.66	1.00	0.47	1.00	0.00
SIZE	800	16.97	17.00	1.30	21.00	13.00
ROA	800	0.03	0.04	0.10	0.72	−0.94
AGE	800	22.33	18.00	14.77	64.00	1.00
DR	800	0.33	0.29	0.22	1.80	0.01

Note: The same dependent variable and control variables are listed by these author(s) in Table 5: Al Fadli et al. (2020), Table 3 Al Fadli et al. (2019), Table 3 Al Fadli (2020).

Abbreviations: AC, dichotomous variable equal to 1 if there exists an audit committee; AGE, years of establishment; CEOD, dummy variable equal to 1 if there is CEO duality and 0 otherwise; CSRRI, corporate Social Responsibility Reporting Index; DR, total liabilities divided by total assets; FOROWN, ratio of total shares owned by foreigners to total number of shares issued; FOWN, ratio of total shares owned by family member of shareholders to total number of shares issued; GOVOWN, ratio of total shares owned by government to total number of shares issued; INSTOWN, ratio of total shares owned by institutions to total number of shares issued; MGTOWN, ratio of total shares owned by directors and managers to total number of shares issued; ROA, Return on Assets; SIZE, natural logarithm of total assets.

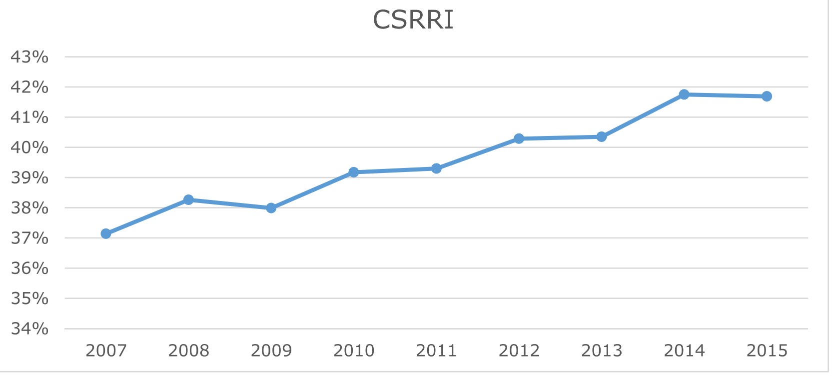

FIGURE 1 Corporate social responsibility (CSR) reporting index over time*. *Note*: *the same dependent variable is listed by these author(s) in Figure 1; Al Fadli et al. (2020), Al Fadli et al. (2019), and Al Fadli (2020) [Color figure can be viewed at wileyonlinelibrary.com]

audit committee is, on average, 66%, suggesting a strong presence of corporate governance practices monitoring among Jordanian public listed companies (Barakat et al., 2015).

6.2 | Exploratory test

The longitudinal data (balanced panel data) analysis cover the 2006 to 2015 reporting years. The extent of CSR reporting has increased compared with the results of prior studies in Jordan. During this period, the JCGC was introduced in 2009, which necessitated companies to disclose CSR information. The analysis was split into pre-2009 and post-2009 data, respectively, for the purpose of exploring whether the extent of CSR reporting increase is significantly related to the introduction of JCGC.

Table 5 shows that the extent of CSR reporting has increased in post-2009 to 40% from, on average, 37% in the pre-2009 period. A *T*-test produced a statistically significant mean difference of CSRRI between pre-2009 and post-2009. This significant finding supports the conclusion that the JCGC requirement is a significant influence on this increased CSR disclosure in Jordanian companies' annual reports. Another influence for this increased CSR disclosure may be the Arabic spring crisis in 2011 (in particular the Iraq and Syrian crisis). From a legitimacy theory perspective, Jordanian companies may have adopted CSR reporting as a legitimation strategy after these events for the purpose of influence or reassuring external perception of their operations' legitimacy.

6.3 | Correlation analysis

Table 6 presents the correlation statistics between this study's variables. While there is recognized overlap in the ownership categories, the results suggest that there are no evidence of the presence of multicollinearity.

Additionally, the correlation coefficients that range from 0.64 to −0.01 between the independent variables do not exceed 0.80 and at an acceptable level normally (Gujarati, 2003). The correlation coefficients between CSR reporting and family ownership in Table 6 is negative and significant at 1% (−0.156**). Also, management ownership is insignificantly negative (−0.01) and institutional ownership is insignificantly positive (0.04). Foreign ownership is positively

TABLE 5 Means difference of the pre-2009 and post-2009 CSR reporting data

			t-test for equality of means		
	Pre-2009 mean	**Post-2009 mean**	***t***	**Mean difference**	**Std. error difference**
Dependent variable					
CSRRI	0.37	0.40	(2.299)**	0.03	0.01
Observations	**240**	**560**			

Note: The *t*-tests are presented in parentheses. The same dependent variable is listed by these author(s) in Table 7: Al Fadli et al. (2020), Table 4: Al Fadli et al. (2019), and Table 5: Al Fadli (2020). Values in bold are the total of observations in pre-2009 and post-2009.

**$p < 0.05$.

TABLE 6 Correlation analysis

		1	2	3	4	5	6	7	8	9	10	11	12	VIF
1	**CSRRI**	1.00												
2	**FAMOWN**	−0.156**	1.00											1.30
3	**MGTOWN**	−0.01	0.082***	1.00										2.16
4	**INSTOWN**	0.04	−0.254**	0.639**	1.00									2.40
5	**FOROWN**	0.155**	−0.117**	0.223**	0.301**	1.00								1.30
6	**GOVOWN**	0.204**	−0.197**	0.426**	0.464**	0.04	1.00							1.57
7	**CEOD**	−0.080*	0.188**	−0.06	−0.167**	−0.079*	−0.098**	1.00						1.09
8	**AC**	0.207**	0.00	−0.05	−0.102**	0.162**	−0.03	−0.078*	1.00					1.08
9	**SIZE**	0.375**	0.02	0.262**	0.288**	0.318**	0.335**	0.02	0.06	1.00				1.49
10	**AGE**	0.410**	−0.103**	0.132**	0.174**	0.146**	0.119**	−0.090*	0.01	0.162**	1.00			1.07
11	**DR**	0.02	0.00	−0.104**	0.118**	0.142**	−0.124**	−0.078*	−0.076*	0.180**	0.06	1.00		1.26
12	**ROA**	0.206**	0.01	0.196**	0.114**	0.075*	0.206**	0.07	0.075*	0.312**	0.090*	−0.196**	1.00	1.22

Note: The same dependent variable, but different independent variables and some control variables are listed by these author(s) in Table 6: Al Fadli et al. (2020), Table 5: Al Fadli et al. (2019), and Table 4: Al Fadli (2020).

Abbreviations: ACI, dichotomous variable equal to 1 if there exists an audit committee; AGEI, years of establishment; CEODI, dummy variable equal to 1 if there is CEO duality and 0 otherwise; CSRRI, corporate Social Responsibility Reporting Index; FOROWNI, ratio of total shares owned by foreigners to total number of shares issued; FOWNI, ratio of total shares owned by family member of shareholders to total number of shares issued; GOVOWNI, ratio of total shares owned by government to total number of shares issued; INSTOWNI, ratio of total shares owned by institutions to total number of shares issued; INDUSTRYI, categoric variable equal to 1 for service sector and 0 for manufacturing sector; MGTOWNI, ratio of total shares owned by directors and managers to total number of shares issued; ROAI, Return on Assets; DRI, total liabilities divided by total assets; SIZEI, natural logarithm of total assets.

**Correlation is significant at the 1% level.

*Correlation is significant at the 5% level.

significant at 1% (0.155**). Government ownership has a significant positive relationship at 1% (0.204**) with the extent of CSR reporting.

6.4 | Model analysis and discussion

Table 7 shows the OLS results for model 1 and model 2. Both models include all independent and control variables control, while model 2 also controls for time and industry effects. To

TABLE 7 Regression analysis

Dependent variable CSR reporting		
	OLS model 1 (before controlling for industry and time)	**OLS model 2 (after controlling for industry and time)**
Intercept	−0.377 (−5.166)***	−0.008 (−0.125)
FAMOWN	−0.113 (−2.697)***	−0.109 (−2.884)***
MGTOWN	−0.074 (−2.617)***	−0.093 (−3.038)***
INSTOWN	−0.078 (−2.740)***	−0.027 (−1.093)
FOROWN	0.016 (0.487)	0.045 (1.762)*
GOVOWN	0.134 (4.566)***	0.307 (5.999)***
Control variables		
CEOD	−0.017 (−1.393)	−0.035 (−2.784)***
AC	0.058 (5.775)***	0.062 (6.326)***
SIZE	0.041 (9.036)***	0.027 (7.218)***
ROA	0.129 (2.614)***	0.084 (2.159)**
AGE	0.004 (12.604)***	0.001 (5.386)***
DR	−0.012 (−0.531)	−0.059 (−2.342)**
INDUSTRY DUMMY	NO	Yes
TIME DUMMY	NO	Yes
F statistic	(39.13)***	(25.24)***
Adjusted R^2	0.344	0.554
Observations	**800**	**800**

Note: The *t*-tests are presented in the parentheses. The same dependent variable but different independent variables and some control variables are listed by these author(s) in Table 8: Al Fadli et al. (2020), Table 6: Al Fadli et al. (2019), and Table 6: Al Fadli (2020).

Abbreviations: AC, dichotomous variable equal to 1 if an audit committee exists; AGE, years of establishment; CEOD, dummy variable equal to 1 if there is CEO duality and 0 otherwise; CSRRI, corporate Social Responsibility Reporting Index; DR, total liabilities divided by total assets; FOROWN, ratio of total shares owned by foreigners to total number of shares issued; FOWN, ratio of total shares owned by family member of shareholders to total number of shares issued; GOVOWN, ratio of total shares owned by government to total number of shares issued; INSTOWN, ratio of total shares owned by institutions to total number of shares issued; MGTOWN, ratio of total shares owned by directors and managers to total number of shares issued; ROA, Return on Assets; SIZE, natural logarithm of total assets.

*$p < 0.10$. A weak significant relationship.

**$p < 0.05$.

***$p < 0.001$.

achieve this extended control, model 2 uses the same equation of model 1 and adds time and industry dummy variables. The adjusted *R* square values in models 1 and were 34% and 56%, respectively, which indicates that the variation of the extent of CSR reporting among different company ownership types is best explained by model 2. Therefore, model 2 is the more suitable model to investigate the five hypotheses.

The regression coefficient supports an association between family ownership and the extent of CSR reporting that is negative and significant. Abdullah et al. (2011) and Muttakin and Khan (2014) found similar decrease in the extent of CSR reporting results for more family dominated ownership companies. This is because family owners and their members who dominate the board of directors have unlimited access to company information (Haddad et al., 2015). Legitimacy theory provides an explanation that more voluntary CSR information reporting by companies may be a strategy for them to address external threats to their legitimacy (Khan et al., 2013). However, extending voluntary (CSR) reporting to satisfy the general public expectations is a less compelling strategy for family dominated ownership companies because the expectation gap does not pose a threat to these companies' legitimacy (Darus et al., 2013; Muttakin & Khan, 2014; Rashid, 2018). Therefore, such companies disclose less CSR data in their annual report. Thus, the results support Hypothesis H1.

Managerial company ownership is shown to have a significant and negative relationship with the extent of CSR reporting. This result supports not only Hypothesis H2 but also results from prior studies (Ghazali, 2007; Isa & Muhammad, 2016; Khan et al., 2013). That is, more managerial dominated ownership companies, commonly prevailing in Jordanian public listed companies, tend to disclose less information on CSR activities. These powerful shareholders based their manage and control the company's policy on self-interest motivations, and they can easily access the company information. However, they provide a lower extent of CSR reporting because they, the concentration of owners, have easy access to such information and are less motivated to manage the expectations of the general public as the companies' legitimacy is not threatened (Ghazali, 2007; Oh et al., 2011; Rashid, 2018).

Findings support an insignificant and negative relationship between Institutional ownership and the extent of CSR reporting in model 2. Prior findings did not find any significant relationship (Habbash, 2016; Naser et al., 2006; Sartawi et al., 2014). Also, directionally, Htay et al. (2012) found that high institutional ownership companies, as prevailing in ASE listed companies, tend to decrease the extent of CSR disclosures through their power influences on company's decisions and its disclosures' policy motivated by their self-interest (Habbash, 2016). That is, institutional investors in Jordan are interested in short-term investment focus rather than long-term focus. This focus motivates them to adopt an objective to maximize their wealth through the reduction of CSR activities' investment and reporting costs. Furthermore, the high concentration institutional ownership companies already has access to the internal information through board membership; therefore, the demand for voluntary disclosure is generally low and there is no threat to their survival (Alves et al., 2012; Sartawi et al., 2014). In summary, Hypothesis H3 is not supported.

The converse results of a positive and significant relationship were found to exist for the final two types of company ownership, foreign and government ownership, on the extent of CSR reporting. This result for foreign ownership supports Hypothesis H4 and is consistent with prior studies' results (Haniffa & Cooke, 2005; Khan et al., 2013; Muttakin & Subramaniam, 2015; Oh et al., 2011). This ownership type may bring different knowledge and values from the foreign market and encourages managers to adopt legitimation strategies such as investing in CSR activities and its related extent of disclosures (Khan et al., 2013; Oh et al., 2011). Jordanian companies with this type of ownership may use legitimation as a proactive strategy to legitimize their existence and report CSR information to a greater extent to attract more foreign capital (Haniffa & Cooke, 2005).

The final company ownership type result confirms Hypothesis H5 that government ownership has a positive and significant association with the extent of CSR reporting as well as supports prior studies' findings (Ghazali, 2007; Habbash, 2016; Muttakin & Subramaniam, 2015; Said et al., 2009; Suwaidan et al., 2004). The finding signals that there is an increasing consciousness of the need for extensive CSR reporting and an embracing of good governance practices by companies with government ownership. According to legitimacy perspective, this type of company ownership is seeking legitimation since the company's behavior is more noticeable to the public and perceived as the government's behavior; consequently, they need to enlighten public perception about their legitimacy (Ghazali, 2007).

It is noted that each of the control variables has a different association with CSR reporting. First, the statistics support a negative and significant association between for CEO duality and the extent of CSR reporting. The results support the findings by Muttakin and Subramaniam (2015). It may be inferred from the results that when the chair and CEO positions are from the one family, they may interpret CSR reporting as harmful because it could reduce their wealth in the company without providing any additional information to the primary readers of the annual report. Also, in this case, disclosing information beyond what is mandatory does not pose any threat to the company's legitimacy (Khan et al., 2013; Rashid, 2018).

The remaining four control variables (company size, company age, company profit [measured by ROA], and the presence of the audit committee) are all positive and has significant association with the extent of CSR reporting. Larger companies generally are more transparent to the public and stakeholders as a whole because they disclose more CSR information than smaller companies. This finding supports the results of earlier studies (Ahmed Haji, 2013; Barakat et al., 2015; Habbash, 2016; Oh et al., 2011). Also, the company's age result supports the earlier findings by Khan et al. (2013) and Habbash (2016). Companies with operations established in the market for a longer time has a tendency to disclose more CSR information than a younger company (Habbash, 2016). The ROA result shows that highly profitable companies have an enticement to disclose more CSR activities for the purpose of improving or reinforcing the public's perception about their legitimacy. This result is constant with prior studies' findings (Barakat et al., 2015; Khan et al., 2013; Rashid & Lodh, 2008). Where an audit committee exists in Jordanian public listed companies, the results support an increase awareness about the benefits of extensive CSR reporting, which signal the adoption of good governance practices to meet public expectations. This finding is uniform with the results of prior studies into CSR reporting (Barakat et al., 2015; Khan et al., 2013; Said et al., 2009).

Finally, statistics support a negative and significant relationship between the debt ratio and CSR reporting. This result is identical to earlier results (Habbash, 2016; Khan et al., 2013; Oh et al., 2011). High debt gearing companies have little motivation to disclose more CSR information because they are focused on increasing profit and reducing high debt levels. (Habbash, 2016; Oh et al., 2011). This reduced debt ratio should be achieved if more profit can be either retained within the assets and the increased total assets (the denominator of the ratio) or used to pay down the debt (the numerator of the ratio), with either action reducing the debt ratio. Such debt-based company may also use private channels to legitimize their activities with powerful stakeholder's needs (such as creditors), which favor profitability and stability ratios information, in preference to the extent of CSR disclosures, in the company's annual report.

6.5 | Endogeneity test

Endogeneity problems, between explanatory (independent) variables and the error term, are especially possible for time series analysis (Rashid & Lodh, 2008). This problem was not believed relevant to this study because 10-year period pooled data from different companies were used. However, literature suggests that a problem may arise from a simultaneous association between disclosure and ownership variables (Al-Bassam et al., 2015). Consequently, the

TABLE 8 Endogeneity test

Dependent variable CSR reporting		
	2SLS model 3 (before controlling for industry and time)	**2SLS model 4 (after controlling for industry and time)**
Intercept	**−0.324 (−4.127)*** **	**0.036 (0.500)**
FAMOWN	−0.116 (−2.405)**	−0.100 (−2.144)**
MGTOWN	−0.117 (−3.154)***	−0.184 (−4.053)***
INSTOWN	−0.072 (−2.021)**	0.004 (0.118)
FOROWN	0.154 (0.578)	0.064 (2.157)**
GOVOWN	0.154 (4.611)***	0.371 (6.399)***
Control variables		
CEOD	−0.014 (−1.152)	−0.030 (−2.327)**
AC	0.053 (4.972)***	0.061 (5.888)***
SIZE	0.039 (8.011)***	0.024 (6.242)***
ROA	0.206 (4.132)***	0.130 (2.960)***
AGE	0.004 (11.795)***	0.002 (5.166)***
DR	−0.019 (−0.751)	−0.080 (−2.785)***
INDUSTRY DUMMY	NO	Yes
TIME DUMMY	NO	Yes
***F* statistic**	**(35.59)*** **	**(24.02)*** **
Adjusted R^2	**0.335**	**0.542**
Observations	**720**	**720**

Note: The same dependent variable, but different independent variables and some control variables are listed by these author(s) in Table 9: Al Fadli et al. (2020), Table 8: Al Fadli et al. (2019), and Table 7: Al Fadli (2020). The *t*-tests are presented in the parentheses.

Abbreviations: AC, dichotomous variable equal to 1 an audit committee exists; AGE, years of establishment; CEOD, dummy variable equal to 1 if there is CEO duality and 0 otherwise; CSRRI, corporate Social Responsibility Reporting Index; DR, total liabilities divided by total assets; FOROWN, ratio of total shares owned by foreigners to total number of shares issued; FOWN, ratio of total shares owned by family member of shareholders to total number of shares issued; GOVOWN, ratio of total shares owned by government to total number of shares issued; INSTOWN, ratio of total shares owned by institutions to total number of shares issued; MGTOWN, ratio of total shares owned by directors and managers to total number of shares issued; SIZE, natural logarithm of total assets; ROA, Return on Assets. Values in bold emphasis are to distinguish between the type of variables (independent variables and control variables).

**$p < 0.05$. ***$p < 0.001$.

results of a two-stage least square (2SLS) model estimated for time and industry effects by using lagged ownership structure variables as instrumental variables in a 2SLS model are shown in Table 8. The statistics did not indicate any serious problem of endogeneity as the results were consistent with the original OLS regression models.

7 | CONCLUSION

This research investigated whether ownership structure influences the extent of CSR reporting in Jordanian public listed companies. The results reveal that companies with foreign ownership and government ownership have significant and positive influences on the extent of CSR reporting. Family ownership and managerial ownership were found to be significantly negative, and institutional ownership had a negligible influence on the extent of CSR reporting. These findings provide insights into how ownership structure influences the CSR reporting extent among Jordanian companies. This research supported the relevance of legitimacy theory to predict and explain the relationship between different corporate governance mechanisms and CSR disclosure levels in a developing country. Legitimacy theory derives from a "social contract" notion which acknowledges that company activities should meet society norms and values (Gray et al., 1996). In this way, legitimacy theory promotes a focus on the expectations of society in general (Deegan et al., 2002). Accordingly, companies may need to disclose more CSR information in its annual reports or stand-alone CSR reports as a proactive strategy to avoid threats to the company's legitimacy (Deegan et al., 2002; Deegan & Gordon, 1996; Gray et al., 1996; Patten, 1992). When the perceived threat is minimal, companies may be less motivated to disclose more CSR voluntary information in excess of mandatory requirements as these do not pose any threat to company legitimacy (Haniffa & Cooke, 2005).

In general, it is noted that the extent of CSR reporting has increased when compared with prior Jordanian companies CSR-based studies. This increase was significant post the code's introduction in 2009, and this suggests that the JCGC requirement is one factor that could be credited with the increase in CSR reporting in Jordanian annual reports. From a legitimacy theory standpoint, Jordanian companies may adopt CSR reporting as a legitimation strategy, after an event, to change the external expectation of its responsibilities and influence public's perception about their legitimacy.

This research contributes several important points to the corporate governance and CSR reporting literature in the Middle East and developing countries. Firstly, this study contributes evidence to the very limited empirical studies that has assessed the influence of comprehensive ownership structures on the extent of CSR reporting using longitudinal data (balanced panel data) of 800 observations for a 10-year period by Jordanian companies. Second, the conducted endogenous test and robustness analysis in this study contribute to the lack of rigorous testing gap, which was identified by Velte (2017) as missing from previous corporate governance and CSR reporting published studies.

In regard to the practical implications, the findings suggest that policy makers, regulatory bodies, companies, and investors should increase their awareness about how a company's voluntary CSR reporting is influenced by ownership structure. The varying corporate motivations for the extent of CSR activities disclosure in the annual reports should be understood by policy makers when preparing guidelines for a CSR reporting framework. Also, external company stakeholders should increase their understand of how different ownership structures influence the varying extent of CSR activities disclosure in annual reports or other reporting avenues.

The following discussion relates to the study's limitations as well as provides direction for further research. The first limitation involves the use of annual reports to establish the CSR reporting index. Further studies may wish to use independently developed indices by employing different data sources, such as separate (sustainability) reports, company-based websites, publicly available data, or databases, such as Morningstar's or Bloomberg's. The second limitation concerns only the nonfinancial sectors' ownership structures and their impact on the extent of CSR reporting being studied. Further studies may wish to extend the investigation to include the financial sector ownership structures, which may have a different level of influence on the CSR reporting extent. The different influences may be due to significant differences not only in the application of accounting policies but also differing sets of instructions and rules of disclosure requirements. Therefore, further studies might examine the influence of ownership structures, accounting policies, and disclosure requirements on the extent of CSR reporting in the financial sector. Moreover, the third limitation is examining the influence of different ownership groups only on the CSR reporting extent. Further studies may investigate the impact of other internal corporate governance mechanism on CSR reporting extent, such as board independence. This might extend the current understanding of how corporate governance mechanisms determine CSR reporting practices in Jordan.

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CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

ETHICS STATEMENT

This article does not contain any interaction with human participants performed by any of the authors.

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APPENDIX

CSR disclosures checklist

Environmental reporting (16) items
Information on environmental controlling system
Information on the firm's policies for the environment
Information on protection of natural resources
Information on the effluent treatment system
Information on recycling of waste output
Information on the water discharge of the firm's operations
Information on the air emission control of the firm's operations
Information on observation of pollution in the process of business operations
Information on solid waste disposal of the firm's operations
ISO/26000/9001/22000/14001
Information on antilitter campaign
Information on making the country green (e.g., planting of trees)
Information on protection or repair of harm to the environment
Providing environmental management services to other firms' projects
Support the public or private action designed to protect the environment
Participation in environmental institutions (e.g., industry committees)
Community involvement reporting (11) items
Information on charitable donations to the public
Information on support for public education
Information on support for public health
Information on support for culture and the arts
Information on sponsoring sports or recreational projects and gifts
Information on donations to the public for making gardens and parks

(Continues)

	Information on support to the local population
	Information on support for the social welfare system
	Information on conducting or sponsoring conferences and seminars
	Information on establishment of educational institutions
	Information on establishment of medical center
Marketplace reporting (7) items	
	Information on quality of the product
	Information on safety of the product
	Information on development of the product
	Information on research plans prepared by the firm to develop its product
	Information on disclosing safety practices to consumer
	Information on customer service improvement
	Information on complaints and consumer satisfaction
Workplace reporting (14) items	
	Information on number of employees
	Information on health care for employees
	Information on employee training and education
	Information on employees' welfare
	Information on employees' salary
	Information on pensions and compensation
	Information on employee satisfaction
	Information on hazards in the work environment
	Information on safety in the workplace
	Information on minorities in the workforce
	Information on employee morale
	Information on sponsoring educational conferences or art exhibitions
	Information on the firm's future and stability of the employee's job
	Information on job opportunities
Total (48) items	

Note: Adopted from Haniffa and Cooke (2005), Ghazali (2007), Rashid and Lodh (2008), Rouf (2011), Bayoud et al. (2012), Rashid (2015), Barakat et al. (2015), Ibrahim et al. (2016), Ahmad et al. (2017b), Al Fadli et al. (2019), Al Fadli (2020), and Al Fadli et al. (2020).