CORPORATE GOVERNANCE, CORPORATE SOCIAL RESPONSIBILITY AND EARNINGS MANAGEMENT PRACTICES: EVIDENCE FROM JORDAN

A Thesis Submitted By

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Abstract

Earnings management has captured the attention of researchers, because accounting earnings are considered to be amongst the most important indicators of the financial performance of a company, and this subject remains a fruitful area for academic research. As a result of the practice of earnings management, financial crises may occur in companies, resulting in weakening reliability and doubtful fairness of published financial statements.

Previous studies have focused on earnings management and the factors that may affect earnings management practices. Likewise, the current study explores some of these factors, such as corporate governance and corporate social responsibility, and whether they affect earnings management practices in the financial reporting of industrial companies in the public sector in Jordan, during the period 2006-2015. This period includes 2 important events in the Jordanian context: The Corporate Governance Code, introduced in 2008/2009, and the global financial crisis in 2008. The current study has taken into consideration two periods: 2006-2008 (before the introduction of the Corporate Governance Code) and 2009-2015 (after the introduction of the Corporate Governance Code), to compare the results of this study, whilst other studies have considered only before **or** after the introduction of the Corporate Governance Code. Therefore, this study provides an analysis of the effectiveness of the code's introduction.

The current study has examined corporate governance mechanisms (ownership structure and audit committees) as control tools to ensure a firm's performance effectiveness, and to provide a way to monitor the behaviour of the managers. Additionally, the current study has examined corporate social responsibility (CSR) and evaluated how it may be used as a mask to cover earnings management practices.

This study has used discretionary accruals, derived from the Modified Jones and Modified Jones with ROA models, as a proxy for measuring earnings management. An ordinary least square regression was used to investigate the association between corporate governance mechanisms, CSR, and earnings management. The data was collected from 49 Jordanian industrial companies listed on the Amman Stock Exchange (ASE), during the period 2006-2015.

The results have revealed that institutional ownership and earnings management were positively related at significant levels, whilst insider ownership has no effect on earnings management in the Jordanian industrial sector. CSR and earnings management were found to be negatively associated at significant levels. At the same time, audit committee and earnings management were negatively but insignificantly related.

This study makes an important contribution to both the research literature and corporate governance practice. It facilitates discussion about the link between corporate governance mechanisms, CSR disclosures, and earnings management practices. Additionally, this research informs supervisory and regulatory authorities about the influence of corporate governance mechanisms, CSR disclosures and how they may be used to help avoid earnings management. This study assists the users or beneficiaries of financial reports to understand earnings management practices, and increase their awareness about this phenomenon.

Keywords: Earnings Management, Corporate Governance, Ownership Structure, Insider Ownership, Institutional Ownership, Audit Committee, Corporate Social Responsibility, and Jordan.

Certification of Thesis

This Thesis is the work of Rula Khaled Almadadha except where otherwise acknowledged, with the majority of the authorship of the papers presented as a Thesis by Publication undertaken by the Student. The work is original and has not previously been submitted for any other award, except where acknowledged.

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Statement of Contribution

The following detail is the agreed share of contribution for candidate and co-authors in the presented publications in this thesis:

- **Article I:** Almadadha, R, Rashid, A, Jones, G & Shams, S, 'Ownership Structure and Earnings Management: Evidence from Jordan'. Submitted to *Sydney International Business Research Conference (SIBRC)* 2019.

  The overall contribution of ***Rula Almadadha*** was 60% to the objectives and hypothesis formulating, development of methodology, data collection, and writing the initial draft and revising the final submission; ***Afzalur Rashid*** contributed for 15% in manuscript preparation and layout, hypothesis formulation and technical discussion; ***Gregory Jones*** contributed for 15% in reviewing the manuscript; ***Syed Shams*** contributed for 10% in reviewing the statistical analysis of the manuscript.

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Abbreviations

AC: Audit Committee
AFM: Amman Financial Market
ASB: Accounting Standards Board
ASE: Amman Stock Exchange
CASH: Cash Holding
CG: Corporate Governance
CSR: Corporate Social Responsibility
DACC: Discretionary Accruals
EM: Earnings Management
FASB: Financial Accounting Standards Board
GAAP: Generally Accepted Accounting Principles
GDP: Gross Domestic Product.
IASB: International Accounting Standards Board
IFAC: International Federation of Accountants
IFRS: International Financial Reporting Standards
INSOWN: Insider Ownership
INSTOWN: Institutional Ownership
ISAs: International Standards on Auditing
ISO: International Standards Organization
JACPA: Jordanian Association of Certified Public Accounting
JSC: Jordan Securities Commission
LEV: Financial Leverage
OECD: Organisation of Economic Cooperation and Development
PCAOB: Public Company Accounting Oversight Board
ROA: Return on Assets
SDC: Securities Depository Centre
SIZE: Firm Size
WBCSD: World Business Council for Sustainable Development

CHAPTER 1: INTRODUCTION

1. Background

Annual financial reports of companies are considered to be an important information source for many parties, whether internal users such as managers, and employees, or external users such as investors, lenders, analysts, economists, and government. The Accounting Standards Board (ASB 1999) outline in the statement of principles: "The objective of financial statements is to provide information about the financial position, performance and changes in financial position of an enterprise that is useful to a wide range of users in making economic decisions". Therefore, to achieve that purpose, financial reports must be accurate, reliable, credible and clearly reflect the details of the financial performance of the company, and this, as a result, will contribute to high quality earnings reports. The quality of the earnings reports contributes to the ability of users to evaluate reported earnings in an effort to predict future earnings by the company, and represents the degree to which earnings reflect the true underlying economic effects (Melumad & Nissim 2009; Sepe, Nelson, Tan & Spiceland 2012).

Standards setters, such as the Financial Accounting Standards Board (FASB) and the International Accounting Standards Board (IASB), list a number of qualitative characteristics that are required to achieve a high quality of financial reporting - these include relevance, faithful representation, comparability, verifiability, timeliness, and understandability. Although it is important to follow the standards when preparing the financial statements, the Generally Accepted Accounting Principles (GAAP) allow a degree of freedom to select reporting methods, estimates, and disclosures, that may be used to match the firm's underlying economics. This flexibility provides opportunities for financial reports to be exploited by the management and reported profits to be manipulated (Levitt 1998). The prospect of exploitation activities increases when there are incentives for the management to manipulate the earnings to achieve specific goals (Dechow 1996; Holland & Ramsay 2003). The ability to exploit flexibility of GAAP may encourage managers in managing earnings. Thus, earnings management occurs when managers use judgment in the financial reporting to alter the financial reports (Healy & Wahlen 1999) to present a view of the company's financial position which suits management's needs. Earnings management and earnings quality have captured researchers' attention (Ahmadpour & Shahsavari 2016), because accounting earnings

is considered to be one of the most important indicators of financial performance of the company, and this subject remains a fruitful area for academic research.

In general, earnings management is defined as the influence of the company's manager on the information provided within the financial statements, for the purpose of misleading users wanting to assess the condition of the company (Nurdiniah & Herlina 2015). As a result of the practice of earnings management, significant financial crises have occurred in international companies (Enron, WorldCom, HIH, One-Tel, and Harris Scarfe), resulting in public perceptions of weakened reliability and fairness of the published financial statements.

Previous studies have focused on earnings management and the factors that may lead to the practice of earnings management. Similarly, the current study explores factors such as corporate governance and corporate social responsibility, to examine whether they affect earnings management practices in the financial reporting of the industrial companies' in the public sector in Jordan. Unlike other studies which have focused on earnings management in developed countries (e.g. Australia, Canada, UK, and USA), this study takes a case study approach focusing on a developing Jordanian market.

This chapter is structured as follows: Section 2 reviews some of the earnings management literature. Section 3 examines some of the earnings quality literature. Section 4 appraises some of the corporate governance literature. Section 5 reviews some of the corporate social responsibility (CSR) literature. Section 6 discusses the research motivation and justification for this research. Section 7 highlights the research objectives. Section 8 discusses the research problems and questions. Section 9 presents an overview of the research importance and the expected contribution of this research to literature and practice. Section 10 describes the gap existing in the literature. Section 11 shows how the thesis's objectives have been addressed through the study's papers. Section 12 explains the structure of this thesis. Section 13 provides a chapter summary and conclusion.

2. Definitions of Earnings Management

Previous studies have provided several definitions for earnings management. For instance, Schipper (1989) defined earnings management as an intervention in the financial reporting process, to bring about personal interests, by selecting accounting methods within GAAP or by applying given methods in particular ways. Healy and

Wahlen (1999, p. 368) stated that: "Earnings management occurs when managers use judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company, or to influence contractual outcomes that depend on reported accounting numbers".

Rahman, Moniruzzaman, and Sharif (2013) defined earnings management as control of accruals by the management, to manipulate earnings. Also, earnings management can be defined as the choice of accounting policies to achieve the desired result of financial reporting (Li, Rider & Moore 2009). One recent study defining earnings management, was by Nurdiniah and Herlina (2015), who have pointed out earnings management as intervening in or influencing the information in the financial statements by a company's manager, for the purpose of deceiving the stakeholders who want to know the performance and condition of the company.

Through an examination of previous studies defining earnings management, this study has defined earnings management as the exploitation of flexibility in accounting (accounting standards, GAAP and international auditing standards), which allows managers to choose accounting methods that serve their desires or to achieve a specific goal. The following section highlights that there are several incentives and motivations for managers to engage in the practice of earnings management.

2.1 Incentives and Motivations for Earnings Management

Previous studies have indicated several motives and reasons for why managers and directors manage earnings. Hashim et al. (2013) have reported that the primary motive for directors to manage earnings was to meet market expectations and to satisfy other parties' expectations, rather than for their own benefit. Moreover, López-Iturriaga et al. (2005) and Reitenga and Tearny (2003), have pointed out in their studies that earnings management may arise as result of the agency problem, in that managers manage earnings to improve their personal situation and interests. In addition, they may manage earnings to increase the company's share price in the market, reduce political and social costs, and enhance the company's credibility (Omar et al. 2014).

Furthermore, Nurdiniah and Herlina (2015) summarised that there were several incentives to manage earnings, including the bonus motivation where the company owners promise managers they will receive a bonus if the companies' performances reach a certain level. This provides an incentive to motivate managers to manage in an

effective way, and increase earnings in order to receive the bonus. Healy and Wahlen (1999) identified three main types of incentives for earnings management, namely, capital market expectations and valuation, contracts written in terms of accounting numbers, and political and regulatory requirements.

As a result of these incentives and motivations outlined in this section, managers are able to engage in a variety of methods and procedures for managing earnings. Some of the most important method have been highlighted in the next section.

2.2 Earnings Management Methods

After discussing the incentives and reasons explaining why managers and directors may manage earnings, it is necessary to outline methods that managers may use to achieve their goals of manipulation of data and accounting figures. There are several methods managers resort to in order to manage earnings. The current study discusses some of the most important of these methods.

Radzi et al. (2011) clarified that one method used by managers to manage earnings, is using the way accounting standards can be interpreted. This opportunity arises from exploiting the underlying flexibility in GAAP, and it is therefore difficult for outside parties to confirm whether changes in the application of accounting standards made by the company, represent manipulation, or the genuine application to present relevant and reliable financial reports. Rahman, Moniruzzaman, and Sharif (2013) hold the view that managers can use the flexibility allowed in GAAP to change reported earnings, without changing the underlying cash flows, which Healy and Wahlen (1999) call the use of administrative judgment in financial reporting “accounting profit management”. Consequently, managers can use the flexibility of GAAP and subjectivity in application of the accounting standards as a method of manipulating accounting numbers and managing earnings to achieve the desired objectives. Whether or not those objectives are to present more relevant and reliable information, or to manipulate the reports to present desired results, they are both an application of earnings management.

Another significant method that managers may use to manage earnings are through the use of accruals management. Management of accruals may misrepresent financial information to users of financial reports, if they rely on the reports and are unaware of how the accruals are calculated. The accruals basis provides an opportunity

for managers to alter information within the financial statements, to generate earnings and results from the flexibility within the GAAP to choose accounting methods (Nurdiniah & Herlina 2015). Accruals are defined as the difference between earnings, and cash flows from operating activities (Dechow, Kothari & Watts 1998). Managers may use earnings management methods, based on an accrual basis, to utilise the flexibility contained within the accounting rules, and report earnings figures that meet or exceed the expectations of analysts (Li, Rider & Moore 2009). Previous studies have primarily used the accruals as a proxy to measure earnings management (Healy 1985; DeAngelo 1986; Jones 1991; Dechow et al. 1995). Total accruals can be split into discretionary and non-discretionary categories (Goel 2016). So, managers may increase or decrease the levels of accounting accruals (such as inventory, deferred revenue, payable, accrued liabilities, prepaid expenses, and receivables) in order to achieve desired profit and goals (Dharan 2003). Therefore, accruals can be used as a tool by managers to manage earnings or manipulate and change reported accounting figures. Based on discretionary accruals, managers are able to make changes to accounting estimates for certain accounts such as depreciation, production life, long-term construction contracts, inventory, deferred revenue, payable, accrued liabilities, prepaid expenses, receivables, etc. This method provides managers with an opportunity to give manipulated estimates, but satisfy their desired outcomes and achieve their goals.

Furthermore, managers are able to adopt different accounting methods to manage earnings, such as inventory valuation methods (e.g. FIFO, LIFO) (Cook et al. 2012) as these methods has an impact on total assets, or delaying expenditures method by rotating expenses as capital expenditure and distributing to subsequent years or accelerating revenue recognition by recognising revenue in the current year, even though it belongs to more than one financial year are another. Some managers may also add fraudulent expenses or revenue or reduce retirement allowances (Betty et al. 2002). Similarly, Rahman et al. (2013) explained that earnings management is an attempt by the management to influence or manipulate reported earnings using specific accounting methods, or to change accounting methods by recognising one-time non-recurring items, accelerating expenses or revenue processes, or using other methods designed to influence short-term earnings.

Based on the above, managers may resort to a variety of methods to manipulate accounting figures and practicing earnings management. This may be done in order to

achieve several goals, as mentioned in the section on incentives, to practice earnings management, such as meeting market expectations and analysts' expectations, increasing their chances of obtaining bonuses or compensation or stock options, and responding to political and regulatory requirements. These methods may be difficult to detect especially for investors or users of accounting reports and financial statements, but as mentioned, previous studies have tried to find a clear measurement method to detect the practice of earnings management. This is further explained in the next section.

2.3 The Development of Earnings Management Models

A model is a representation of facts that belong to real or physical life, by using a number of meaningful symbols and simplifying what is complex (Kighir, Omar & Mohamed 2014). Previous studies have developed several models to measure earnings management, each model measuring earnings management by using a different method and a particular type of data. Examples of models used in previous studies, include the Healy Model 1985, DeAngelo Model 1986, Jones Model 1991, and the Modified Jones Model by Dechow et al. 1995.

In the current study, accounting accruals will be used as a method to measure earnings management activities. As mentioned previously, accruals are defined as the difference between earnings and cash flows from operating activities (Dechow, Kothari & Watts 1998). Accruals can be classified into non-discretionary accruals and discretionary accruals. Non-discretionary accruals are the modifications to the cash flows of the company by application of the accounting standards, while discretionary accruals are modifications to cash flows by applying flexibility allowed within the accounting standards, and are selected by the managers (McNichols & Wilson 1988; Schipper 1989; Rao & Dandale 2008; Isenmila & Elijah 2012). Accruals can provide managers with different techniques to manage earnings. Some studies such as Healy (1985), used total accruals to measure earnings management. Subsequent studies separated them into discretionary and non-discretionary accruals and used just discretionary accruals to measure earnings management, because non-discretionary accruals were considered to reflect non-manipulated accounting accruals items, which were out of managers' control (Al-Fayoumi, Abuzayed & Alexander 2010).

This section provides and discusses earnings management models (accruals-based models). These models are the most common and widely used models, and they

are the strongest models to measure earnings management (Guay et al.1996; Peasnell, Pope & Young 2000; Bedard et al. 2004; Hamdan et al. 2013; Nour & Mattar 2015).

2.3.1 The Healy's Model (1985)

Healy (1985) summarised the previous studies which tested the association between managers' accrual and accounting procedure decisions, and their income reporting incentives. He developed an accruals model to measure earnings management, relying on total accruals as a proxy. However, there are some limitations in Healy's approach. These limitations are mostly arising due to observing earnings after earnings management has occurred (Al-Masarwah 2015).

2.3.2 The DeAngelo's Model (1986)

DeAngelo (1986) used a different method from Healy (1985) to calculate total accruals, relying on the average changes of discretionary and non-discretionary accruals.

Healy (1985) developed an approach that used the firm's operating cash flows as a proxy for what earnings would have been, absent from managerial income manipulation. This approach has been identified as having several limitations, the most important of which is that total accrual contains both a discretionary and a non-discretionary component, which may create a noise problem. The DeAngelo (1986) model sought to reduce this problem, by considering total accruals change in all current operating accounts, instead of only using operating accounts (e.g. depreciation, accounts receivable, income tax payable, deferred income tax, account payable and inventory) (Al-Masarwah 2015).

Therefore, Healy (1985) and DeAngelo (1986) have used total accruals as a proxy to measure earnings management, however total accruals consist of discretionary accruals (controlled by managers), and non-discretionary accruals (reflecting business conditions), and it is more likely for managers to use only discretionary accruals to practice earnings management. The reason for that, is it gives them an opportunity to choose the accounting methods and accounting estimates appropriate for their objectives, and furthermore, non-discretionary accruals are out of managers' control. Previous studies have required separation of total accruals into discretionary and non-discretionary, and used discretionary accruals as a proxy for earnings management. Therefore, separation of types of accruals is a very important

issue for accurate results. This is further explained and clarified in the explanation of the following models. A review of the literature makes it obvious that the Jones (1991) and the modified Jones (1995) models, are the most frequently used by academic researchers for separating discretionary and non-discretionary accruals.

2.3.3 The Jones's Model (1991)

Jones (1991) in his model proposed that the discretionary portion of total accruals should be used to capture earnings management. This was a departure from previous models which used total accruals to capture earnings management. Total accruals were calculated in the Jones' version as the change in noncash working capital before income taxes payable, less total depreciation expense. The change in noncash working capital before taxes, was measured as the change in current assets other than cash and short-term investments, less current liabilities other than current maturities of long-term liabilities, and income taxes payable.

Furthermore, Jones relied on the expectations model used by the DeAngelo (1986) model. One of the limitations of this model, is that it assumes that managers do not practise discretion over revenues, and this may lead to an error in determining the discretionary accruals when managers practise discretion in revenues. Another limitation of this model, was that it may provide a biased representation of accruals due to the neglecting of expenses (Habbash 2010).

2.3.4 The Modified Jones Model (Developed by Dechow, Sloan and Sweeney, 1995)

Dechow et al. (1995) studied the possible misspecifications in tests for earnings management, and their impact on inferences concerning earnings management. They used discretionary accruals to measure earnings management, and explained that the usual starting point for measuring discretionary accruals was the total accruals as stated in previous models. According to the modified Jones's model by Dechow et al. (1995), total accruals (TA) are computed as the difference between earnings and cash flows from operating activities.

They studied, summarised, and evaluated the prior models (Healy's model, DeAngelo's model, Jones's model), then extended those models to develop the modified Jones model. They found that the Jones's model and modified Jones's model were the best in detecting earnings management, and the modified Jones model was

the most powerful model in detecting earnings management. This was because Dechow et al. (1995) used time series data to perform the research, and as this model was a modification of the Jones model, it has lower standard errors than the other models. This information means that the modified Jones model has better capabilities to detect earnings management.

Thus, the Dechow et al. (1995) model when compared to other models, became accepted as the most powerful model for measuring earnings management. However, Choi et al. (2007) documented in their study a different perspective, proposing that the modified Jones's model was not effective in measuring discretionary accruals for Korean firms. This was unlike many other studies, which agreed that the modified Jones's model, proposed by Dechow et al. (1995), was a more powerful method to detect earnings management in both developed and developing countries, such as: USA, UK, Malaysia, Taiwan, and India, etc. (Islam et al. 2011).

3. Earnings Quality

Earnings quality is one of the most important characteristics of financial statements. It reflects current performance and is useful for predicting future performance (Black 1980). Moreover, Melumad and Nissim (2009) summarised that the most important elements illustrating the concept of earnings quality, include: stability, where high quality earnings exhibit low volatility over time, and enhancing predictability. Higher earnings quality means more accruals realised as cash (Dechow & Dichev 2002). In addition, higher quality earnings are earnings that represent faithfully the firm's fundamental earnings process, which were relevant to a specific decision made by a specific decision maker (Dechow, Ge & Schrand 2010).

Earnings quality is one of the most important concerns in the preparation of financial reports, and is reflective of the overall financial reporting quality (Bissessur 2008). Therefore, the quality of earnings demonstrates the company's financial reports in a manner which gives users of financial statements, the confidence to rely on the reports, the ability to evaluate the current company's performances, and to predict the future performance of the company.

Different views come from previous studies in relation to earnings quality properties. Some suggest that the sustainability of earnings is a measure of earnings quality, and is an indicator of the relationship between current earnings and future earnings (Sloan 1996; Altamuro & Beatty 2007). Other studies suggest that the

indicator of the quality of earnings is that it is free from earnings management practices (Dechow & Dichev 2002; Francis et al. 2002). Dechow, Ge, and Schrand (2010) pointed out that previous studies have used different measures as indicators of earnings quality, including persistence, accruals, smoothness, timeliness, loss avoidance and investor responsiveness. Dechow et al. (2010) asserted that there is no one definition of earnings quality because ‘‘quality’’ is dependent on the context of the decision, and also it is a function of the company's core performance.

Previous studies have found that the quality of earnings and earnings management have an inverse relationship, where earnings management leads to a reduction in the quality of earnings and vice versa (Healy & Wahlen 1999; Radzi et al. 2011). This assertion will be further discussed in the following section.

3.1 Relationship between Earnings Management and Earnings Quality

Earnings management and earnings quality are two sides of the same coin (Azzoz & Khamees 2016), proposing that when earnings quality is high, earnings management is low, and vice versa. Bhattacharya, Daouk, and Welker (2003) assert that earnings quality can be measured by levels of earnings management. Williams et al. (2005), Dechow, Ge, Larson, and Sloan (2011), and Radzi et al. (2011) hold the view that earnings management is the most important determinant of earnings quality, where earnings management is considered a strong indicator of earnings quality. Therefore, prior research has demonstrated that earnings management has an effect on the quality of financial statements and usefulness of financial statements to users.

Earnings management and earnings quality are often used as interchangeable concepts. High earnings management can produce low-quality earnings, and information manipulation may lead to incorrect decisions (Healy & Wahlen 1999; Ahadiat et al. 2012; Azzoz et al. 2016). However, the lack of earnings management is not the only factor which can lead to a high quality of earnings, because other factors may increase earnings quality, such as capital market and management compensation (Lo 2008).

Consequently, standard setters have sought to develop accounting standards that improve earnings quality and reduce earnings management, and many recent changes in audit, corporate governance, and law enforcement, have a similar goal (Ewert & Wagenhofer 2011).

The previous studies have given a great deal of attention to the factors that affect earnings management and earnings quality. The current study focuses on the most important influencing factors that may affect earnings management, which are: corporate governance mechanisms (ownership structure, audit committee) and corporate social responsibility (CSR). These factors will be discussed in the next section.

4. Corporate Governance

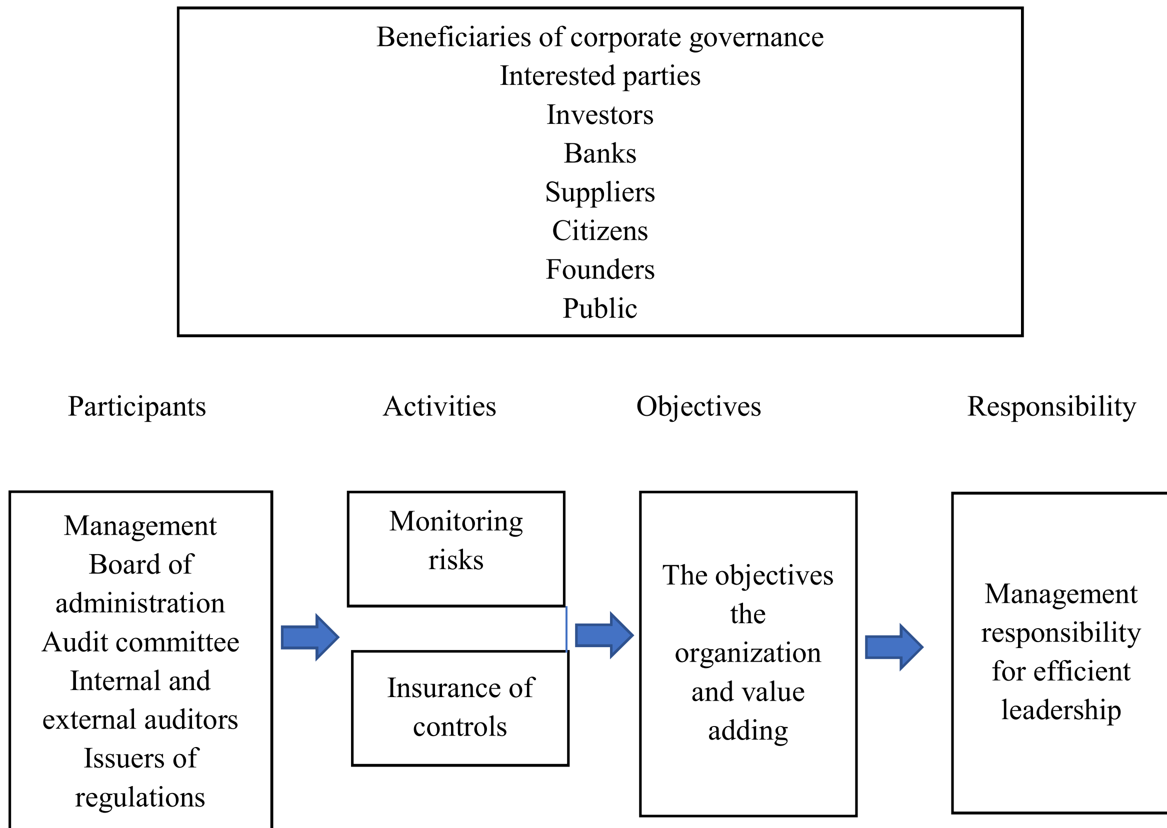
Corporate governance plays an important role in controlling and monitoring management activities. There are a number of ways of defining corporate governance. The definition of corporate governance most widely used is "the system by which companies are directed and controlled" (Cadbury Committee 2012). Corporate governance has also been defined as the connection between the corporation and all of its stakeholders (Arsoy & Crowther 2008).

Similarly, the Organisation of Economic Cooperation and Development (OECD 2004) defined corporate governance as “The system by which business corporations are directed and controlled. The corporate governance structure specifies the distribution of rights and responsibilities among different participants in the corporation, such as the board, managers, shareholders and other stakeholders and spells out the rules and procedures for making decisions on corporate affairs. By doing this, it also provides the structure through which the company objectives are set, and the means of attaining those objectives and monitoring performance”. OECD (2015) pointed out that good corporate governance is not an end in itself, but it is a way to create trust in the market and business integrity, which in turn is a primary concern for companies wanting to attract long term investment and to maintain the confidence of investors.

Therefore, corporate governance may be considered a system that includes rules, practices, policies, and processes for management, for the control and monitoring of companies. It is also a tool of control over companies, which monitors and supervises the rights and duties of stakeholders, such as shareholders, management, customers, suppliers, financiers, government and the community. Its aim is to achieve the company's and the stakeholders’ interests, and hamper the special interests of managers through its laws and regulations (Man and Wong 2013). Thus, improving corporate governance will balance the interests of managers and other

stakeholders, and may improve disclosure and the quality of information in financial reports. Dima and Brancoveanu (2013) have pointed out that there are several characteristics of corporate governance which are shown in figure 1.1.

Figure (1.1): Characteristics of Corporate Governance



Source: Dima and Brancoveanu (2013), adaptation after Dana R. Hermanson, Larry E. Rittenberg (2003).

Additionally, the OECD (2015) explained the principles of corporate governance as follows (translated adapted from OECD 2015):

- The corporate governance framework should promote transparency and efficiency of markets, and efficient resource allocation. They should support effective oversight and enforcement, and harmonised with the rule of law.
- The corporate governance framework should guarantee the shareholder rights and ensure fair treatment for all shareholders.
- The corporate governance framework should provide fit incentives for all stages of investment, and allow equity markets to operate in a way that improves corporate governance.

- The corporate governance framework should recognise the stakeholder's rights, and encourage active cooperation between companies and stakeholders, in creating added value, jobs, and sustainability of financially sound enterprises.
- The corporate governance framework should provide accurate and timely disclosure of all material matters relating to the corporation.
- The corporate governance framework should ensure the effective strategic coordination, effective supervision by the board of directors, and board accountability to the company and shareholders.

The conclusion from the above, is that effective corporate governance seeks to achieve a balance between the company and the stakeholder's interests. In order to achieve this balance, it is necessary to ensure that the company has effective controls, which, in turn will lead to the accurate disclosure of all material matters relating to the company. When discussing corporate governance, it is important to consider the mechanisms for guaranteeing shareholders' rights and resolving conflicts. Corporate governance encompasses mechanisms through which outside investors can protect their interests against insiders (La Porta et al. 2000). These mechanisms are tools for controlling and monitoring within the company, that explain the relationship between management and stakeholders and will be discussed in the next sections.

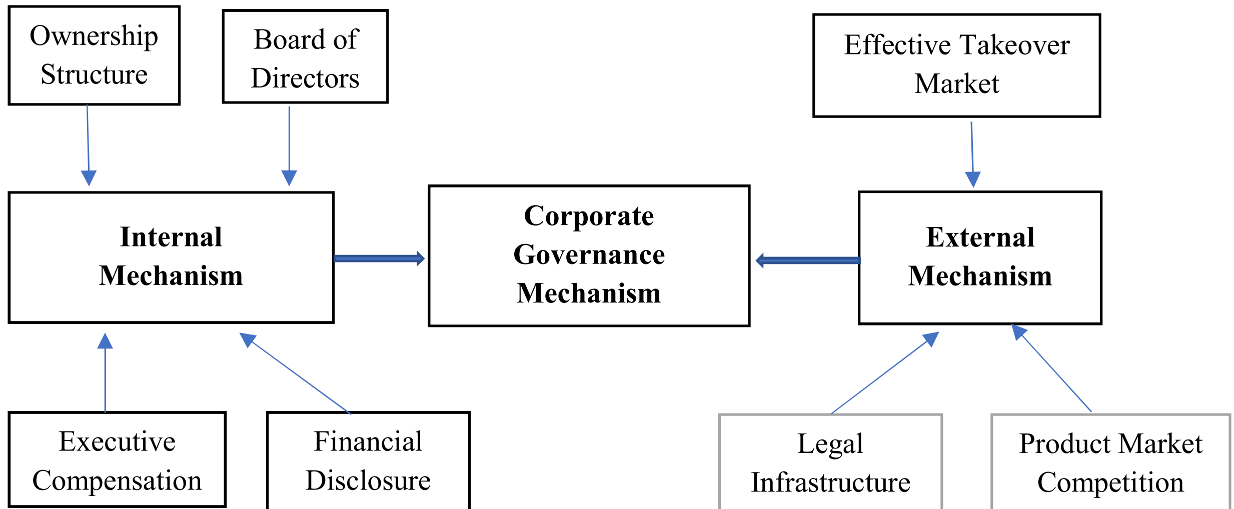
4.1 Corporate Governance Mechanisms

Corporate governance mechanisms have attracted the attention of researchers, especially after the separation of ownership from management in modern companies, as this practice may lead to potential conflicts of interest between owners and agents (Habbash 2010). One important aspect of corporate governance is that it is a system aimed at controlling and supervising companies, whilst protecting stakeholders through several corporate governance mechanisms. In other words, corporate governance mechanisms seek to ensure that managers and other insiders always take appropriate measures to protect the interests of stakeholders (Al-Haddad et al. 2011).

Ahmed et al. (2008) explained that there are two types of mechanisms which are able to resolve conflicts of interests between various parties in the firm, such as owners and managers, and majority and minority of shareholders. The first type includes different internal mechanisms, such as: the ownership structure, the board of

directors, executive compensation, and financial disclosure. The second includes external mechanisms, such as: an effective acquisition market, legal infrastructure, and competition in a productive market. As shown in figure 1.2.

Figure (1.2): Corporate Governance Mechanisms



Source: Ahmed, Alam, Jafar, and Zaman (2008).

Man and Wong (2013) have identified external mechanisms that are available to govern firms in the interests of stakeholders, including items such as legal protection and takeover rules. Whilst, internal mechanisms include internal contributions by management, as well as the structure and characteristics of the board of directors, including the percentage of independent members, directors' backgrounds, audit committees, remuneration committees and ownership structures.

This study explores the mechanisms of corporate governance that affect earnings management. These mechanisms include ownership structure (insider ownership and institutional ownership), and existence of an internal audit committee. These mechanisms are important and considered to be corporate governance control tools. They are used to ensure the firm's performance effectiveness and provide a way to monitor the behaviour of the managers (Adams 2000; Mohamad et al. 2010; Hamdan et al. 2013; Abu Siam et al. 2014). Furthermore, these mechanisms provide protection for shareholders. Prior studies have documented the relationship between corporate governance mechanisms and earnings management, however, it appears that there is no general agreement regarding the effect of corporate governance mechanisms on earnings management (Attia & Hegazy 2015; Omoye & Eriki 2014;

Isenmila & Elijah 2012; Al-Fayoumi et al. 2010). The following is a general explanation of each of these mechanisms, and their effectiveness in controlling earnings management.

4.1.1 Ownership Structure

An important issue related to corporate governance practices is the ownership structure and its relationship to a firm's performance, top management, and earnings management. The structure of ownership is defined not only by the distribution of property rights in respect of votes and capital, but also by the identity of equity holders (Wahl 2006). This structure of the distribution of ownership in a company, determines the strength and control of both managers and shareholders. The following sections illustrate two types of ownership: insider ownership, and institutional ownership and their impact on earnings management.

4.1.1.1 Insider Ownership

Insiders are defined as persons who work within the company or are employed within the company they own (Wahl 2006). Al-Fayoumi et al. (2010) have identified insider ownership, by the percentage of shares held by officers or directors within the firm and their families. The views and results of previous studies, differed regarding insider ownership and its relationship with earnings management. This issue has been covered and discussed in ***paper I***.

The discussions presented in ***paper I*** show that the previous studies are divided into two parts with respect to insider ownership and their relationship to earnings management. Firstly, insider owners are those who work within the company and who hold a large share of the company's shares. They are considered to have an effective control role over the decisions and performance of the company. They are less likely to exhibit opportunistic behaviours such as earnings management, so as not to harm their interests and property, and have a desire to increase the value of the company (Warfield et al. 1995; Alzoubi & Selamat 2012; Huang, Wang & Zhou 2013). Secondly, it is proposed that insider owners who hold a large share of the company's shares, have greater authority and are more integrated into the company's decisions and performance. Which gives them the opportunity to engage in earnings management to achieve their goals (Yeo et al. 2002; Huang, Wang & Zhou 2013).

Therefore, it appears that there is no general agreement regarding the effect of insider ownership on earnings management.

However, in line with agency theory and published empirical results, ***paper I*** hypothesises that a high level of insider ownership is associated with less earnings management. In this scenario, managers avoid any opportunistic behaviour that may affect the value of their shares or interests in the company. Therefore, agency theory suggests that managerial shareholdings encourage managers to improve the value of the company, because managers bear the proportion of wealth effects as shareholders (Alves 2012). Consequently, insider ownership may be considered as a mechanism to control managerial opportunistic behaviour (Klein 2002; Teshima & Shuto 2008). Furthermore, from an agency theory perspective, high insider ownership may improve the structure of corporate governance, which is reflected by a high quality in financial reporting (Ballesta & Meca 2005). Based on the previous discussion, ***paper I*** expects that increased insider ownership may reduce the level of earnings management practises.

4.1.1.2 Institutional Ownership

Al-Fayoumi et al. (2010) defined institutional ownership as the percentage of shares owned by institutions, which includes shares held through social security and other funds. They also referred to Koh (2003) who listed the following organisations as institutional investors: insurance companies (life and non-life), pension funds, investment companies, and financial institutions, including banks. Likewise, Velury and Jenkins (2006) defined institutional ownership as large investors such as bank trusts, insurance companies, mutual funds and pension funds that invest on behalf of others. The views and results of previous studies differed regarding institutional ownership and its relationship with earnings management. This issue has also been covered and discussed in ***paper I***.

The discussions presented in ***paper I*** show that the previous studies have two views in terms of the relationship between institutional ownership and earnings management. Firstly, institutional ownership can be seen as a tool to monitor the performance and activities of the company's management. Their presence can limit managers' recourse to opportunistic behaviour and earnings management (Chung et al. 2002; Alves 2012; Njah & Jarboui 2013; Ajay & Madhumathi 2015). Alternatively, institutional ownership does not have an effective role as a monitoring tool for

management activities. The reason for this is that managers may feel more forced to meet expectations of earnings targets of these investors, and thereby engage in manipulation of earnings, and may increase management incentives to participate in opportunist behaviour (Pound 1988; Duggal & Millar 1999; Cornett, Marcus, & Tehranian 2008).

However, ***paper I*** in this regard depicts institutional ownership as a monitoring tool, which can assist in improving the performance and activities of the company's management, as well as it may prevent managers practising earnings management, as confirmed by many studies (Bushee 1998; Chung et al. 2002; Koh 2003). Based on that, ***paper I*** expects that higher institutional ownership is associated with less earnings management.

4.1.2 Audit Committee

The audit committee is an important corporate governance mechanism, which aims at controlling the performance of its members, and verifying the accuracy and transparency of financial statements, and provides an oversight of the company's financial reporting process. The audit committee has a particular role in ensuring that shareholders' interests are properly protected in the process of preparing financial reports, and provision of internal controls and audit activities (Issarawornrawanich 2015). The board of directors is responsible for establishing an internal audit committee that has the ability to assess the structure of the company and its governance. The Public Company Accounting Oversight Board (PCAOB 2012, p. 34) defines the audit committee as: *a committee (or equivalent body) established by and among the board of directors of a company, for the purpose of overseeing the accounting and financial reporting processes of the company and audits of the financial statements of the company.*

The audit committee can improve the quality and accuracy of financial information by reviewing financial statements, accounts, processes, and disclosures in financial statements and reports. Therefore, as a part of the corporate governance mechanism, the audit committee has an important and effective role as a control and oversight tool in reducing opportunistic behaviours such as manipulation and earnings management. As a result, the audit committee can improve and increase the quality of earnings and the quality of financial reports. This has been demonstrated by many studies (see, Vafeas 2005; Baxter & Cotter 2009; Albersmann & Hohenfels 2017).

However, some studies have contradicted that belief and found the existence of an audit committee does not play a vital role in constraining earnings management (Osma & Noguer 2007; Haniffa et al. 2006; Habbash 2011; Waweru & Riro 2013). This issue has been covered and discussed in ***paper II***.

Paper II presents the view that the presence of an audit committee is related to less earnings management. The reason is, that from the agency theory perspective, the audit committee performs oversight and audit functions as a governance mechanism to reduce information asymmetry between stakeholders and managers, thereby alleviating agency problems (Lin, Hutchinson & Percy 2009). Therefore, the presence of an audit committee in the company increases earnings quality, and reduces the practice of earnings management. Also, the existence of full audit committees with the following characteristics (made up of qualified members, audit committee independence, a high level of audit committee expertise, frequent meetings, and a large audit committee) and good audit committee structure, serves to strengthen corporate governance and thus limits the level of earnings management (Davidson et al. 2005; Vafeas 2005). Based on that, ***paper II*** expects that the existence of an internal audit committee is associated with less earnings management.

5. Corporate Social Responsibility (CSR)

CSR is an activity which indicates the extent to which companies are interested in society as a whole. The most important objective for CSR, is about building sustainability for business in a responsible manner (Moir 2001). CSR is related to ethical and moral aspects about corporate decision-making and behaviour (Branco & Rodrigues 2006). The World Business Council for Sustainable Development (WBCSD 2000, p. 6) defines CSR in the following terms: "Corporate Social Responsibility is the continuing commitment by business to contribute to economic development while improving the quality of life of the workforce and their families as well as of the community and society at large." where CSR includes many aspects, such as human rights, employee relations, corporate ethics, community relations, fair market operations and the environment (Hamidu, Haron & Amran 2015). Likewise, Smith (2011) pointed out that the International Standards Organization (ISO) has identified seven key issues of social responsibility: organisational governance, community involvement and development, human rights, labour practices, the environment, fair operating practices, and consumer issues.

Dahlsrud (2008) concluded that there are five dimensions of CSR which are based on analysing 37 definitions used by previous studies. These dimensions are: environmental, social, economic, stakeholder, and voluntariness dimension. Table (1.1) summarises these dimensions.

Table (1.1): The Five Dimensions of Corporate Social Responsibility

Dimensions	The definition is coded to the dimension if it refers to	Example phrases
The environmental dimension	The natural environment	'a cleaner environment' 'environmental stewardship' 'environmental concerns in business operations'
The social dimension	The relationship between business and society	'contribute to a better society' 'integrate social concerns into their business operations'
The economic dimension	Socio-economic or financial aspects, including describing CSR in terms of a business operation	'contribute to economic development' 'preserving the profitability' 'business operations'
The stakeholder dimension	Stakeholders or stakeholder groups	interactions with their stakeholders' 'how organizations interact with their employees, suppliers, customers and communities'
The voluntariness dimension	Actions not prescribed by law	'based on ethical values' 'beyond legal obligations' 'voluntary'

Source: The five dimensions, how the coding scheme was applied and example phrases (Dahlsrud 2008)

CSR is a significant issue for companies, and previous studies have focused on CSR and its relationship with earnings management. The views and results of previous studies differed, regarding CSR and its relationship with earnings management. Many previous studies have suggested that companies who provide CSR reports are less

likely to be involved in financial manipulations and earnings management (see, Yip et al. 2011; Hong & Andersen 2011; Kim et al. 2012). Other studies are concerned that CSR may be used as a mask to cover earnings management, and that it is used by managers to achieve their own special goals. In other words, firms may use CSR reporting as a tool to hide their earnings management activities (Prior et al. 2008; Salewski & Zulch 2014; Muttakin, Khan & Azim 2015). This issue has been covered and discussed in ***paper III***.

Paper III expects CSR to be positively related to earnings management, and CSR disclosures to be related to more earnings management practices. In this case, the managers may resort to opportunistic behaviors to cover weaknesses in the company, or to hide earnings management through CSR disclosures.

6. Study Motivation and Justification

This study is motivated by the global attention to corporate governance mechanisms and its relationship with earnings management (Al-Fayoumi et al. 2010; Abed et al. 2012; Abbadi et al. 2016). Previous research has suggested, poor corporate governance, earnings management and companies' failure, are interrelated issues (Charitou et al. 2007; Lara et al. 2009). Poor corporate governance practices have been cited as one of the causes of corporate collapses (Adeyemi & Fagbemi 2010). In addition, the current study is interested with CSR disclosures and its relationship with earnings management, as firms may use CSR reporting as a tool to hide their earnings management activities (Salewski & Zulch 2014) and the managers may resort to opportunistic behaviors to cover the company's weakness or hide earnings management through these CSR disclosures.

The current study explores the factors (corporate governance mechanisms and CSR disclosures) that influence earnings management, with a specific focus on the developing Jordanian market as a case study, unlike other studies which give more attention to developed countries (e.g. Australia, Canada, UK, and USA).

The decision to focus on Jordan is motived by several factors. The dearth of the corporate governance mechanisms, CSR, and earnings management research in the Jordanian context as a developing country (Al-Fayoumi et al. 2010; Abed et al. 2012; Alzoubi 2015); a high rate of failure and bankruptcy cases amongst Jordanian firms (Zureigat et al. 2014); the significant financial collapses that have happened in the world which had an impact on the Jordanian economy provide further justification for

this study. Finally, there has been significant attention paid to consolidating the support for corporate governance in Jordan (Al-Fayoumi et al. 2010) when the corporate governance code for shareholding companies listed on the Amman stock exchange (ASE), came into effect on 1 January 2009 (Securities Depository Centre, SDC 2017). For these reasons, Jordan has been selected as a case study for this research.

7. Research Objectives

This study explores the factors that affect earnings management practises. These factors include corporate governance mechanisms (ownership structure and internal audit committee) and corporate social responsibility (CSR) disclosures. Thus, this study seeks to achieve the following objectives:

- Examine the relationship between insider ownership and earnings management practises.
- Examine the relationship between institutional ownership and earnings management practises.
- Examine the relationship between internal audit committee and earnings management practises.
- Examine the relationship between company attitudes to CSR and earnings management practises.

8. Research Problem and Questions

This research problem can be summarised by the lack of knowledge and awareness of earnings management practices and its implications particularly within the Jordanian context as mentioned earlier. Moreover, this research provides insights into the controversy surrounding the relationship between earnings management practices and influencing factors such as corporate governance mechanisms and CSR. The main research questions that were addressed through this study are:

- What is the impact of insider ownership on earnings management practises in the Jordanian industrial public sector?
- What is the impact of institutional ownership on earnings management practises in the Jordanian industrial public sector?
- What is the impact of internal audit committee on earnings management practises in the Jordanian industrial public sector?

- What is the impact of CSR disclosures on earnings management practises in the Jordanian industrial public sector?

9. Research Importance

This study makes an important contribution to both the research literature and corporate governance practice. Firstly: contribution to literature; this study facilitates discussion about the link between corporate governance mechanisms, CSR disclosures, and earnings management practices. It clarifies the factors that have the capacity to affect earnings management, and therefore affect the quality of earnings reporting. This study also adds to the literature by investigating the impact of corporate governance mechanisms and CSR disclosures on earnings management in the Jordanian industrial public-sector context during (2006-2015). This period includes important events within the Jordanian context: the corporate governance code was introduced in 2008/2009; and the global financial crisis occurred in 2008. Consequently, the current study provides an opportunity to compare the results of this study before and after the introduction of corporate governance code. Therefore, it provides an analysis of the effectiveness of the code's introduction.

Secondly: contribution to practice; this study informs supervisory and regulatory authorities about the influence of corporate governance mechanisms, CSR disclosures and how they may be used to help avoiding earnings management. This study assists the users or beneficiaries of financial reports to understand earnings management practices and increase their awareness about this phenomenon. Thus, it may help in improving the corporate governance practices and may help increase the reliability of the financial statements in the Jordanian industrial public sector.

10. The Gap in the Literature

In the light of the above mentioned, the research gaps can be identified as: Firstly, corporate governance mechanisms, CSR disclosures, and earnings management are described important issues in the literature. However, there is a current lack of research exploring the relationship between these issues in the Jordanian context (Al-Fayoumi et al. 2010; Abed et al. 2012; Abu Siam et al. 2014; Alzoubi 2015; Abbadi et al. 2016). Secondly, there is an omission within the previous studies of some important events which occurred in 2008/2009, these years include

important events in the Jordanian context: corporate governance code introduced in 2008/2009; and the global financial crisis in 2008. The current study has taken into consideration two periods 2006-2008 (before introducing the corporate governance code), and 2009-2015 (after introducing the corporate governance code), to compare the results of this study, whilst other studies take into consideration only before or after introduction of the corporate governance code. Consequently, the current study will provide an opportunity to compare the results before and after the introduction of corporate governance code, providing an analysis of the effectiveness of the code's introduction. The current study thus adds value in terms of knowledge to existing studies.

11. Addressing Thesis Objectives Through the Study's Papers

The first and second objective were accomplished, and the outcomes were presented in ***paper I***. The relationship between ownership structure (insider and institutional), and earnings management practices, was examined. The third objective was addressed in ***paper II***. The relationship between audit committee and earnings management practices was examined. The fourth objective was addressed in ***paper III***. The relationship between company attitudes to CSR and earnings management practices was examined. These papers highlighted the relationship between corporate governance mechanisms and earnings management practices from one hand, and corporate social responsibility and earnings management practices from the other hand, in the Jordanian industrial sector which is the main focus of this study.

12. Structure of this Thesis

Table (1.2): Structure of this Thesis

Chapter 1: Introduction	This chapter provides an overview of this PHD thesis, and it provides a background to this thesis. This chapter explains the motivation and justification of this study, the research objectives, the research problem and questions, the research importance and the contribution of this study to literature and practice, and the gap in the literature. This chapter also outlines the structure of the thesis.

Chapter 2: Institutional Background of Jordan Context	Chapter two describes an insight of institutional background of Jordan context. It beings with providing a brief view of the background of Jordanian context. Also, a number of corporate governance issues in Jordanian context are covered in this chapter such as: the emergence and development of Jordanian corporate governance code; and discussed the most important mechanisms within the Jordanian corporate governance. In addition, this chapter has discussed the institutional framework and the dimensions of Jordanian corporate governance.
Paper I	**Objective 1 & 2:** • Examine the relationship between insider ownership and earnings management practises. • Examine the relationship between institutional ownership and earnings management practises. **Summary outcomes:** The paper found that institutional ownership and earnings management were positively related, whilst the insider ownership has no effect on earnings management in the Jordanian industrial sector.
Paper II	**Objective 3:** • Examine the relationship between audit committee and earnings management practises. **Summary outcomes:** The paper found that audit committee and earnings management were negatively but insignificantly related in the Jordanian industrial sector.
Paper III	**Objective 4:** • Examine the relationship between company attitudes to CSR and earnings management practises. **Summary outcomes:** The paper found that CSR and earnings management are negatively associated.

Conclusions	• Summary of key outcomes from all papers. • Limitations and Recommendations for future research.

13. Chapter Summary and Conclusion

This chapter is the introduction chapter of this thesis. It begins with the general introduction background related to earnings management: definition, motivations, methods, and models used to detect earnings management. Subsequently, the quality of earnings and its relationship to earnings management were discussed. Then, it offered and reviewed corporate governance mechanisms. Two mechanisms of corporate governance were discussed in this chapter: ownership structure and audit committee. In addition, this chapter presented a brief discussion about corporate social responsibility. This chapter has provided a general summary of corporate governance mechanisms, corporate social responsibility and earnings management literature, and outlines a general understanding of this topic. This has helped to identify the concerns and shortcomings of previous studies, which has been used to develop hypotheses related to research.

In addition, this chapter has explained the motivation and justification of this study, the research objectives, the research problem and questions, the research importance and the contribution of this study to literature and practice, and the gap in the literature. This chapter has shown how the thesis's objectives have been addressed through the study's papers. This chapter also has outlined the structure of the thesis.

The next chapter of this thesis introduces a brief view of the background in the Jordanian context, as well as discussing a number of corporate governance issues in the Jordanian context.

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CHAPTER 2: INSTITUTIONAL BACKGROUND OF JORDAN CONTEXT

1. Introduction

This chapter has provided an overview of the institutional background of Jordan, as well as highlights of the historical background of Jordan, Jordanian laws, its location, the culture of legal systems, the Jordanian economy, and one of the most important sectors in Jordan, the industrial sector. Also, this chapter has discussed a number of corporate governance issues in the Jordanian context and its mechanisms. The institutional framework for corporate governance in Jordan was also reviewed. Understanding the underlying issues has helped to frame and explain the research results, which has provided a wider and more general framework regarding this topic.

Accordingly, this chapter has been structured as follows: Section 2 has presented a brief background of Jordan. Section 3 has shed light on the development of corporate governance in Jordan. Section 4 has covered the institutional framework of corporate governance in Jordan. Section 5 has presented corporate governance mechanisms in Jordan. Section 6 has provided a brief overview about corporate social responsibility activities in Jordan. Section 7 has discussed earnings management in Jordan. Section 8 has presented an overall chapter summary.

2. A Brief Background of Jordan

Jordan, one of the most modern countries in the Middle East, gained independence and was declared a kingdom in 1946. Jordan is governed by a royal parliamentary system. The legal system of Jordan has been affected by a variety of sources: the civil law family, Islamic law, and customary law. The legal system of Jordan has developed from codes of law founded by the Ottoman Empire (Al-Tal 2014). These codes were complemented by British laws, during the period of the British mandate in Jordan (1922-1946).

Jordan has a strategic geographic location at the crossroads of Asia, Africa, and Europe. The capital, Amman, is the country's economic, political and cultural center and is Jordan's most populous city (Al-Asad 2004). The country is located in Southwest Asia, bordering Syria to the north, Iraq to the north-east, Palestine to the west, and Saudi Arabia to the east and south.

Jordan has an area of 89,341 square kilometres and is 400 kilometres long between its northernmost and southernmost points (The World Fact Book 2016). The

culture of Jordan is based on Arabic and Islamic concepts, but also with a clear impact of the influence of western culture. Whilst Arabic is the formal language of Jordan, English is widely understood amongst the educated and the middle and upper classes (The World Fact Book 2016). The Jordanian Kingdom has a wide cultural diversity because of its location, which incorporates three continents (Asia, Africa, and Europe). In addition, Jordan is host to a large number of nationalities, who came to Jordan for a variety of reasons (e.g. refuge, tourism, and study) and have had an important impact on its economy.

The Jordanian economy is one of the smallest economies in the region, and depends on attracting foreign investors to grow the economy, however it is classified by the World Bank (2016) as an "upper middle-income country". There are several issues that have had an influence on the Jordanian economy, such as the refuge issue where Jordan hosts a larger number of refugees than any other country. In fact, refugees constitute one third of Jordan's population (World Bank 2016). Furthermore, the lack of natural resources (e.g. oil, gas) has had a large constraining influence on the growth of the economy.

The industrial sector in Jordan is a strategic sector which contributes significantly to the Jordanian economy. The industrial sector in Jordan plays a vital role in balancing the Jordanian economy; the industrial sector amounted to 25% of the Kingdom's GDP in 2017, and employment in the Jordanian industrial sector constitutes about 25% of the total employed Jordanians in 2018 (Plecher 2019).

The industrial sector in Jordan is also one of the most interconnected sectors when compared to other sectors, which expresses its great importance to the Jordanian economy (Jordan Chamber of Industry 2014). Jordan's industrial sector is composed primarily of the mining, quarrying and manufacturing subsectors. Large-scale industries consist mainly of phosphate and potash mining, and the industrial production of cement, fertilizers, and refined petroleum.

The Jordanian government has provided a number of incentives to investors, in order to enhance and support the investment in this sector, and this has contributed to making Jordan one of the most suitable investment destinations in the Middle East (Jaafar & El-Shawa 2009). However, the Jordanian industrial sector has also faced issues of failure, liquidation, and bankruptcy. There were 44 bankruptcy cases among Jordanian companies during the period 2000 to 2011, where 26 companies (59%) were

from the industrial sector, 15 companies (34%) from the service sector and 3 companies (7%) from the financial sector (Zureigat et al. 2014).

3. Corporate Governance in Jordan

The corporate governance guide for Public Shareholding Companies Listed on the Amman Stock Exchange (ASE) in Jordan, was launched in 2008. Since 1/1/2009, all companies have been requested to adhere to the rules of corporate governance (Al-Bawab 2015) through disclosure in their annual reports. The extent of their compliance with the code needs to be explained according to the 'comply or explain' rule (Jordan Securities Commission, JSC 2007). The Jordanian corporate governance guide determined that the application of these rules would initially be through the "compliance or explain" approach. This approach meant that companies were required to abide by the rules within the guide, and when any of the rules contained therein were not complied with, to provide an explanation for non-compliance. It excluded companies who had an exemption based on a binding legal provision. The reasons for non-compliance with this rule are required to be clearly stated in the company's annual report.

The aim of this approach was to give companies flexibility in implementation and sufficient time to adapt to the requirements of the rules of governance, in order to enhance awareness of these rules, and thus achieve their full compliance in a gradual manner (Securities Depository Center, SDC 2017). Prior to issuing the corporate governance guide for public shareholding companies listed on the Amman Stock Exchange (ASE), the Central Bank issued guidelines in 2004 for bank board members. This corporate governance guide for banks in Jordan provided a benchmark for international best practices in this area, which was based on guidelines from the Organisation for Economic Cooperation and Development (OECD). Table (2.1) shows the development of corporate governance in Jordan (translated adapted from Al-Manasir (2013)):

Table (2.1): Development of Corporate Governance in Jordan

Organization	Year	Version
Jordanian Central Bank	2004	Issued guidelines for bank board members in corporate governance (Corporate Governance guide for Jordanian Banks 2007)
Insurance Authority	2006	Issued the instructions for the institutional governance of the insurance companies and the basis of their organisation and management.
Jordanian Central Bank	2007	Issued the Corporate Governance Guide which contained terms and procedures whereby each bank was required to disclose in the annual report, full compliance, or provide an interpretation of reasons for non-compliance (Corporate Governance guide for Jordanian Banks 2007).
Securities Commission	2008	Issued the rules of corporate governance to be adhered to by public shareholding companies listed in the financial market. Required to disclose the application of these rules and had to be applied from 1 January 2009 (Securities Commission 2008)
Securities Commission	2010	Issued a detailed catalog of corporate governance rules and determining mandatory rules and guidelines (Securities Commission 2010).
Companies Control Department	2012	Issued the Jordanian corporate governance guide (private shareholding companies, limited liability companies and public shareholding companies) based on a memorandum signed with International Finance Corporation (IFC) in 2011. The

		guide targeted small and medium-sized companies that were not covered by the corporate governance rules issued by the bank central or insurance commission or securities commission (Companies Control Department 2012).

Source: Translated adapted from Al-Manasir (2013).

The corporate governance structure distributed the rights and responsibilities in the company amongst the different parties such as: the board of directors, managers, shareholders and other stakeholders, and sets of rules and procedures for decision-making (European Central Bank 2004). According to Al-Jazi (2007), the concept and principles of corporate governance in Jordan are present in many of the laws governing companies. For instance, these include companies' law No. 22, 1997; securities law No. 76, 2002; banking law No. 28, 2000; and regulation law of the accounting profession No. 73, 2003.

The preparation of the guide of corporate governance in Jordan was undertaken in line with the efforts of the Jordan securities commission (JSC) for the development of the capital market and its regulation. The guide contained rules of corporate governance for public companies listed on the ASE. These rules established a clear framework which regulated the relations and management and determined the rights, duties, and responsibilities of the company, in order to protect the rights of all stakeholders (Al-Sa'eed 2013).

These rules were based primarily on a number of the most important legislations from the securities and legislation section, which were issued pursuant to the corporate law, as well as international principles set by the Organisation for Economic Cooperation and Development (OECD). Compliance with corporate governance rules enhanced and improved the performance of management and the company (Securities Depository Centre, SDC 2017).

4. Institutional Framework of Corporate Governance in Jordan

In order to understand corporate governance practices by companies, it was first necessary to determine the institutional framework affecting corporate governance in Jordan. According to Shanikat and Abbadi (2011), corporate

governance in Jordan has been divided into six dimensions: a legislative framework, disclosure and accounting standards, a capital market, effective supervision of the board of directors, preservation of property rights and protection of minority rights, and transparency in privatisation. The companies' law of 1997 and the mandates of 2006, extensively mentioned these six dimensions, and the securities law 2002 and mandates of 2010, also referred to some of these dimensions. The following sections have further elaborated on these dimensions.

4.1 Legislative Framework

The legislative environment in Jordan has been framed by a variety of laws controlling companies and their actions. These include the securities law, company law, insurance law, banking law, law of competition and monopoly, law of investment promotion, commercial law, and law of privatisation (Al-Jazi 2007). The legislative environment has played a significant role in improving the role of the Jordanian Association of Certified Public Accounting (JACPA) and has led to the establishment of the high council of accounting and auditing.

The Jordanian Association of Certified Public Accountants (JACPA) has responsibility for monitoring the quality of the accounting information. All registered Jordanian companies are compelled to fulfil their obligations by publishing their accounts after getting certification. Reports need to be made available to users including, decision makers, analysts, investors, and other shareholders and stakeholders. Certification and control of accounts in Jordan are under the jurisdiction of the JACPA, which has adopted International Accounting Standards (IAS). The auditors are authorised to certify the annual reports after receiving that certification. The government's accounting and auditing regulations are compatible with international standards (Al-Fayoumi et al. 2010). Furthermore, the legal environment in Jordan supports good corporate governance, and increases awareness and respect for the culture of corporate governance (Al-Jazy 2005).

4.2 Disclosure and Accounting Standards

The Jordanian corporate governance guide has explains points regarding disclosure and transparency requirements (translated adapted from SDC 2017):

- The company shall provide disclosure information to shareholders and investors in an accurate, clear, and non-misleading manner at specified times.
- The company shall establish written procedures in accordance with the disclosure policy adopted by the board of directors, to regulate the disclosure of information and follow up its application in accordance with the requirements of the regulatory bodies and the applicable legislation.
- The company shall organise its accounts and prepare its financial statements in accordance with the International Financial Reporting Standards (IFRS).
- No person familiar with the company may disclose the internal information related to the company, other than the competent authority or the judiciary.
- The company should use its website to promote disclosure, transparency and information.
- The company shall disclose its policies and programs regarding the local community and the environment.

The JSC has adopted disclosure instructions for issued companies, accounting standards and auditing standards in item No (14), the International Accounting Standards (IAS) issued by the International Accounting Standards Board (IASB), and all entities subject to the securities commission are required to prepare their financial statements in accordance with these standards. The International Auditing Standards issued by the International Federation of Accountants (IFAC) have been adopted for the purpose of auditing the accounts of entities subject to the securities commission monitoring.

4.3 Institutional Framework - Capital Market

According to the JSC, the Jordanian public sector has been dealing in shares since 1930's. Corporate bonds have been issued since the beginning of the sixties and the transactions were handled by individual brokerage firms. Thus, the need of organising the market, and the establishment of the Amman Financial Market (AFM) became crucial. The securities market was established on 1st January 1978. Since then,

the Amman Financial Market (AFM) has been in charge of the stock exchange and the regulatory bodies.

According to international standards, Securities Law No. (23), 1997, has been a turning point for the Jordanian capital market. Three institutions emerged out of the securities law. They are:

- The Jordan Securities Commission (JSC)
- The Securities Depository Centre (SDC)
- The Amman Stock Exchange (ASE)

The JSC is the legal inheritor of the Amman Financial Market. It was designated to control the capital market by performing regulatory and supervisory roles (JSC). The SDC is the securities depository centre of Jordan, it is a public institution established based on the Securities Law No. (23), 1997. It is subjected to the JSC's control and supervision. Moreover, it has a legal personality and is independent administratively and financially. Furthermore, it is the only entity in Jordan that is legally empowered by the Securities Law No. (76), 2002, to supervise the following responsibilities:

- Registration of securities
- Deposit of securities
- Safekeeping of securities and transfer of ownership
- Settlement and clearance of securities transactions

The third institution that emerged out of the securities law was ASE. It was established in March 1999 as a non-profit institution with administrative and financial independence. It was authorised to operate as a securities trading market. The membership of the ASE comprises 58 members of Jordan's brokerage firms. The exchange is controlled by a seven-member board of directors. A chief executive officer supervises responsibilities and reports to the board (Amman Stock Exchange, ASE 2017).

The securities law in Jordan has many purposes. The main purposes are: to protect investors from fraud and manipulation, to provide a suitable environment for safe trading in securities, and to develop and control the stock market. The ASE and JSC work together on controlling matters and to build strong relationships with other exchanges, institutions, and international organisations (ASE 2017).

4.4 Preservation of Property Rights and Protection of Minority Rights

According to the SDC (2017), the corporate governance guide for shareholding companies listed on the ASE includes several chapters that explain everything related to the board of directors, the general assembly, shareholders' rights, and disclosure and transparency. The most important objectives of the Jordanian corporate governance guide relate to, practising control role, preserving the rights of shareholders, stakeholders and the economic reputation of Jordan.

Furthermore, the Jordanian corporate governance guide indicated that the issue of corporate governance has become important in building good management, which is based on prudent decisions founded on the rules of transparency, activating self-supervision of the board of directors and protecting shareholders. Likewise, the corporate governance guide illustrated some items that are related to preservation of property rights and protection of minority rights, such as (translated adapted from SDC 2017):

- Equitable treatment of shareholders: each shareholder must be provided with adequate and correct information about the company unless there is a given reason for not giving this information. This information is provided to each shareholder regardless of the class of shares he owns.

- Equal rights: shareholders have the right to vote according to the type and number of shares they hold. Also, the company allocate part of its website or other means of communication, to clarify shareholder rights and how to participate and vote in the meetings of the general assembly of shareholders.

- The chairman of the board shall ensure that major shareholders and minority shareholders have equal opportunities to participate during the general assembly meeting of shareholders.

- In companies with one or more major shareholders, the board of directors must seek to make senior shareholders benefit from their position by working to respect the rights and interests of minority shareholders.

Moreover, the Jordanian Companies Law No. (22) (1997), and amendments (2006) explained in several sections all shareholder rights. The companies' law (2006)

has established the principles of governance, protection of the rights of shareholders, safeguards for the rights of the minority, and separation of executive management and the board of directors. This was established in order to balance the interests of all parties interested in dealing with the company, in a clear framework that defined the rights, duties and responsibilities entrusted to the management and shareholders. Additionally, it reinforced the rules for control of companies, through an establishment of a set of principles, committed to by the management, including the protection of minority rights within the companies.

4.5 Privatisation

During the 1990s, the government of Jordan adopted the privatisation of some government companies and institutions. The aim of the process was to instigate economic reforms, aimed at increasing the participation of the private sector in the economy (Shanikat & Abbadi 2011).

As demonstration of the importance of the issue of privatisation in Jordan, and in order to provide the appropriate legislative framework, the Privatisation Law No. (25) was issued in 2000. The law contained clear provisions regulating the privatisation process and allowing implementation. The law also provided the necessary rules for transparency and clarity in the implementation of privatisation operations, within mechanisms which were subject to government control (ASE 2017).

Sharar (2006) summarised that the main objectives of the privatisation program were to strengthen the economy and reduce government expenditure. Achieving these goals was desired as a mechanism to reduce the budget deficit of the Jordanian government and improve overall productivity and efficiency. The aim of these economic developments was to serve as a platform for Jordan to compete more effectively in the global market.

5. Corporate Governance Mechanisms in Jordan

5.1 Board of Directors

The Jordanian corporate governance code contains a number of items related to board members themselves. The number of board members must be between five and thirteen, and they are elected by a secret vote and meet at least six times per year. The board of directors are appointed to manage the company for a term of four years starting on the date of election. In addition, the board of directors' chairman is not

allowed to work in any executive position within the firm at the same time. The company is not allowed to provide a loan of any kind to the chairman of the board or any of its members, or to any of their relatives. The company is required to provide board members with all the information and data related to the company, to enable them to carry out their duties and be aware of all aspects related to the companies' work (SDC 2017).

Based on the SDC corporate governance code for shareholding companies listed on ASE, the Jordanian corporate governance code has determined standards for the board of directors' functions and responsibilities, and include (translated adapted from SDC 2017):

- The board of directors' sets out strategies, policies, plans and procedures that will benefit the company and its objectives, maximise its shareholders' equity and serve the local community.
- The board develops a risk management policy for risks that the company may face.
- The board organises financial, accounting and administrative matters of the company, under special internal regulations.
- The board prepares annual, semi-annual and quarterly reports and results of initial annual work on the companies' business.
- The board develops the companies' disclosure and transparency policy and follows up on its implementation.
- The board appoints the general manager of the company and terminates his services.
- The board defines the functions and powers of the executive management in the company.
- The board establishes a mechanism to receive complaints and suggestions from shareholders.
- The board approves the incentives, rewards, and benefits of directors and executive management.

- The board develops written procedures to implement and review the principles of good corporate governance and evaluate the extent of their application on an annual basis.

The board of directors is also responsible for forming two permanent committees: the audit committee; and the nominations and remunerations committee (SDC 2017). The audit committee is required to oversee and monitor accounting, internal control and auditing activities of the company. The nominations and remunerations committee have functions such as: ensuring the independence of independent members, and setting up and continually reviewing the policy for the annual granting of bonuses, benefits, incentives and salaries in the company.

5.1.1 Effective Supervision of the Board of Directors

The Jordanian companies' law (1997), and mandates (2006), has defined all matters related to the supervision of the board of directors such as:

- Determine the shares that a person must own to nominate to the board of directors.
- Determine the persons who are prohibited from nomination for the board of directors.
- Explain the role of the government and official institutions representatives on the board of directors.
- Explain how to elect of the chairman and vice-chairman of the board of directors.
- Explain that the board must submit a written report for what the chairman and members of the board of directors own and a copy of the report shall be provided to the company controller.

The Jordanian companies' law has also defined the duties and responsibilities of the board of directors. A board of directors must prepare, within a period not exceeding three months from the end of the financial year, the company's accounts and statements to be submitted to the general assembly. Therefore, the board of directors has the responsible for preparing the company's annual general budget, statement of profit and loss, statement of cash flows and clarifications in relation to the previous

financial year, and these are required to be approved by the company's auditors. Furthermore, the board of directors must prepare the board's annual report on the company's business during the past year and its projections for the coming year. They must provide the controller with copies of the accounts and statements prior to the date set for the meeting of the general assembly within a period of not less than twenty-one days. Moreover, the board of directors are required to provide a detailed disclosure of the expenses, wages, and privileges of the chairman and members of the board of directors at the meeting of the general assembly, in order to inform the shareholders and to provide the controller with a copy thereof.

Item No. (151) of the Jordanian companies law (1997), and its mandates (2006), clarified that the financial, accounting and administrative matters of the company shall be prepared by a board of directors, and specify in a detailed manner the duties of the board and its powers and responsibilities in such matters, as long as that it does not provide for anything contrary to the provisions of the law and the regulations issued pursuant thereto or any other legislation in force. Copies of those regulations have to be sent to the controller, and then to the minister upon the recommendation of the controller. This requirement has been created in order to achieve the interests of the company and its shareholders.

According to the Jordanian companies law in item No. (159), the chairman and members of the board of directors of the company are jointly and severally liable to the shareholders for their negligence in the management of the company. These requirements are in place in order to provide effective supervision of the board of directors. This is a crucial issue in the management of companies since the board of directors is charged with advising, reviewing and evaluating management (Gillan 2006).

5.2 Audit Committee

The audit committee forms the basis of the governance system. It assists the board of directors in its responsibilities towards the shareholders, and it is important to evaluate internal control systems (Oqab 2012). Based on the SDC (2017), corporate governance code for shareholding companies listed on the ASE, the audit committee is required to undertake the tasks of overseeing and monitoring, accounting, internal control, and auditing activities in the company. The expectation is that the audit committee include no less than 3 members and some of them should be non-executive

members. The committee must meet regularly, not less than four times a year, and minutes of its meetings must be taken appropriately. At least once a year, the audit committee must meet with the company’s external auditor, without the presence of the executive management or any person representing it. In addition, it has undertaken other tasks as stated in the Jordanian corporate governance code such as:

- Discussing of matters related to the nomination of the external auditor.
- Following up the company's compliance with the provisions of the legislation in force and the requirements of the regulatory bodies.
- Studying the periodic reports before submitting them to the board of directors.
- Any other matters decided by the board of directors.

The corporate governance code for shareholding companies listed on ASE (2017), also determine that the audit committee has powers such as:

- Requesting the presence of the external auditor if the committee considers it necessary to discuss with him regarding any matters relating to his work in the company.
- Recommending that the board of directors nominate the external auditor.
- Nominating an internal auditor to be appointed to the company.

Moreover, the Jordanian corporate governance code explains that all audit committee members must have knowledge in financial and accounting matters, and at least one of them must have had previous work experience in the field of accounting or financial matters, or a scientific qualification or a professional certificate in accounting, finance or other related fields.

The Jordanian corporate governance code explains that the general assembly shall elect one or more auditors who are licensed to practice the profession, to carry out external auditing functions in accordance with the approved international auditing standards, and the requirements of the profession and the applicable legislation. Also, the external auditor is appointed to perform their duties for a period of one-year renewable, provided that the responsible partner of the external auditor shall not audit

the company's accounts for more than four consecutive years. Auditors may be re-assigned to audit the accounts of the company after at least two years absence.

The Jordanian corporate governance code has also explained that the company shall take appropriate procedures to ensure that the external auditor is independent in accordance with international standards on auditing (ISAs), that the auditor is required to act impartially and not interfere with the work of the board of directors or the executive management. Also, the Jordanian corporate governance code has specified the conditions that must be available to the external auditor. The auditor is required to have a valid practicing license to be a member of the Jordanian association of certified public accountants; also, must have practiced the profession on a full-time basis for at least three consecutive years after receiving a licence to practice auditing, and have at least one partner or employee who meets the above conditions.

In regard to the duties performed by the external auditor, the Jordanian corporate governance code has identified the following functions (translated adapted from SDC 2017):

- Monitoring the company's business.
- Attending meetings of the general assembly of the company.
- Answering the questions and queries of the shareholders of the company, regarding the financial statements and final accounts during the meetings of the general assembly.
- Providing an opinion on the fairness of the financial statements of the company, and request its amendment if there is any impact on its fairness.
- Reporting any violation of the legislation in force or any financial or administrative matters that have a negative impact on the company's conditions, to the competent authorities.
- Examining the administrative and financial systems of the company and the internal control systems, and give an opinion on their effectiveness.
- Auditing the company's accounts in accordance with international standards and professional rules.

- Exercising the functions assigned to him in an independent and impartial manner.

5.3 Shareholders

Al-Fayoumi et al. (2010) identified three main types of ownership structure in Jordanian firms. These were: insider ownership; institutional ownership; and individual block-holder's ownership which could affect firms' decisions and performance. According to Jordan Companies Control Department (2008) shareholders are the owners of the company, and they enjoy certain rights. However, in most cases, they are not expected to take responsibility for managing the company. This responsibility lies on the board of directors and management, who in this case, are accountable to shareholders. Therefore, it is the company's responsibility to ensure that shareholders are aware of their rights to justice and equality without discrimination (SDC 2017). The Jordanian corporate governance code has determined two types of shareholders' rights: general shareholders' rights, and rights within the powers of the general assembly.

5.3.1 General Shareholders' Rights

Shareholders enjoy general rights, the most important of which are the following (translated adapted from SDC 2017):

- The company shall keep records of the ownership of shareholders, including information on their contribution, their names, number of shares owned by them, any restrictions on ownership, and any changes that may occur.
- Viewing the information and documents of the company in accordance with the legislation.
- Participating and voting at the general assembly meeting.
- Obtaining the annual profits of the company within thirty days from the date of issuance of the general assembly's decision to distribute them.
- Prioritisation of any new issues of the company's shares prior to offering them to other investors.

- Requesting the holding of an extraordinary general assembly meeting, for shareholders holding 25% of the shares of the subscribed company.
- Requesting the convening of an extraordinary general assembly meeting to demand the resignation of the board of directors of the company or any member thereof, for shareholders holding 20% of the company's shares.
- Requesting an audit of the company's business, for shareholders holding 10% of the company's shares.
- Access to the minutes of the general assembly meetings of the company.

5.3.2 Shareholders' Rights within the Powers of the General Assembly

The general assembly has been given wide powers, especially the power to make decisions that affect the future of the company directly, including the following (translated adapted from SDC 2017):

- Discussing with the board of directors, the company's performance and plans for the coming period.
- Election of the board of directors and the external auditor.
- Matters related to the consolidation or liquidation of the company.
- Selling the company or owning another company.
- Increasing or decreasing the company's capital.
- Purchasing of the company's shares and selling of those shares, or selling off the entire assets of the company or an important part, which may affect the achievement of the goals of the company.

With these rights, according to the Jordan companies control department, the shareholders of the company have several responsibilities. These include: shareholders shall benefit from the meetings of the general assembly of shareholders in ensuring that the company is properly managed in order to maximise the interest of the shareholders on the basis of mutual understanding of the objectives and concerns;

effective participation and voting in meetings of the general assembly of shareholders (non-present shareholders are entitled to vote by proxy); and the company should also encourage shareholders to take an interest and participate in appointing board members and external auditors. Also, senior shareholders must respect the rights and interests of minority shareholders.

6. Corporate Social Responsibility

The Jordanian corporate governance guide requires companies to disclose social and environmental information in their annual reports. This has been covered in section five of the Jordanian governance guide under the title 'Disclosure and Transparency', that every company must disclose its policies and programs regarding the local community and the environment (SDC 2017).

In response, the Jordanian SDC (2008) adopted an initiative called "Responsibility to the Local Community" which has reflected the centre's recognition of the importance of its work, functions and ethical service towards the local community. According to the Amman Chamber of Commerce (2017), a number of workshops were held on the various aspects and prospects that are able to be achieved through social responsibility, and the areas in which sustainable economic and social development can be pursued. The most prominent of these activities are environmental awareness, health care and public safety, education and training, job creation, development in remote areas, infrastructure development, youth support, women's support and strengthening their role in society.

7. Earnings Management in Jordan

According to, Al-Qutaish and Al-Sufi (2011) many firms in Jordan have been involved in earnings management, and many departments have resorted to earnings management to enhance their financial statements, in an effort to improve the financial situation of the company, in order to achieve their own targets. Al-Sartawi et al. (2013) supported this assertion, mentioning that many Jordanian companies listed on the ASE resorted to earnings management, which has distorted the meaning of financial reporting, and destabilised the confidence of users in the reliability of financial reports.

These companies have resorted to these practices for several reasons. Either to satisfy their shareholders; or to reduce the decline in the prices of their shares traded in the financial market; or to avoid the forced liquidation process that threatened them

because of the significant decline in their operating profits; or to improve their profitability and the financial position reflected in published financial statements; or to achieve their own purposes (Mattar et al. 2013). This topic has been further expanded through the study's papers in the following chapters. These papers have also presented the literature review related to practices of earnings management.

8. Chapter Summary and Conclusion

This chapter began with providing a brief view of the background of Jordanian context, and described Jordan in terms of its history, laws, location, the culture of legal systems, the economy, and the industrial sector which is considered to be one of the most important sectors in Jordan. Also, a number of corporate governance issues have been highlighted in this chapter such as: the emergence and development of Jordanian corporate governance code; and the important mechanisms to govern boards contained within the Jordanian corporate governance code, which are: board of directors; audit committee; and shareholders. This chapter has also highlighted the corporate social responsibilities of Jordan firms.

Furthermore, this chapter has presented the institutional framework and the dimensions of Jordanian corporate governance. It has reviewed the legislative framework in Jordan and reviewed important laws, such as the Securities Law No. (23), (1997), and the three institutions comprising the regulatory bodies (the Jordan Securities Commission (JSC), the Securities Depository Centre (SDC), and the Amman Stock Exchange (ASE)). An overview of the functions and responsibilities of each institution has been provided. Finally, this chapter discussed briefly earnings management within Jordan.

In conclusion, this chapter has provided an opportunity for academics and practitioners to develop an understanding regarding the institutional background within Jordan.

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Appendix A: Official Government Sites in Jordan

http://www.ase.com.jo/

http://www.jsc.gov.jo/public/mainEnglish.aspx?page_id=1454

http://www.sdc.com.jo/arabic/index.php

http://www.ccd.gov.jo/en

CHAPTER 3: PAPER I

OWNERSHIP STRUCTURE AND EARNINGS MANAGEMENT: EVIDENCE FROM JORDAN

The following details show the share of the co-authors in the submitted paper for publishing in this thesis.

Almadadha, R, Rashid, A, Jones, G & Shams, S, 'Ownership Structure and Earnings Management: Evidence from Jordan', Submitted to *Sydney International Business Research Conference* (SIBRC) 2019. Incorporated as ***paper I***.

Contributor	**Statement of contribution**	**Contribution Significance**
Almadadha, R. (candidate)	Almadadha, R. formulated the hypothesis and the objectives of the research work, development of methodology, collected data, and wrote the initial draft and revised the final submission.	60%
Rashid, A.	Rashid, A. contributed in manuscript preparation and layout, hypothesis formulation and technical discussion.	15%
Jones, G.	Jones, G. reviewed the manuscript.	15%
Shams, S.	Shams, S. reviewed the statistical analysis of the manuscript.	10%

OWNERSHIP STRUCTURE AND EARNINGS MANAGEMENT: EVIDENCE FROM JORDAN

Abstract

Purpose - This paper examines the effect of corporate ownership structure on earnings management (EM) in the context of Jordan.

Design/Methodology/Approach - The paper has used the discretionary accruals (DA) as a measure of earnings management. An ordinary least square regression was used to investigate the association between ownership structure and earnings management. The data was collected from 49 Jordanian industrial companies listed on the Amman Stock Exchange (ASE) during the period 2006-2015.

Findings - The paper found that institutional ownership and earnings management were positively associated. The study also found that insider ownership had no effect on earnings management in the Jordanian industrial sector.

Originality/value - This paper addressed a gap in the research regarding the role of ownership structure on earnings management practices. Furthermore, this paper has informed supervisory, regulatory authorities and users of the financial reports about corporate ownership structure and its role in earnings management practices. Additionally, it has increased awareness and understand of earnings management practices.

Keywords - Earnings Management (EM), Ownership Structure, Jordan.

1. Introduction

Ownership structure is one of the most important corporate governance mechanisms available to address agency problems, and a high level of ownership will lead to more effective monitoring (Jensen & Meckling 1976). Due to the separation of ownership and control, agency problems have arisen due to the conflict of interests between managers and shareholders. The separation of ownership and control in modern corporations has led to managers' being incentivised to choose and apply estimates and accounting techniques, that increase their own wealth, to the detriment of shareholders (Kazemian & Sanusi 2015). Thus, ownership structure has been considered a significant control mechanism which can play a role in limiting earnings management activities by management (Alzoubi 2015).

Previous studies have focused on earnings management incentives, however there are many factors that may limit earnings management practices, such as corporate governance mechanisms (Alves 2012). Habbash (2010) argued that an ownership structure (managers, insiders, and outsiders), where groups had a large concentration of shares, had high levels of strength and incentives to control the company, thereby reducing the likelihood of earnings management activities, as well as reducing agency conflicts between management and shareholders due to the convergence of interests. Agreeing with that proposition, Man and Wong (2013) indicated that the value of the company increases when owners are also corporate managers. Conversely, when managers were not owners, they may have wider freedom to achieve their own goals, resulting in a reduction of the companies' value. These studies have presented the role of ownership structure in limiting the earnings managements practicing and thus the affect on earnings quality.

This study has explored whether corporate ownership structure influences earnings management, with a specific focus on the developing Jordanian market as a case study, unlike other studies which have focused their attention on developed countries (e.g. Australia, Canada, UK, and USA).

Jordan has been used as a case in this study for several reasons. Firstly, there is a lack of studies on ownership structure and earnings management in Jordan (Al-Fayoumi et al. 2010; Abed et al. 2012; Alzoubi 2016). Secondly, there is a high rate of failure and bankruptcy of the Jordanian firms, especially in the industrial sector (Zureigat et al. 2014). Thirdly, the impact of the world financial collapses which have had an influence on the Jordanian economy. All of these reasons have provided further

justification for this paper. Finally, the significant attention which has occurred in recent times, which support improved corporate governance within Jordan (Al-Fayoumi et al. 2010).

This study has made an important contribution to both the research literature and corporate governance practice in developing countries. Firstly: the contribution to literature; this study has facilitated discussion about corporate ownership structure and earnings management. It has clarified the factors that have the capacity to affect earnings management, and therefore affect the quality of earnings reporting. This study has also added to the literature by investigating corporate ownership structure on earnings management in the Jordanian industrial public-sector context during the period from 2006 to 2015. This period has included several important events specific to the Jordanian context. These include the introduction of the corporate governance code in 2008, and the global financial crisis in 2008. Consequently, the current study has provided an opportunity to compare results from before and after the introduction of corporate governance code. The current study has added value in terms of knowledge to existing studies.

Secondly: the contribution to practice; this study has informed supervisory and regulatory authorities about the influence of corporate ownership structure, and how it may influence or be used to help detect earnings management. This study assists the users or beneficiaries of financial reports to understand earnings management practices, and increase their awareness about this phenomenon. This study assists in improving corporate governance practices, and increase the reliability of the financial statements within the Jordanian industrial public sector.

This paper is structured as follows: Section 2 has discussed the institutional background and corporate ownership structure within Jordan. Section 3 presented the theoretical framework. Section 4 discussed the literature review and hypotheses development. Section 5 provided the research method. Section 6 reported the results from this study. Section 7 submitted the conclusions about this study.

2. Institutional Background and Ownership Structure in Jordan

Jordan as a developing country in the Middle East, has issued a set of regulations and laws which include a corporate governance code designed to improve the credibility of financial statements, and minimise manipulation of the financial statements (Zureigat et al. 2014). The corporate governance guide (Public

Shareholding Companies listed on the ASE) in Jordan was launched in 2008. As of 1/1/2009, all companies have been requested to adhere to the rules of corporate governance (Al-Bawab 2015), through disclosure in their annual reports the extent of their compliance with the code according to the 'comply or explain' approach. The aim of this approach was to give companies flexibility in implementation of the rules and sufficient time to adapt to the requirements of governance, to enhance awareness of these rules, and thus achieve full compliance in a gradual manner (Jordan Securities Commission, JSC 2007).

The preparation of the guide of corporate governance in Jordan was prepared in line with the efforts of the Jordan Securities Commission (JSC), with the goal of development of the capital market and its regulation. The guide contains rules of corporate governance for public companies listed on the ASE (Al-sa'eed 2013). These rules established a clear framework that distributed the rights and responsibilities within the company amongst different parties and set rules and procedures for decision-making (European Central Bank 2004). These rules were based primarily on a number of the most important legislations of the securities and legislation section. They were issued pursuant to the corporate law, as well as international principles set by the Organisation for Economic Cooperation and Development (OECD). Compliance with corporate governance rules enhances and improves the management and companies' performance (Securities Depository Centre, SDC 2017).

Corporate governance and its mechanisms have caught the attention of Jordanian researchers (Alabdullah et al. 2014; Al-Azzam et al. 2015; Abbadi et al. 2016). It is considered a relatively new topic in the Jordanian context. One of the most important influences on good corporate governance, is the ownership structure and its relationship to a firm's performance, top management, and earnings management. There are three types of ownership structure in Jordanian firms. These are: insider ownership, institutional ownership, and individual block-holder's ownership which affect firms' decisions and performance (Al-Fayoumi et al. 2010). It is the company's responsibility to ensure that shareholders know their rights to achieve justice and equality without discrimination (SDC 2017).

According to the Jordan Companies Control Department (2008), shareholders are the owners of the company, and they enjoy certain rights, but in most cases, they are not expected to take responsibility for managing the company. This responsibility

lies with the board of directors and management, where the board of directors and management, in this case, are accountable to shareholders.

With these rights, the Jordanian Companies Control Department has identified several responsibilities in which the shareholders of the company should be committed. These include that shareholders shall benefit from the meetings of the general assembly of shareholders to ensuring that the company is properly managed, in order to maximise the interest of the shareholders on the basis of mutual understanding of the objectives and concerns. Engage in effective participation and voting in meetings of the general assembly of shareholders (non-present shareholders are entitled to vote by proxy), and the company should also encourage shareholders to take an interest and participate in appointing board members and external auditors. Additionally, dominant shareholders are required to respect the rights and interests of minority shareholders.

However, the managers often have incentives to pursue and achieve their personal interests which are sometimes in conflict with those of the shareholders (Habbash 2010). In those cases, managers would be incentivised to manage earnings and maximise their own benefits. Similarly to many other countries, Jordan is under the effect of this phenomenon (earnings management). According to, Al-Qutaish and Al-Sufi (2011), many Jordanian firms have been involved in earnings management and many departments have resorted to earnings management to enhance their financial statements and improve the financial situation of the company, in order to achieve their own targets. Al-Sartawi et al. (2013) supported this assertion, mentioning that many Jordanian companies listed on the ASE have resorted to earnings management, which has distorted the meaning of the financial reports, and destabilised the confidence of users in the financial reporting process. Thus, the current study has examined the effect of different ownership structures on earnings management in the Jordanian context.

3. Theoretical Framework

Researchers have commonly used agency theory to describe earnings management behaviour and have provided a solid theoretical framework for understanding the practice of earnings management (Rani, Hussain & Chand 2013). Agency theory has been used to explain the relationship between principals (owners)

and agents (managers), and how that relationship may be best managed (Ross 1972; Mitnick 1973; Jensen & Meckling 1976).

According to agency theory, the relationship between the principal and the agent may lead to conflicts called "agency problems" where both managers and shareholders may have specific concerns and follow their own interests (Saltaji 2013). These problems arise when managers do not operate a company for the best interests of shareholders or because investors and other stakeholders are not in a position to be able to make optimal decisions about the company (Davidson, Jiraporn, Kim & Nemec 2004). Thus, according to agency theory, the managers often have incentives to pursue their personal interests, which may be to the detriment of the interests of shareholders (Habbash 2010).

When personal goals of managers compete with the shareholders' goals, it leads to a conflict of interest which is described as an agency cost. Earnings management is considered one type of agency cost. This is because when managers issue financial reports that do not provide a precise economic picture of the company, and shareholders rely on those reports, they may make unfavourable investment decisions (Davidson et al. 2004) which is an associated agency cost. Additionally, agency theory has proposed that managers who are motivated by self-interest, may not faithfully present the company position (Prior, Surroca & Tribó 2007). In other words, managers may be involved in earnings management to present a better picture of the company. They may do this for a variety of reasons, such as, to meet market expectations, to improve their personal situation and interests, or to receive bonuses which were based on the profit made by the company.

Within agency theory there are a number of assumptions, which are related to the manager's behaviour in conjunction with financial reporting (Fields et al. 2001; Iatridis 2010). Based on the earnings management concept, agency theory has indicated that managers' use accounting figures to influence contractual outcomes - this behaviour reflects the concept of opportunistic behaviour (Duru & Tsitinidis 2013). Therefore, companies need to separate decision management from decision control, by controlling management authority and ensuring that the best interests of the shareholders are the primary goal and it will lead to a reduction in agency costs (Fama & Jensen 1983).

Corporate governance is considered to act as a monitoring and controlling system. According to agency theory, monitoring mechanisms align the interests of

both management and the shareholders, and reduce opportunistic behaviour which arises from conflicts of interest (Kazemian & Sanusi 2015). Furthermore, agency theory has suggested that monitoring mechanisms such as corporate governance, may limit earnings management practices (Habbash 2010). Davis et al. (1997 p.23) stated that "The governance mechanisms are designed to ensure agent-principal interest alignment, protect shareholder interests and thus minimise agency costs". Similarly, McKnight and Weir (2009) pointed to agency costs being reduced by a number of governance mechanisms which reorganise and align the interests of agents and principals. Further, there are a variety of optimal governance structures that minimise agency costs and maximise performance outcomes (McKnight & Weir 2009). Thus, corporate governance plays an important role in controlling and monitoring management decisions and protecting the interests of shareholders, which in turn may reduce agency problems and conflicts between agents and principals.

Corporate governance mechanisms such as ownership structures, give shareholders an opportunity to monitor the work of the management. The weakness of corporate controlling and monitoring, may provide an opportunity for managers to pursue and achieve their personal interests by following opportunistic behaviours such as earnings management, but effective corporate governance mechanisms can reduce this behaviour (Habbash 2010).

In the light of the above, agency theory can be summarised as the problem which occurs as a result of the separation of management and ownership in companies. This separation may cause a problem (agency problem) because of the different interests of both managers and shareholders. Thus, to minimise this problem, there must be an effective control system, such as corporate governance, to reduce opportunistic behaviour and control management performance, and to protect shareholder rights.

The adoption of a particular theory relies on contextual factors: information asymmetry, board power, and environmental uncertainty (Hendry & Kiel 2004). As stated earlier, agency theory has argued that the individual is primarily self-interested and self-opportunistic, rather than altruistic (Rashid 2009). Therefore, this study considers agency theory an appropriate tool to clarify the motivations and incentives of earnings management practices. Thus, this study has relied on agency theory in its hypotheses development, to test whether there is a relationship between corporate ownership structure and earnings management practices.

4. Literature Review and Hypotheses Development

4.1 Insider Ownership

A considerable amount of literature has investigated the relationship between insider ownership and earnings management (Chandra & Wimelda 2018; Salehi, Mahmoudabadi & Adibian 2018) . Many studies have found that insider ownership may affect the behaviour of managers when preparing discretionary financial reports. In other words, managers with higher levels of insider ownership, were less likely to participate in manipulating financial reports, so as not to harm their interests and property (Huang, Wang & Zhou 2013). Similarly, earnings reports reflected more reliability when managers have a high level of ownership in the firm (Warfield et al. 1995). Furthermore, Alzoubi and Selamat (2012) pointed out that the insiders or managers who have a large part of the shares of the company, were useful in reducing agency conflicts as there was better alignment of the interests of management and shareholders.

In their study, O'Callaghan, Ashton, and Hodgkinson (2018) investigated the relationship between earnings management and managerial ownership. The results of their study proved that firms with low managerial ownership engage in more earnings management. Likewise, Alves (2012) found that discretionary accruals was negatively related with managerial ownership, thus she suggested that managerial ownership improved the quality of annual earnings by reducing the levels of earnings management. Yang, Lai, and Tan (2008) suggested that shareholdings by company officers should be encouraged, in order to reduce agency costs and thereby enhance information content related to earnings.

However, high levels of insider ownership can also provide managers with greater freedom to undertake opportunistic actions such as opportunistic financial reports, manipulation of accounting figures, and choice of accounting policies that are commensurate with their objectives, with less fear of being removed (Huang, Wang & Zhou 2013). Consequently, managers who hold a larger share of the ownership are more integrated into the company, and therefore may have less external control over their decisions and actions. This provides the appropriate environment for managers who have a large share of the ownership in the company to practise opportunistic behaviours.

This view was supported by Yeo,Tan, Ho, and Chen (2002) who have pointed out that there may be a positive relationship between earnings management and

managerial ownership, and the high level of managerial ownership can become ineffective in aligning managerial goals with decisions of maximum value. In the same vein, Al-Fayoumi et al. (2010) have examined the association between earnings management and ownership structure in emerging markets (Jordan). They indicated that there was a positive and significant relationship between higher insider ownership and earnings management, and the quality of earnings and earnings was reported to decrease.

The previous studies are divided into two parts with respect to insider ownership and their relationship to earnings management. Firstly, insider ownership who hold a large share of the company's shares are considered to have effective control role over the decisions and performance of the company. These owners engage in less opportunistic behaviours such as earnings management, because of the fear that it may impact on the value of their property and because of the desire to increase the value of the company. Secondly, insider ownership who hold a large share of the company's shares, have greater authority and are more integrated into the company's decisions and performance, which provides the opportunity and environment for them to engage in earnings management and manipulation to achieve their goals. Therefore, it appears that there is no general agreement regarding the effect of insider ownership on earnings management.

In line with agency theory and published empirical results, this study has hypothesised that a high level of insider ownership is associated with less earnings management. In this scenario the managers avoid any opportunistic behaviour that may affect the value of their shares or interests in the company. Therefore, agency theory has suggested that managerial shareholdings encourage managers to improve the value of the company because managers, as shareholders, bear the proportion of wealth effects (Alves 2012). Consequently, insider ownership may be considered as a mechanism to control managerial opportunistic behaviour (Klein 2002; Teshima & Shuto 2008). Furthermore, from agency theory perspective, high insider ownership may improve the structure of corporate governance which has been reflected in a high quality in financial reporting (Ballesta & Meca 2005).

Based on the previous discussion, this study expects that increased insider ownership may reduce the earnings management practising. This discussion has led to the following hypothesis:

H1: There will be a negative relationship between insider ownership and earnings management.

4.2 Institutional Ownership

Several studies have indicated that institutional ownership is an important governance mechanism, which is linked to better monitoring of management activities, which thereby reduces managers' ability to exploit earnings (Anwara & Buvanendraa 2019). The studies have proposed that institutions have the opportunity, resources and ability to monitor managers behaviour and company activities (Alves 2012).

Habbash (2010) clarified that the institutional investors have been categorized into two major groups. First, long-term institutional investors, who invest in companies over a long period, thus, they have strong incentives to monitor those companies. Second, short-term institutional investors, due to their restricted focus primarily on current earnings. Also, she summarised that previous studies showed that long-term institutional holdings have a negative impact on earnings management activities, while short-term institutional holdings have a positive impact. Furthermore, Njah and Jarboui (2013) clarified the relationship between institutional ownership and the behaviour of earnings management for some French companies. The results indicated that the monitoring role of active institutional investors has reduced opportunistic behaviour by managers. Therefore, institutional ownership in companies acts as a proxy for monitoring devices that align the interests of both managers and shareholders (Ebrahim 2007).

In the same vein, Ajay and Madhumathi (2015) have studied institutional ownership and earnings management in India. The findings indicated that companies with higher institutional holdings had higher earnings quality, thus limiting managers from using their discretionary powers to manage earnings. Also, they found that institutional ownership has a negative relationship with earnings management, for large and mature companies. Thus, institutional investors monitor companies actions, which in turn reduces aggressive earnings management.

Chung et al. (2002) held the view that large institutional shareholdings may inhibit managers from managing earnings, as they have greater incentives for gathering information, monitoring management procedures and motivating better performance. Kazemian and Sanusi (2015) asserted that institutional ownership was linked to better

monitoring of management activities, and thereby reduced the ability of managers to exercise opportunistic behaviours.

However, some have argued that institutional ownership does not have an effective role as a monitoring tool for management activities. Duggal and Millar (1999) employed corporate takeover decisions to investigate the impact of institutional ownership on corporate performance. They did not find any evidence that institutional investors were active in enhancing market efficiency through monitoring companies, suggesting that institutional investors may collude and vote with management against their own fiduciary interests (Pound 1988). Similarly, Sarkar and Sarkar (2000) found no evidence that institutional investors have an effective role in corporate governance.

Wong, Loo, Mohd, and Mohamad (2009) have examined the role of outside directors and institutional shareholders in constraining earnings management activities. The results indicated that there is no correlation between the degree of manipulation of earnings and the ratio of outside directors and institutional shareholders. Also, they indicated that there was weak evidence showing that outside directors have some influence in curbing earnings management.

Cornett, Marcus, and Tehranian (2008) had two views: firstly, that monitoring by institutional ownership can compel managers to focus more on corporate performance and less on opportunistic behaviour. Secondly, that managers feel more forced to meet expectations of earnings targets for these types of investors and thereby engage in further manipulation of earnings, and that this may increase management incentives to participate in opportunist behaviour.

In the context of Jordan, Al-Fayoumi et al. (2010) found an insignificant relationship between institutions ownership and earnings management. Alternatively, Alzoubi (2016) found that aspects of ownership structure have a significant influence on earnings management in Jordanian companies, and that insider managerial ownership, institutional ownership, external block holders, family ownership and foreign ownership had a superior influence on financial reporting quality.

Thus, the results of previous studies differed regarding the institutional ownership impact on earnings management, possibly, because of different legal and corporate governance systems in each country. However, the current study considered that institutional ownership could be seen as a tool to monitor the performance and activities of the company's management, as their presence can limit managers' recourse to opportunistic behaviour and earnings management. Thus, the existence of

institutional ownership prevented managers from practicing earnings management, which has been confirmed by many studies (Bushee 1998; Chung et al. 2002; Koh 2003).

Based on the previous discussion, which indicated that there was a relationship between institutional ownership and earnings management, this study expected that higher institutional ownership would be associated with less earnings management. This discussion has led to the following hypothesis:

***H2**: There will be a negative relationship between institutional ownership and earnings management.*

5. Research Method

5.1 Sample

This paper examined whether the corporate ownership structure influenced earnings management in the Jordanian industrial sector. The study examined selected Jordanian industrial companies listed on the Amman Stock Exchange (ASE) during the period of 2006-2015. The population of this study consisted of industrial companies listed in ASE, which represented 64 companies at the end of 2015. The study's sample included 49 Jordanian industrial companies which were selected based on: (i) the availability of data; (ii) the company had not merged; (iii) and the company was still trading and had not stopped trading during the period of the study.

The study gathered necessary data from annual financial statements of these companies based on the company's guide issued by ASE during the period 2006-2015. The Jordanian industrial sector consists of 16 different types of industries (e.g. metal mining, chemical and allied products, etc.). These 16 types of industries represented 49 firms which had financial statements and annual reports available for 10 years, which formed the total sample used in this paper, as shown in table (1).

Table (1): Industry Classification of the Sample

Industry Type	Number	Percent%
Agricultural Production-Livestock	2	4.10
Metal Mining	1	2.04
Oil and Gas Extraction	1	2.04

Non-Metallic Minerals, except Fuels	2	4.10
Food and Kindred Products	8	16.32
Tobacco Products	1	2.04
Textile Mill Products	1	2.04
Apparel and other Textile Products	3	6.12
Lumber and Wood Products	1	2.04
Paper and Allied Products	2	4.10
Chemicals and Allied Products	10	20.40
Petroleum and Coal Products	2	4.10
Stone, Clay, and Glass Products	5	10.20
Primary Metal Industries	6	12.20
Electronic and other Electric Equipment	3	6.12
Transportation Equipment	1	2.04
Total	49	100%

5.2 Variables Definitions

5.2.1 Measurement of Earnings Management

- **Modified Jones Model Using DACC (EM1)**

Many studies have used accounting accruals to detect the presence of earnings management, as managers may practise earnings management through manipulation of accruals as it is less likely to be exposed (Habbash 2010). Healy (1995) used total accruals to measure earnings management, and subsequently, many other studies have separated them into discretionary and non-discretionary accruals, and then used just discretionary accruals to measure earnings management. Non-discretionary accruals reflect non-manipulated accounting accruals items because they are out of managers' control (Al-Fayoumi et al. 2010).

Prior studies used a number of models to detect and measure earnings management such as: Healy Model 1985; DeAngelo Model 1986; Jones Model 1991; Modified Jones Model by Dechow et al. 1995. In this study, earnings management has been measured by using the modified Jones Model (1995) developed by Dechow et al. (1995). The modified Jones Model (1995) is the most common and widely used model in accounting literature for studying and measuring earnings management, and it provides the most powerful method for detecting and measuring earnings management

and discretionary accruals (Guay et al. 1996; Peasnell, Pope & Young 2000; Bedard et al. 2004). Similarly, Dechow et al. (1995) pointed out that, it is more powerful in exposing the discretionary accruals, when comparing other models proposed in the earnings management literature.

In this regard, this study calculated the total accruals and then calculated non-discretionary accruals, thus the discretionary accruals were calculated through analysing the difference between the total accruals and the non-discretionary accruals.

According to the modified Jones Model developed by Dechow et al. (1995), which has been used in many studies (e.g. Muttakin et al. 2015; Abbadi et al. 2016), total accruals (TA) were computed as the difference between earnings and cash flows from operating activities.

$$TACC_{it} = NI_{it} - OCF_{it}$$

The equation below was estimated for each firm and fiscal year combination. Thus, the industry specific parameters of the Jones model were estimated as follows:

$$TACC_{it}/TA_{it-1} = \alpha_1 (1/TA_{it-1}) + \alpha_2 [(\Delta REV_{it})/TA_{it-1}] + \alpha_3 (PPE_{it}/TA_{it-1}) + \varepsilon_{it}$$

Nondiscretionary accruals were estimated for each year and fiscal year combination by using the following equation:

$$NDAC_{it} = \hat{a}_1 (1/TA_{it-1}) + \hat{a}_2 [(\Delta REV_{it} - \Delta REC_{it})/TA_{it-1}] + \hat{a}_3 (PPE_{it}/TA_{it-1})$$

Discretionary accruals were estimated by subtracting the predicted level of nondiscretionary accruals (NDAP) from total accruals, and calculated by using the following equation:

$$DACC_{it} = TACC_{it} – NDAC_{it}$$

Where,

$TACC_{it}$ = Total accruals for company i in year t;

NI_{it} = Net income before extraordinary items for company i in year t;

OCF_{it} = Operating cash flows for company i in year t;

TA_{it-1} = Previous year’s total assets;

ΔREV_{it} = Change in operating revenues for company i in year t;

PPE_{it} = Gross property, plant and equipment for company i in year t;

$NDAC_{it}$ = Non-discretionary accruals for company i in year t;

ΔREC_{it} = Change in net receivables for company i in year t;

$DACC_{it}$ = Discretionary accruals for company i in year t;

$\alpha_1 - \alpha_3$ = Regression parameters;

ε_{it} = Error term for company i in year t.

- **Modified Jones Model Using ROA (EM2)**

Choi, Lee and Park (2013) supported the suggestion made by Kothari et al. (2005) to use the modified Jones model, after introducing an additional independent variable, the current ROA, to control for the impact of a firm's performance on discretionary accruals. Sincerre, Sampaio, Famá and Santos (2016) summed up the difference between the Modified Jones and the Modified Jones with ROA models as: The Modified Jones with ROA model takes into account the return on assets (ROA) variable in the estimation of non-discretionary accruals, in addition to considering the net revenue and receivables variables. Based on that, total accruals and nondiscretionary accruals have been defined as follows:

$$TACC_{it}/TA_{it-1} = \alpha_1 (1/TA_{it-1}) + \alpha_2 [(\Delta REV_{it})/TA_{it-1}] + \alpha_3 (PPE_{it}/TA_{it-1}) + \alpha_4 ROA_{it-1} + \varepsilon_{it}$$

$$NDAC_{it} = \hat{a}_1 (1/TA_{it-1}) + \hat{a}_2 [(\Delta REV_{it} - \Delta REC_{it})/TA_{it-1}] + \hat{a}_3 (PPE_{it}/TA_{it-1}) + \hat{a}_4 ROA_{it-1}$$

Where, ROA has been calculated as the net income in year t, divided by the total assets in year $t-1$.

5.2.2 Measurement of Ownership Structure

As mentioned previously, ownership structure is an important monitoring mechanism, as it may restrict the appearance of earnings management practices (Alves 2012). This variable was measured within the following ownership structure categories: insider ownership (INSOWN) defined as the percentage of shares held by officers or directors within the firm and their families; and institutional ownership (INSTOWN) defined as the percent of shares held by institutions, which includes shares owned through social security and other funds. This measurement has been used in many studies (Habbash 2010; Al-Fayoumi et al. 2010; Isenmila & Elijah 2012).

5.3 Model Specification

The study used the following model to test the hypotheses presented below:

$$DACC_{it} = \beta_0 + \beta_1 INSOWN_{it} + \beta_2 INSTOWN_{it} + \beta_3 ROA_{it} + \beta_4 LEV_{it} + \beta_5 SIZE_{it} + \beta_6 CASH_{it} + e_{it}$$

Where,

$DACC_{it}$: Discretionary accruals for company i in year t;

$INSOWN_{it}$: The percentage of shares held by officers or directors within the firm and their families for company i in year t;
$INSTOWN_{it}$: The percent of shares held by the institutions for company i in year t;
ROA_{it}: Return on assets for company i in year t;
LEV_{it}: Financial leverage for company i in year t;
$SIZE_{it}$: The firm size for company i in year t;
$CASH_{it}$: Cash holding for company i in year t.

From the above-mentioned model, the measurement of earnings management (DACC) was the dependent variable. INSOWN and INSTOWN were the independent variables. The control variables were: return on assets (ROA); financial leverage (LEV); firm size (SIZE); and cash holding (CASH).

Based on prior studies, this study included four control variables: ROA, LEV, SIZE, CASH, since these have been found to be associated with the level of earnings management (Chen 2008; Sun & Rath 2009; Ardison et al. 2012; Gallap 2014; Kang & Kim 2014). ROA has been defined as the ratio of net profit and interest expenses to total assets; LEV was defined as the ratio of debt to total assets; SIZE was the natural logarithm of total assets; CASH was defined as cash to total assets after extracting the cash. Table (A1) summarised the definitions of the key variables employed in this work.

6. Results

Table (2) has provided the descriptive statistics for the variables used in this study. The average level of discretionary accruals (DACC) was 8.12 (median = 6.23) and DACC_ROA was 7.87 (median = 6.16). The average INSOWN was 51.30 (median = 49.60) and INSTOWN was 42.06 (median = 39.42). By looking at the firm characteristics, it was found that the average level of return on assets (ROA) was 2.39 (median = 3.85). The average level of leverage (LEV) was 35.16 (median = 30.59). The average level of ln of firm size (SIZE) was 16.91 (median = 16.71). The average cash holding (CASH) was 8.28 (median = 2.11).

Table (2): Descriptive Statistics

Variables	Mean	Median	Standard Deviation	Min	Max	Observations
DACC	0.46	0.76	11.00	-49.17	41.10	490
Absolute_DACC	8.12	6.23	7.42	0.01	49.17	490
DACC_ROA	0.40	-0.52	10.32	-47.61	37.62	490
Absolute_DACC_ROA	7.87	6.16	6.68	0.02	47.61	490
INSOWN	51.30	49.60	28.29	0.20	100	490
INSTOWN	42.06	39.42	30.25	0.00	100	490
ROA	2.39	3.85	9.39	-58.67	43.94	490
LEV	35.16	30.59	26.55	0.00	227.53	490
SIZE	16.91	16.71	1.35	13.99	21.31	490
CASH	8.28	2.11	20.97	0.00	197.20	490

Note: table (2) presented descriptive statistics of dependent and independent variables. Different notations used in the table were defined as follows: DACC = the level of discretionary accruals (measured by Modified Jones Model); DACC_ROA = the level of discretionary accruals (measured by Modified Jones Model with ROA); INSOWN = insider ownership; INSTOWN = institutional ownership; ROA = return on assets; LEV = leverage, SIZE = natural logarithm of total assets; CASH = cash holding.

Table (3) has presented the correlation matrix. The dependent variable EM (measured by DACC) was negatively insignificant correlated with INSOWN, SIZE, and CASH, and it was negatively significant correlated with ROA (r = -0.20). Whilst it was positively insignificant correlated with INSTOWN and positively significant with LEV (r = 0.15). The independent variable INSOWN was positively significant correlated with INSTOWN, SIZE, and CASH (r = 0.63; 0.14; 0.27) respectively. Whilst it was negatively significant correlated with LEV (r = -0.16). The same with the second independent variable INSTOWN was positively significant correlated with SIZE, and CASH (r = 0.33; 0.29) respectively. That means existence of earnings management practices in firms was not related significantly with INSOWN and INSTOWN. From the other hand, an increase in ROA may discourage managers to practice earnings management, while an increase in LEV may encourage managers to practice earnings management.

In the second model, the EM measured by Modified Jones Model with ROA, was positively insignificant correlated with INSOWN, INSTOWN, ROA, and negatively insignificant correlated with LEV, SIZE, and CASH.

Table (3): Correlation Matrix

	DACC	DACC-ROA	INSOWN	INSTOWN	ROA	LEV	SIZE	CAH
DACCC	1.00							
DACC_ROA	0.74^{***}	1.00						
INSOWN	-0.02	0.05	1.00					
INSTOWN	0.04	0.05	0.63^{***}	1.00				
ROA	-0.20^{***}	0.05	0.09	0.14	1.00			
LEV	0.15^{**}	-0.01	-0.16^{*}	-0.04	-0.37^{***}	1.00		
SIZE	-0.01	-0.01	0.14^{*}	0.33^{***}	0.31^{***}	0.14^{*}	1.00	
CASH	-0.09	-0.06	0.27^{***}	0.29^{***}	0.19^{**}	-0.22^{***}	-0.02	1.00

Note: table (3) presented the correlation matrix. Different notations used in the table were defined as follows: DACC = earnings management measured by the level of discretionary accruals; DACC-ROA = earnings management measured by Modified Jones Model with ROA; INSOWN = the percentage of shares held by officers or directors within the firm and their families; INSTOWN: the percent of shares held by the institutions; ROA = ratio of return on assets; LEV = ratio of leverage; SIZE = natural logarithm of total assets; CASH = ratio of cash holding; *, **, or ***: Significant at a 10%, 5%, or 1% level, respectively.

VIF of the correlation matrix: 1.91

Table (4) presented the differences in the mean values of the explanatory variables analysis before and after implementing corporate governance code for firms with a score lower and higher than the median. A *Mann-Whitney* test has been used to test the statistical significance of the mean differences. It is noted that variables such as DACC, DACC_ROA, and ROA differed significantly between both groups (before and after implementing corporate governance code) of firms. Furthermore, the analysis revealed that other variables such as INSOWN, ISTOWN, LEV, SIZE, and CASH differed statistically insignificantly between both groups.

Table (4): Differences in the Mean Values of the Explanatory Variables Analysis Before and After Implementing Corporate Governance Code

	Before CG		**After CG**		Mann-Whitney test
	Mean	Median	Mean	Median	
DACC	0.16	-0.02	0.59	1.11	0.71
Absolute_DACC	9.36	6.56	7.60	6.17	1.75^{*}
DACC_ROA	-0.33	0.54	-0.42	-0.62	0.57
Absolute_DACC_ROA	9.70	7.34	7.08	5.75	3.40^{***}

INSOWN	50.12	41.77	51.81	52.67	0.58
INSTOWN	41.57	39.49	42.26	39.34	0.15
ROA	4.28	5.24	1.58	3.34	3.69***
LEV	31.20	28.40	36.86	31.48	1.54
SIZE	16.88	16.73	16.92	16.69	0.12
CASH	5.78	2.09	9.35	2.13	0.13
Total	147		343		

Note: table (4) presented the differences in the mean values of the explanatory variables analysis. Different notations used in the table were defined as follows: DACC = earnings management measured by the level of discretionary accruals; DACC-ROA = earnings management measured by Modified Jones Model with ROA; INSOWN = the percentage of shares held by officers or directors within the firm and their families; INSTOWN: the percent of shares held by the institutions; ROA = ratio of return on assets; LEV = ratio of leverage; SIZE = natural logarithm of total assets; CASH = ratio of cash holding; *, **, or ***: Significant at a 10%, 5%, or 1% level, respectively.

The relationship between ownership and earnings management

Table (5) presented the regression results between the level of ownership and EM (measured by DACC). In the first model (EM and INSOWN), the regression analysis between insider ownership and earnings management, was run. A positive insignificant coefficient between the variables was found. In other words, there was no significant relationship between insider ownership and earning management. This result was consistent with many studies, such as Abed et al. (2012) and Spinos (2013).

By considering the control variables, it was found that both ROA and CASH variables were significant and negative at (β = -0.1607, $p < 0.05$; β = -0.0251, $p < 0.10$) respectively, while LEV and SIZE were statistically insignificant.

In the second model (EM and INSTOWN), the regression between institutional ownership and earnings management was run. A positive significant coefficient (β = .0390, $p < .05$) between these variables was found. This finding indicated that a higher institutional ownership resulted in higher discretionary accruals (DACC). That meant, a higher institutional ownership in the Jordanian industrial sector increased earnings management practices. This result was consistent with other studies, such as Alves (2012) who pointed out that institutional ownership may be unable to practice their monitoring role and unwilling to vote against managers, because it may affect their business interests with the company. As a result, this may encourage managers to engage in earnings management. Also, Cheng et al. (2001) proposed that institutional investors were interested in short-term financial results which created pressure on management to meet short-term earnings expectations. Moreover, Emamgholipoura et al. (2013) suggested that increasing the ownership percentage of institutional shareholders, increased earnings management practices.

These arguments indicated that institutional ownership may increase the incentives of managers to engage in earnings management, thus, may not have a limiting effect on managers' earnings management practices. Therefore, institutional investors do not always exert their role as monitors (Alves 2012; Cheng et al. 2001).

When evaluating the control variables, it was found that both ROA and CASH variables were significant and negative at (β = -0.1588, $p < 0.05$; β = -0.0393, $p < 0.01$) respectively, while LEV and SIZE were statistically insignificant.

In the third model, both insider and institutional ownership and earnings management were controlled in column 3 of table (5). The results showed a negative and insignificant coefficient between EM and INSOWN. On the other hand, it was found that INSTOWN had a positive and significant coefficient (β = .0409, $p < .05$) on earnings management. Similar to model 1 and 2, the control variables were statistically significant for ROA and CASH (β = -0.1587, $p < .05$; β = -0.0392, $p < .01$) respectively, and insignificant for LEV and SIZE.

Table (5): The Impact of Ownership Structure on Firm's Earnings Management (Measured by DACC)

Model	**1**	**2**	**3**
Constant	0.0677 (1.21)	0.0702 (1.29)	0.0749 (1.35)
INSOWN	0.0012 (0.29)		-0.0037 (-0.84)
INSTOWN		0.0390 (2.40)**	0.0409 (2.48)**
ROA	-0.1607 (-2.30)**	-0.1588 (-2.29)**	-0.1587 (-2.29)**
LEV	0.0246 (1.54)	0.0254 (1.63)	0.0253 (1.63)
Size	0.0005 (0.15)	-0.0005 (-0.14)	-0.0007 (-0.20)
CASH	-0.0251 (-1.81)*	-0.0393 (-2.73)***	-0.0392 (-2.72)***
Industry effect	Yes	Yes	Yes
Year effect	Yes	Yes	Yes
Adjusted R-squared	0.0785	0.0893	0.0878
F-Statistics	2.23	2.36	2.33
Probability	0.0004	0.0001	0.0001
N	490	490	490

Note: table (5) presented the regression results between the level of ownership and EM (measured by DACC). Different notations used in the table were defined as follows: DACC = earnings management measured by the level of discretionary accruals; INSOWN = the percentage of shares held by officers or directors within the firm and their families; INSTOWN: the percent of shares held

by the institutions; ROA = ratio of return on assets; LEV = ratio of leverage; SIZE = natural logarithm of total assets; CASH = ratio of cash holding; *, **, or ***: Significant at a 10%, 5%, or 1% level, respectively.

Table (6) presented the regression results between ownership structure and EM using a different measure of earnings management (measured by DACC_ROA). The results have been reported in table (6). The first model (EM and INSOWN), examined the influence of insider ownership and earnings management and found a positive insignificant coefficient between them. The only control variable which was statistically significant for CASH at (β = -0.0285, $p < .05$), while ROA, LEV and SIZE were statistically insignificant.

In the second model (EM and INSTOWN), this study estimated the regression between institutional ownership and earnings management. Similar results were found and reported in table (5). There was a significant positive association between institutional ownership and earnings management (β = .0299, $p < .05$). The control variables' coefficients were statistically significant and negative for CASH (β = -0.0386, $p < .01$), while ROA, LEV and SIZE were statistically insignificant.

In the third model, this study showed regression results after controlling for both insider and institutional ownership in model 3. A positive and insignificant coefficient between EM and INSOWN was found. On the other hand, we found that INSTOWN had a positive and significant coefficient (β = .0295, $p < .05$). The control variables' coefficients were statistically significant and negative for CASH (β = -0.0386, $p < .01$), while ROA, LEV and SIZE were statistically insignificant.

Thus, the above findings have implied that firms with high institutional ownership in the Jordanian industrial sector, may have higher flexibility to use accruals to manage earnings, whilst the insider ownership had no significant impact on earnings management. The reason may be due to the enacting of Jordanian Securities Law, which created several rules and restrictions to control insider trading; based on ethical and economic rationale, on the other hand, this law also eased restrictions on investors and outside ownership (Malkawi & Haloush 2007). This may explain why the insider ownership-earnings management relation was insignificant, and the outside ownership-earnings management was positively significant.

Furthermore, the relation may be different according to the corporate governance environment, as corporate governance environment may have determined whether the relation was positive, negative or insignificant, especially in the economic

environment, where economic environment includes different ownership (diffused or concentrated) and types of shareholders (stable shareholders or market investors), unfortunately many studies have ignored the impact of environmental context (Hu & Izumida 2008).

Table (6): The Impact of Ownership Structure on Firm's Earnings Management (Measured by DACC_ROA)

Model	**1**	**2**	**3**
Constant	0.1362 (2.76)***	0.1424 (2.94)***	0.1414 (2.86)***
INSOWN	0.0043 (0.78)		0.0008 (0.18)
INSTOWN		0.0299 (2.22)**	0.0295 (2.11)**
ROA	0.0375 (1.01)	0.0391 (1.05)	0.0390 (1.05)
LEV	0.0038 (0.31)	0.0043 (0.36)	0.0044 (0.36)
Size	-0.0039 (-1.32)	-0.0048 (-1.64)	-0.0048 (-1.59)
CASH	-0.0285 (-2.28)**	-0.0386 (-2.98)***	-0.0386 (-2.98)***
Industry effect	Yes	Yes	Yes
Year effect	Yes	Yes	Yes
Adjusted R-squared	0.0539	0.0611	0.0591
F-Statistics	2.33	2.42	2.33
Probability	0.0002	0.0001	0.0001
N	490	490	490

Note: table (6) presented the regression results between the level of ownership and EM (measured by DACC-ROA). Different notations used in the table were defined as follows: DACC-ROA = earnings management measured by Modified Jones Model with ROA; INSOWN = the percentage of shares held by officers or directors within the firm and their families; INSTOWN: the percent of shares held by the institutions; ROA = ratio of return on assets; LEV = ratio of leverage; SIZE = natural logarithm of total assets; CASH = ratio of cash holding; *, **, or ***: Significant at a 10%, 5%, or 1% level, respectively.

In table (7) the regression model for three main industries was run. In the first model (consumer discretionary) a negative significant coefficient ($\beta = -0.1287$, $p < 0.01$) between INSTOWN and earnings management was found, while INSOWN was statistically insignificant. In the second model (consumer staple) and the third (energy), a positive significant coefficient ($\beta = 0.0714$, $p < 0.05$) and ($\beta = 0.3683$, $p < 0.01$) respectively between INSTOWN and earnings management was found, whilst INSOWN was statistically insignificant in both models, implying that the results were consistent with the regression model in table (5).

Table (7): Industry Analysis

Model	Consumer Discretionary	Consumer Staple	Energy
Constant	0.4449 (1.83)*	0.2277 (1.21)	0.0043 (0.02)
INSOWN	0.0021 (0.05)	-0.0230 (-1.04)	-0.0524 (-0.19)
INSTOWN	-0.1287 (-3.16)***	0.0714 (2.33)**	0.3683 (2.58)***
ROA	0.5507 (2.13)**	-0.4461 (-4.91)***	-0.6174 (-2.39)**
LEV	0.1247 (1.84)*	-0.0349 (-1.78)*	0.2905 (1.15)
Size	-0.0199 (-1.56)	-0.0116 (-1.02)	-0.0117 (-0.52)
CASH	-0.6595 (-1.66)*	0.2407 (1.78)*	-0.0832 (-1.98)**
Year effect	Yes	Yes	Yes
Adjusted R-squared	0.4510	0.3354	0.6699
F-Statistics	7.51	3.36	5.389
Probability	0.000	0.0000	0.0010
N	40	110	30

Note: table (7) presented the industry analysis. Different notations used in the table were defined as follows: INSOWN = the percentage of shares held by officers or directors within the firm and their families; INSTOWN: the percent of shares held by the institutions; ROA = ratio of return on assets; LEV = ratio of leverage; SIZE = natural logarithm of total assets; CASH = ratio of cash holding; *, **, or ***: Significant at a 10%, 5%, or 1% level, respectively.

In table (8) the sample was classified into two groups: (i) prior to approval of corporate governance code and (ii) after implementing the corporate governance code. Table (8) presented the regression results between ownership structure (INSOWN and INSTOWN) and EM (measured by DACC). Before the implementation of corporate governance code, findings showed a positive and insignificant coefficient for the INSOWN variable while there was a positive significant coefficient for the INSTOWN variable ($\beta = 0.0700$, $p < 0.10$). However, after the implementation of corporate governance code, findings were that there was a negative insignificant coefficient for the INSOWN and a positive insignificant coefficient for INSTOWN. In models 3 and 6, both INSOWN and INSTOWN were controlled, and the same result of regression was found.

Table (8): The Impact of Ownership Structure on Earnings Management (DACC) Before and After Corporate Governance (CG)

	Before CG			After CG		
Model	**1**	**2**	**3**	**4**	**5**	**6**
Constant	0.0978 (0.71)	0.1034 (0.78)	0.1158 (0.93)	0.0250 (0.38)	0.0305 (0.48)	0.0244 (0.38)
INSOWN	0.0367 (1.02)		0.0153 (0.59)	-0.0013 (-0.18)		-0.0148 (-0.62)
INSTOWN		0.0700 (1.86)*	0.0609 (1.95)*		0.0250 (1.35)	0.0292 (1.29)
ROA	-0.1809 (-2.12)**	-0.1944 (-2.30)**	-0.1866 (-1.12)	-0.2314 (-4.51)***	-0.2242 (-4.36)***	-0.2471 (-3.14)***
LEV	0.1010 (2.40)**	0.0928 (2.27)**	0.0936 (2.39)**	-0.0065 (-0.41)	-0.0055 (-0.34)	-0.0080 (-0.57)
Size	-0.0005 (-0.06)	-0.0022 (-0.28)	-0.0012 (-0.14)	0.0039 (1.04)	0.0032 (0.84)	0.0029 (0.80)
CASH	-0.0247 (-0.34)	-0.0552 (-0.75)	-0.0604 (-0.84)	-0.0171 (-0.91)	-0.0273 (-1.36)	-0.0231 (-1.29)
Industry effect	Yes	Yes	Yes	Yes	Yes	Yes
Year effect	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R-squared	0.1201	0.1366	0.1245	0.0752	0.0803	0.1183
F-Statistics	2.00	2.15	4.47	2.39	2.49	2.22
Probability	0.0115	0.0056	0.0000	0.0009	0.0005	0.0007
N	147	147	147	343	343	343

Notes: table (8) presented the regression results between the level of ownership and EM (measured by DACC) before and after corporate governance code. Different notations used in the table were defined as follows: DACC = earnings management measured by the level of discretionary accruals; INSOWN = the percentage of shares held by officers or directors within the firm and their families; INSTOWN: the percent of shares held by the institutions; ROA = ratio of return on assets; LEV = ratio of leverage; SIZE = natural logarithm of total assets; CASH = ratio of cash holding; *, **, or ***: Significant at a 10%, 5%, or 1% level, respectively.

In table (9), the same model using DACC_ROA as an alternative proxy of earnings management was re-estimated. The results showed that before the implementation of corporate governance code, there was a positive and significant relationship between ownership (INSOWN and INSTOWN) and EM ($\beta = 0.0744$, $p < 0.01$; $\beta = 0.0579$, $p < 0.10$). After the implementation of corporate governance code, a positive and insignificant coefficient between INSOWN, INSTOWN, and EM was found. In models 3 and 6 both INSOWN and INSTOWN were controlled, and the results have not changed substantially.

This implied that before the issuance of the corporate governance code, the existence of the insider and institutional ownership may have increased the

engagement of managers in earnings management practices, but after the issuance of the code, the ownership had no impact on earnings management. This may be due to the timeframe associated with the implementation of the corporate governance code for Jordanian companies.

Table (9): The Impact of Ownership Structure on Earnings Management (DACC_ROA) Before and After Corporate Governance (CG)

	Before CG			**After CG**		
Model	**1**	**2**	**3**	**4**	**5**	**6**
Constant	0.1269 (1.13)	0.1914 (1.72)*	0.1260 (1.11)	0.1048 (1.94)*	0.1135 (2.25)**	0.1141 (2.01)**
INSOWN	0.0744 (2.81)***		0.0625 (2.48)**	0.0069 (0.38)		-0.0007 (-0.03)
INSTOWN		0.0579 (1.75)*	0.0332 (1.02)		0.0160 (1.06)	0.0163 (0.81)
ROA	-0.0556 (-0.61)	-0.0470 (-0.52)	-0.0653 (-0.71)	0.0155 (0.38)	0.0188 (0.48)	0.0187 (0.47)
LEV	0.0715 (2.07)**	0.0530 (1.57)	0.0684 (2.05)**	-0.0142 (-1.21)	-0.0140 (-1.21)	-0.0140 (-1.20)
Size	-0.0019 (-0.27)	-0.0052 (-0.75)	-0.0023 (-0.32)	-0.0024 (-0.82)	-0.0031 (-1.06)	-0.0031 (-0.99)
CASH	-0.0312 (-0.41)	-0.0345 (-0.45)	-0.0478 (-0.61)	-0.0284 (-2.52)**	-0.0329 (-2.66)***	-0.0329 (-2.70)***
Industry effect	Yes	Yes	Yes	Yes	Yes	Yes
Year effect	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R-squared	0.0359	0.0200	0.0336	0.0531	0.0554	0.0524
F-Statistics	1.70	1.25	1.67	2.05	2.06	1.98
Probability	0.0388	0.2215	0.0412	0.0026	0.0025	0.0037
N	147	147	147	343	343	343

Notes: table (9) presented the regression results between the level of ownership and EM (measured by DACC_ROA) before and after corporate governance code. Different notations used in the table were defined as follows: DACC-ROA = earnings management measured by Modified Jones Model with ROA; INSOWN = the percentage of shares held by officers or directors within the firm and their families; INSTOWN: the percent of shares held by the institutions; ROA = ratio of return on assets; LEV = ratio of leverage; SIZE = natural logarithm of total assets; CASH = ratio of cash holding; *, **, or ***: Significant at a 10%, 5%, or 1% level, respectively.

7. Conclusions

This study examined the association between ownership structure and earnings management in the Jordanian industrial sector, as a case study. Based on the earnings management concept, agency theory indicated that managers use accounting figures to influence contractual outcomes which reflected the concept of opportunistic

behaviour (Duru & Tsitinidis 2013). According to agency theory, the monitoring mechanisms such as insider and institutional ownership, aligned the interests of both management and the shareholders, and mitigated any opportunistic behaviour arising from conflict of interest (Kazemian & Sanusi 2015). So, many studies (e.g. Alves 2012; Huang et al. 2013; Njah et al. 2013; Ajay et al. 2015) have found a negative relationship between insider, institutional ownership and earnings management. This study has extended these studies, in order to investigate the relationship between ownership structure and earnings management in the Jordanian industrial sector. Thus, it was expected that insider and institutional ownership would have been negatively related to earnings management; consequently, ownership structure was related to less earnings management practices.

This research used discretionary accruals as a proxy for measuring earnings management, which was derived from the Modified Jones and Modified Jones with ROA models. In addition, other control variables were identified. It was found that institutional ownership and earnings management were positively related in the Jordanian industrial sector. Furthermore, it was documented that firms that had more institutional ownership have more engagement in earnings management. Thus, the study hypothesis has been rejected.

Moreover, the study found that the insider ownership had no effect on earnings management in the Jordanian industrial sector. As mentioned before, the reason may be due to the Jordanian Securities Law being enacted, creating several rules and restrictions to control insider trading, an ethical basis and an economic rationale. On the other hand, these laws eased restrictions on investors and outside ownership (Malkawi & Haloush 2007). This may explain why the insider ownership-earnings management relationship was insignificant, and the outsider ownership-earnings management relationship was positively significant. Furthermore, in a specific economic environment, different ownership (diffused or concentrated) and types of shareholders such as stable shareholders or market investors (Hu & Izumida 2008), may determine whether the ownership-earnings management relation is positive, negative, or insignificant. This implied that the theoretical implication of this study did not reject the perspective of agency theory about ownership structure, as the impact of ownership structure depended on the economic environment.

This study had several limitations: Firstly, this study focused only on the influence of insider and institutional ownership on earnings management, so future

studies can address other influential variables. Secondly, this study only focused on Jordanian industrial companies, so future studies can evaluate different sectors, companies or countries. Thus, future research could consider these issues as interesting lines of investigation.

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Appendix (A)

Summary of Variables

Table (A1) Definition and Measures for Study Variables

Dependent Variable	**Definition/Proxy**
EM	Earnings Management measured as: Accounting accruals (modified Jones Model by Dechowetal. 1995).
Independent Variables	
Ownership Structure	
INSOWN	Insider ownership measured as: The percentage of shares held by officers or directors within the firm and their families.
INSTOWN	Institutional ownership measured as: The percent of shares held by the institutions.
Control Variables	
ROA	Return on assets measured as: ROA= net profit +interest expenses / total assets
LEV	Financial leverage measured as: LEV= the ratio of debt/ total assets.
SIZE	Firm size measured as: SIZE= Ln (Total Assets)
CASH	Cash holding measured as: CASH = Cash / (Total Assets-Cash)

Summary-Objective 1 and 2

Objectives 1 and 2 were fulfilled in ***paper I.*** The relationship between ownership structure (insider and institutional) and earnings management practices was examined. The paper found that institutional ownership and earnings management were positively related while the insider ownership had no effect on earnings management in the Jordanian industrial sector. Although, it was expected that insider and institutional ownership as monitoring mechanisms would be negatively related to earnings management; consequently, ownership structure to be related to less earnings management practices. Another monitoring mechanism, that is, audit committee, has been investigated in the following section of this thesis.

CHAPTER 4: PAPER II

AUDIT COMMITTEES AND EARNINGS MANAGEMENT: EVIDENCE FROM JORDAN

The following details show the share of the co-authors in the submitted paper for publishing in this thesis.

Almadadha, R, Rashid, A, Jones, G & Shams, S, 'Audit Committees and Earnings Management: Evidence from Jordan'. Submitted to *Australian Accounting Review* 2019. Incorporated as ***paper II***.

Contributor	Statement of contribution	Contribution significance
Almadadha, R. (candidate)	Almadadha, R. formulated the hypothesis and the objectives of the research work, development of methodology, collected data, and wrote the initial draft and revised the final submission.	60%
Rashid, A.	Rashid, A. contributed in manuscript preparation and layout, hypothesis formulation and technical discussion.	15%
Jones, G.	Jones, G. reviewed the manuscript.	15%
Shams, S.	Shams, S. reviewed the statistical analysis of the manuscript.	10%

AUDIT COMMITTEES AND EARNINGS MANAGEMENT: EVIDENCE FROM JORDAN

Abstract

Purpose - This paper has examined the effect of internal audit committee on earnings management (EM) in the context of Jordan.

Design/Methodology/Approach – The paper used discretionary accruals (DA) as a measure of earnings management. An ordinary least square regression was used to investigate the association between internal audit committee and earnings management. The data was collected from 49 Jordanian industrial companies listed on the Amman Stock Exchange (ASE) during the period 2006-2015.

Findings – The paper found that audit committee and earnings management were negatively but insignificantly related in the Jordanian industrial sector.

Originality/value – This paper addressed a gap in research regarding the relationship between internal audit committees and earnings management practices. Moreover, this paper has increased the awareness of earnings management practices among supervisory, regulatory authorities and users of the financial reports, and informed them of the nature of internal audit committee-earnings management practices relationship.

Keywords - Earnings Management (EM), Audit Committee (AC), Jordan.

1. Introduction

Corporate governance plays an important role in controlling and monitoring management activities. One important aspect of corporate governance is that it is a system aimed at controlling and supervising companies, and protecting stakeholders through several corporate governance mechanisms. Good corporate governance includes a set of mechanisms to ensure the interests of the company and stakeholders.

The audit committee is one of the most important corporate governance mechanisms, which aims at controlling the performance of its members, and verifying the accuracy, transparency and auditing of financial statements, and oversight of the company's financial reporting process (Public Company Accounting Oversight Board, PCAOB 2012). The audit committee plays an important role in ensuring that shareholders' interests are properly protected in the preparation of financial reports, internal controls and audit activities (Issarawornrawanich 2015).

Furthermore, Alves (2013) argued that the audit committee performs oversight functions of the activities performed by management, with regard to audit, financial reporting, internal control and risk management in institutions, and is therefore expected to protect the interests of shareholders. Moreover, according to agency theory, the audit committee performs oversight and audit functions as a governance mechanism, to reduce information asymmetry between stakeholders and managers, thereby alleviating agency problems (Lin, Hutchinson & Percy 2009).

Thus, the existence of an audit committee in the company, increases the accountability of the board of directors and improves the efficiency of supervision and oversight of the accounting figures contained in the financial statements and reports, which are reviewed by the audit committee. This in turn improves the quality of earnings, and reduces the opportunity for managers to manage earnings. That means the existence of an audit committee within the company, may reduce the conflicts of interest between managers and stakeholders (agency problem).

This study has explored whether internal audit committee influences earnings management, with a specific focus on a developing Jordanian market as a case study. This study differs from previous studies which have given more attention to developed countries (e.g. Australia, Canada, UK, and USA).

Jordan has been selected as a case study for this paper for several reasons. Firstly, there is a lack of studies on audit committee-earnings management relationship (Siam, Laili & Khairi 2015). Secondly, Jordanian firms have suffered from a high rate

of failure, and bankruptcy cases (Zureigat et al. 2014). Thirdly, global financial collapses which have occurred in recent years, have had an influence on the Jordanian economy and provide further justification for this paper. Finally, recently, there has been significant attention paid to the corporate governance environment in Jordan (Al-Fayoumi et al. 2010).

This study has made an important contribution to both the research literature and corporate governance practice. Firstly: contribution to literature; this study has facilitated discussion about internal audit committee and earnings management. It clarified the factors that have the capacity to affect earnings management, and therefore affect the quality of earnings reporting. This study also added to the literature, by investigating internal audit committee impact on earnings management in the Jordanian industrial public-sector context during (2006-2015). This period included important events in the Jordanian context: corporate governance code introduced in 2008/2009, and the global financial crisis in 2008. Consequently, the current study provides an opportunity to compare the results of this study before and after the introduction of the corporate governance code. The current study thus has added value in terms of knowledge, to existing studies.

Secondly: contribution to practice; this study has informed supervisory and regulatory authorities about the influence of internal audit committee, and how it may influence or help detect earnings management practices. This study assists the users or beneficiaries of financial reports, to understand earnings management practices and increase their awareness about this phenomenon. This study may lead to improvements in corporate governance practices and increase the reliability of the financial statements in the Jordanian industrial public sector.

This paper has been structured as follows: Section 2 discussed the institutional background and the audit committee in Jordan. Section 3 presented the theoretical framework. Section 4 has outlined the literature review and hypotheses development. Section 5 provided the research method. Section 6 has shown the results of this study. Section 7 communicated the conclusions from this study.

2. Institutional Background and the Audit Committee in Jordan

Jordan as a developing country in the Middle East, has issued a set of regulations and laws including a corporate governance code, to improve the credibility of financial statements, and minimise manipulation of financial statements (Zureigat

et al. 2014). The corporate governance guide (Public Shareholding Companies listed on the ASE) in Jordan was launched in 2008. From 1/1/2009 all companies have been requested to adhere to the rules of corporate governance (Al-Bawab 2015) through disclosure in their annual reports. This disclosure is required to outline the extent of their compliance with the code, according to the 'comply or explain' approach. The aim of this approach was to give companies flexibility in implementation of the code, and sufficient time to adapt to the requirements of the rules of governance to enhance awareness of these rules, and thus achieve their full compliance in a gradual manner (Jordan Securities Commission, JSC 2007).

Corporate governance and its mechanisms have caught the attention of Jordanian researchers (Alabdullah et al. 2014; Al-Azzam et al. 2015; Abbadi et al. 2016), as it is considered a relatively new topic in the Jordanian context. One of the most important mechanisms for good corporate governance, is the existence of an internal audit committee, and its relationship to controlling a firm’s performance, top management, and earnings management.

Based on the Jordanian Securities Depository Center (SDC 2017), in regard to the corporate governance code for shareholding companies listed on the ASE, the audit committee shall undertake the task of overseeing and monitoring accounting and internal control, and auditing activities in the company. The audit committee is required to consist of at least 3 members, and some of them should be non-executive members. The committee is required to meet regularly, not less than four times a year, and minutes of its meetings must be taken appropriately. At least once a year, the audit committee must meet with the company’s external auditor, without the presence of the executive management or any person representing it.

In addition, it undertakes other tasks as stated in the Jordanian corporate governance code, such as: discussion of matters relating to the nomination of the external auditor; following up the company's compliance with the provisions of the legislation in force and the requirements of the regulatory bodies; studying the periodic reports before submitting them to the board of directors; and any other matters decided by the board of directors.

The corporate governance code also determined that the audit committee has powers such as: requesting the presence of the external auditor if the committee considers it necessary to discuss with them any matters relating to their work in the

company; recommending that the board of directors nominate the external auditor; and nominating an internal auditor to be appointed to the company (SDC 2017).

Moreover, the code determined that all audit committee members must have knowledge in financial and accounting matters, and that at least one of them has had previous work experience in the field of accounting or financial matters, or has a scientific qualification or a professional certificate in accounting, finance or other related fields. The goal of these provisions is to alleviate agency problems. It is the belief that the existence of a qualified audit committee (high experience, regular meetings, independence) can improve the quality of earnings, the quality of financial reports, and reduce earnings management and information asymmetry between shareholders and managers (Lin, Hutchinson & Percy 2009).

3. Theoretical Framework

Many studies have shown the link between earnings management and agency theory (e.g. Davidson, Jiraporn, Kim & Nemec 2004; Prior, Surroca & Tribó 2007). Agency theory has been used widely in literature, to determine the optimal contract between different individuals, and to establish an appropriate accounting control to monitor and control management behaviour (Biaman 1982; Namazie 1985; Namazi 2013). Agency theory is used to explain the relationship between principals (owners) and agents (managers) and how that relationship may be best managed (Ross 1972; Mitnick 1973; Jensen & Meckling 1976). Moreover, agency theory provides information about, managers' incentives to choose and apply estimates and accounting techniques which increase their own wealth. These incentives have resulted from the separation of ownership and control (Kazemian & Sanusi 2015). Thus, from the perspective of agency theory, managers often have incentives to achieve their personal interests ahead of considering the interests of shareholders (Habbash 2010).

Consequently, this has generated a conflict of interest between managers and shareholders which leads to an agency cost. Earnings management is considered a type of agency cost. This because if managers issue financial reports that do not provide a precise economic picture of the company, and shareholders make unfavourable investment decisions based on that information (Davidson et al. 2004), then there is an associated agency cost. Additionally, agency theory has proposed that managers are motivated by self-interest and as a result may not faithfully present the company position (Prior, Surroca & Tribó 2007). This theory has proposed that managers may

be engaged in earnings management practices to present a better picture of the performance of the company, with the goal of achieving their personal motives (e.g. meeting market expectations, improving their personal situation and interests, and receiving bonuses based on profit).

Based on the earnings management concept, agency theory has indicated that managers use accounting figures to influence contractual outcomes which reflects the concept of opportunistic behaviour (Duru & Tsitinidis 2013). Thus, it can be concluded that managers may resort to altering and manipulating financial reports to cover opportunistic behaviour and earnings management. Fama and Jensen (1983) have suggested that companies need to separate decision management from decision control, as controlling the management authority and ensuring interests of the shareholders reduces the agency costs.

According to agency theory, controlling and monitoring mechanisms as corporate governance tools, can align the interests of both management and shareholders, and reduce opportunistic behaviour arising from conflicts of interest (Kazemian & Sanusi 2015). Agency theory takes into consideration earnings management activities, and suggested that it may indicate an agency problem, and has proposed that corporate governance may limit earnings management practices (Habbash 2010). Likewise, Davis et al. (1997 p.23) stated that "The governance mechanisms are designed to ensure agent-principal interest alignment, protect shareholder interests and thus minimise agency costs". Thus, corporate governance plays an important role in controlling and monitoring management decisions and protecting the interests of shareholders, which in turn may reduce agency problems and conflicts between agents and principals.

Corporate governance mechanisms such as an audit committee, provide an opportunity to monitor the work of management. Weakness within corporate controls and monitoring, may provide an opportunity for managers to pursue and achieve their personal interests by following opportunistic behaviours such as earnings management, but effective corporate governance mechanisms can reduce this behaviour (Habbash 2010).

Likewise, Al-Ghamdi (2012) has pointed out that agency theory considers auditing as the most important monitoring mechanism to regulate conflicts of interest and reduce agency costs. Furthermore, he asserted that high audit quality, can reduce the opportunistic behaviour of managers.

In the light of the above, agency theory can be summarised as the problem which occurs as a result of the separation of management and ownership in companies. This separation may cause a problem (agency problem) because of the different interests of both managers and shareholders. Thus, to minimise this problem, there must be an effective control system such as corporate governance to reduce opportunistic behaviour and control management performance, and to protect shareholder rights.

As stated earlier, agency theory argued that the individual is primarily self-interested and self-opportunistic, rather than altruistic (Rashid 2009). Therefore, this study considers agency theory as an appropriate tool to clarify the motivations and incentives of earnings management practices. Thus, this study has relied on agency theory in its hypotheses development, to test whether there is a relationship between internal audit committee and earnings management practices.

4. Literature Review and Hypotheses Development

Recent attention within the literature has focused on the effect of the audit committee on earnings management practices and the quality of financial reporting (Habbash 2019; Alzoubi 2019; Agyei-Mensah & Yeboah 2019). Previous studies have argued that the presence of an audit committee is associated with a lower level of financial statement fraud and more reliable financial reporting (Beasley et al. 2000). In the same vein, Anderson et al. (2004) concluded that the presence of an audit committee has a significant role in controlling the financial reporting and the internal system. Thus, audit committee is considered an efficient mechanism for detecting and reducing earnings management, and hence, improve earnings quality (Piot & Janin 2007; Baxter & Cotter 2009).

Vafeas (2005) argued that the structure and activity of audit committee relate to the quality of earnings information produced by firms. He found that the characteristics of a strong audit committee (e.g. audit committee independence; a high level of audit committee expertise; frequent meetings; and a large audit committee) helped to enhance financial reporting quality and led to an increase in earnings quality. Likewise, Bedard et al. (2004) and Albersmann and Hohenfels (2017) hold the view that audit committees who have members with financial expertise, help prevent earnings management. Xie et al. (2003) argued that the more frequent the meetings, and the more active the audit committees, the more effective monitoring is expected.

As a result, audit committees which include members with financial experience, and where there are regular meetings, help to strengthen the board structure and the efficiency of its work. Similarly, Stewart and Munro (2007) asserted that not only the existence of the audit committee, but also the frequency of audit committee meetings and the auditor's attendance at meetings, are significantly associated with a reduction in the audit risk. In addition, it can help resolve disputes with management, and improve overall audit quality.

Lin, Hutchinson and Percy (2009) studied the role of the audit committees in constraining earnings management and conducted their studies on Chinese firms listed in Hong Kong. They found that independence, expertise and size of audit committee, are associated with lower levels of earnings management. Furthermore, in a study conducted on Malaysian public listed companies, Chandrasegaram et al. (2013) argued that the audit committee is responsible for monitoring the operating system and internal controls of the company, in order to protect the interests of the shareholders. Similarly, Alves (2013) found that the existence of an audit committee and external auditor, together reduces earnings management practices. Also, she asserted that the presence of an audit committee in the company, is able to improve the quality and accuracy of financial information. Consequently, an audit committee, as part of the corporate governance mechanism, can play a key role in restricting earnings management. The existence of audit committee within the company, enhances the quality of earnings reports and compliance with corporate governance principles, and thus ensures a sound corporate governance system able to oversee the financial reporting of the company (Liu, Harris & Omar 2013).

However, some studies have found the existence of an audit committee does not play a vital role in constraining earnings management (Osma & Noguer 2007). These studies have shown that the presence of audit committee does not have a direct interaction with earnings management (see, Peasnell et al. 2005; Osma & Noguer 2007; Wan Mohammad et al. 2016). Furthermore, Abdul Rahman and Ali (2006), Habbash (2011), and Waweru and Riro (2013), found that there was an insignificant relationship between audit committee and earnings management. The contradictory results between previous studies around the role of audit committee in monitoring and detecting earnings management, is justifiable, as the mere existence of the audit committee cannot guarantee the efficiency of the monitoring process, without ensuring its independence and efficiency (Siam, Laili & Khairi 2015).

In the context of Jordan, Al-khabash and Al-Thuneibat (2009) examined in their study earnings management practices from the perspective of external and internal auditors. They designed a questionnaire and distributed it to a sample of both external and internal auditors. The study results showed that there was a significant difference between their views. External auditors believed that management engaged significantly in earnings management, that either increased or decreased income. However, internal auditors believed that management engaged in earnings management that only increased income.

It is concluded that the existence of an audit committee is an important measure to control and oversee the performance and operations of the board itself, and the quality of the financial statements and disclosures, so that they can benefit and serve the needs of a variety of users. Managers may feel more accountable for their decision making when there is an audit committee, thus the chances of opportunistic behaviour by managers may be reduced. The presence of the audit committee can also be considered to provide protection for shareholders' interests. Therefore, the existence of a qualified audit committee (high experience, regular meetings, independent) can improve the quality of earnings, the quality of financial reports, and reduce the earnings management activities.

Based on agency theory and published empirical results, this study hypothesised that the presence of audit committees is related to less earnings management. The reason is that from the agency theory perspective, audit committees perform oversight and audit functions, as a governance mechanism to reduce information asymmetry between stakeholders and managers, thereby alleviating agency problems (Lin, Hutchinson & Percy 2009). Therefore, the presence of an audit committee in the company leads to increased earnings quality and reduces the practice of managing earnings. Also, the existence of full audit committees (qualified; audit committee independence; a high level of audit committee expertise; frequent meetings; and a large audit committee) and good audit committee structure, serves to strengthen corporate governance and limit the level of earnings management (Davidson et al. 2005; Vafeas 2005). This discussion has led to the following hypothesis.

H1: There will be a negative relationship between the presence of audit committee and earnings management.

5. Research Method

5.1 Sample

This paper has examined whether the internal audit committee influence the earnings management activities in the Jordanian industrial sector. We examined selected Jordanian industrial companies which were listed on the Amman Stock Exchange (ASE) during the period of 2006-2015. The study population consisted of industrial companies listed in ASE, which represented 64 companies at the end of 2015. The study's sample consisted of all industrial companies that have the available data to achieve research objectives. It included 49 Jordanian industrial companies selected on the basis of: (i) the availability of data; (ii) the company was not merged; (iii) and the company was still trading and had not stopped trading during the period of the study.

The study gathered necessary data from annual financial statements of these companies based on the company's guide issued by ASE during the period 2006-2015. The Jordanian industrial sector consists of 16 different types of industries (e.g. metal mining, chemical and allied products, etc.). These 16 types of industries represent 49 firms which have financial statements and annual reports available for 10 years, which formed the total sample used in this paper, as shown in table (1).

Table (1): Industry Classification of the Sample

Industry Type	Number	Percent%
Agricultural Production-Livestock	2	4.10
Metal Mining	1	2.04
Oil and Gas Extraction	1	2.04
Non-Metallic Minerals, except Fuels	2	4.10
Food and Kindred Products	8	16.32
Tobacco Products	1	2.04
Textile Mill Products	1	2.04
Apparel and other Textile Products	3	6.12
Lumber and Wood Products	1	2.04
Paper and Allied Products	2	4.10
Chemicals and Allied Products	10	20.40
Petroleum and Coal Products	2	4.10

Stone, Clay, and Glass Products	5	10.20
Primary Metal Industries	6	12.20
Electronic and other Electric Equipment	3	6.12
Transportation Equipment	1	2.04
Total	49	100%

5.2 Variables Definitions

5.2.1 Measurement of Earnings Management

- **Modified Jones Model (EM1)**

In this paper, discretionary accruals were used to detect the presence of earnings management. This is because managers may practise earnings management through the manipulation of discretionary accruals, as it is less likely to be exposed (Habbash 2010). Prior studies have used a number of models to detect and measure the earnings management, such as: Healy Model 1985; DeAngelo Model 1986; Jones Model 1991; Modified Jones Model by Dechow et al. 1995. This paper has used the modified Jones Model (1995) developed by Dechow et al. (1995), to measure earnings management.

The modified Jones Model (1995) is the most common and widely used model in accounting literature used for studying and measuring earnings management, and it provides the most power in detecting and measuring earnings management and discretionary accruals (Guay et al.1996; Peasnell, Pope & Young 2000; Bedard et al. 2004). Discretionary accruals are more susceptible to manipulation and thus considered a good measurement of earnings management (Al-Sartawi et al. 2013). In this regard, we calculated the total accruals and then calculated the non-discretionary accruals, thus the discretionary accruals were calculated through the difference between the total accruals and the non-discretionary accruals.

According to the modified Jones Model developed by Dechow et al. (1995), which has been used in many studies (e.g. Muttakin et al. 2015; Abbadi et al. 2016), total accruals (TA) are computed as the difference between earnings and cash flows from operating activities.

$$TACC_{it} = NI_{it} - OCF_{it}$$

The equation below was estimated for each firm and fiscal year combination. Thus, the industry specific parameters of the Jones model were estimated as follows:

$$TACC_{it}/TA_{it-1} = \alpha_1 (1/TA_{it-1}) + \alpha_2 [(\Delta REV_{it})/TA_{it-1}] + \alpha_3 (PPE_{it}/TA_{it-1}) + \varepsilon_{it}$$

Nondiscretionary accruals were estimated for each year and fiscal year combination, by using the equation as follows:

$$NDAC_{it} = \hat{a}_1 (1/TA_{it-1}) + \hat{a}_2 [(\Delta REV_{it} - \Delta REC_{it})/TA_{it-1}] + \hat{a}_3 (PPE_{it}/TA_{it-1})$$

Then discretionary accruals were estimated by subtracting the predicted level of non-discretionary accruals (NDAP) from total accruals, and is shown by the use of the following equation:

$$DACC_{it} = TACC_{it} - NDAC_{it}$$

Where,

$TACC_{it}$ = Total accruals for company i in year t;

NI_{it} = Net income before extraordinary items for company i in year t;

OCF_{it} = Operating cash flows for company i in year t;

TA_{it-1} = Previous year's total assets;

ΔREV_{it} = Change in operating revenues for company i in year t;

PPE_{it} = Gross property, plant and equipment for company i in year t;

$NDAC_{it}$ = Non-discretionary accruals for company i in year t;

ΔREC_{it} = Change in net receivables for company i in year t;

$DACC_{it}$ = Discretionary accruals for company i in year t;

$\alpha_1 - \alpha_3$ = Regression parameters;

ε_{it} = Error term for company i in year t.

- **Modified Jones Model using ROA (EM2)**

Choi, Lee and Park (2013) supported the suggestion made by Kothari et al. (2005) to use the modified Jones model after introducing an additional independent variable, the current ROA, to control for the impact of a firm's performance on discretionary accruals. Sincerre, Sampaio, Famá and Santos (2016) summed up the difference between the Modified Jones and the Modified Jones with ROA models as: The Modified Jones with ROA model takes into account the return on assets (ROA) variable in the estimation of non-discretionary accruals. In addition to considering the net revenue and receivables variables. Based on that, total accruals and nondiscretionary accruals have been defined as follows:

$$TACC_{it}/TA_{it-1} = \alpha_1 (1/TA_{it-1}) + \alpha_2 [(\Delta REV_{it})/TA_{it-1}] + \alpha_3 (PPE_{it}/TA_{it-1}) + \alpha_4 ROA_{it-1} + \varepsilon_{it}$$

$$NDAC_{it} = \hat{a}_1 (1/TA_{it-1}) + \hat{a}_2 [(\Delta REV_{it} - \Delta REC_{it})/TA_{it-1}] + \hat{a}_3 (PPE_{it}/TA_{it-1}) + \hat{a}_4 ROA_{it-1}$$

Where, ROA was calculated as the net income in year t, divided by the total assets in year t_{-1}.

5.2.2 Measurement of Internal Audit Committee

Ayemere and Elijah (2015, p. 15) defined an audit committee as "A sub-committee of the board that specializes in, and is responsible for, ensuring the accuracy and reliability of the financial statements provided by management". Establishing an audit committee is one of the major benefits for companies which help to improve the quality of financial statements (Blue Ribbon Committee 1999; Ayemere & Elijah 2015). This variable has been measured by audit committee presence; the existence of an audit committee is divided into two parts, set at one if the company has an audit committee and zero if there is no audit committee. This measurement has been used in many previous studies (Goodwin-Stewart 2006; Lin et al. 2009).

5.3 Model Specification

The study used the following model to test the hypotheses presented below:

$$DACC_{it} = \beta 0 + \beta_1 AC_{it} + \beta_2 ROA_{it} + \beta_3 LEV_{it} + \beta_4 SIZE_{it} + \beta_5 CASH_{it} + e_{it}$$

Where,

$DACC_{it}$ = Discretionary accruals for company i in year t;

AC_{it}: A dummy variable given the value 1 for the existence of an audit committee and 0 for no audit committee;

ROA_{it} = Return on assets for company i in year t;

LEV_{it} = Financial leverage for company i in year t;

$SIZE_{it}$ = Firm size for company i in year t;

$CASH_{it}$ = Cash holding for company i in year t.

From the above-mentioned model, the measurement of earnings management (DACC) was the dependent variable, and audit committee (AC) as the independent variable. The control variables were: return on assets (ROA); financial leverage (LEV); firm size (SIZE); and cash holding (CASH).

Based on practices from prior studies, this study included four control variables: ROA, LEV, SIZE, CASH, since these have been found to be associated with the level of earnings management (Chen 2008; Sun & Rath 2009; Ardison et al. 2012; Gallap 2014; Kang & Kim 2014). ROA has been defined as the ratio of net profit and interest expenses to total assets; LEV defined as the ratio of debt to total assets; SIZE

as the natural logarithm of total assets; CASH was defined as cash to total assets after extracting the cash. Table (A1) summarised the definitions of the key variables employed in this work.

6. Results

Table (2) has provided the descriptive statistics for the variables used in this study. The average level of discretionary accruals (DACC) was 8.12 (median = 6.23) and DACC_ROA was 7.87 (median = 6.16). The average audit committee (AC) was 0.53 (median = 1.00). By looking at the firm characteristics, it was found that the average level of return on assets (ROA) was 2.39 (median = 3.85). The average level of leverage (LEV) was 35.16 (median = 30.59). The average level of ln of firm size (SIZE) was 16.91 (median = 16.71). The average cash holding (CASH) was 8.28 (median = 2.11).

Table (2): Descriptive Statistics

Variables	Mean	Median	SD.	Min	Max	Observations
Absolute_DACC	8.12	6.23	7.42	0.01	49.17	490
Absolute_DACC-ROA	7.87	6.16	6.68	0.17	47.61	490
AC	0.53	1.00	0.50	0.00	1.00	490
ROA	2.39	3.85	9.39	-58.67	43.94	490
LEV	35.16	30.59	26.55	0.00	227.53	490
SIZE	16.91	16.71	1.35	13.99	21.31	490
CASH	8.28	2.11	20.97	0.00	197.20	490

Note: table (2) presented descriptive statistics of dependent and independent variables. Different notations used in the table were defined as follows: DACC = the level of discretionary accruals (measured by Modified Jones Model); DACC_ROA = the level of discretionary accruals (measured by Modified Jones Model with ROA); AC = audit committee; ROA = return on assets; LEV = leverage, SIZE = natural logarithm of total assets; CASH = cash holding.

Table (3) presented the differences in the mean values of the explanatory variables analysis before and after implementing corporate governance code for firms with a score lower and higher than the median. A *Mann-Whitney* test has been used to test the statistical significance of the mean differences. It is noted that variables such as DACC, DACC_ROA, and ROA differed significantly between both groups (before and after implementing corporate governance code) of firms. Furthermore, the analysis revealed that other variables such as AC, LEV, SIZE, and CASH differed statistically insignificantly between both groups.

Table (3): Differences in the Mean Values of the Explanatory Variables Analysis Before and After Implementing Corporate Governance Code

	Before CG		After CG		Mann-Whitney test
	Mean	Median	Mean	Median	
Absolute_DACC	9.36	6.56	7.60	6.17	1.75^{*}
Absolute_DACC_ROA	9.70	7.34	7.08	5.75	3.40^{***}
AC	0.53	1.00	0.56	1.00	1.64
ROA	4.28	5.24	1.58	3.34	3.69^{***}
LEV	31.20	28.40	36.86	31.48	1.54
SIZE	16.88	16.73	16.92	16.69	0.12
CASH	5.78	2.09	9.35	2.13	0.13
Total	147		343		

Note: table (3) presented the differences in the mean values of the explanatory variables analysis. Different notations used in the table were defined as follows: DACC = earnings management measured by the level of discretionary accruals; DACC-ROA = earnings management measured by Modified Jones Model with ROA; AC = audit committee measured as: A dummy variable given the value 1 for the existence of an audit committee and 0 for no audit committee; ROA = ratio of return on assets; LEV = ratio of leverage; SIZE = natural logarithm of total assets; CASH = ratio of cash holding; *, **, or ***: Significant at a 10%, 5%, or 1% level, respectively.

Table (4) presented the correlation matrix. The dependent variable EM (measured by DACC) was negatively insignificant correlated with AC and SIZE and was negatively significant correlated with ROA and CASH (r = -0.20; -0.09) respectively. While, it was positively significant correlated with LEV (r = 0.15). The independent variable AC was positively insignificant correlated with ROA and LEV and positively significant correlated with CASH (r = 0.15). While it was negatively significant correlated with SIZE (r = -0.14).

The findings indicated that existence of earnings management practices in firms was negatively related but not significant with AC and SIZE. On the other hand, an increase in ROA and CASH may discourage managers to practice earnings management, while an increase in LEV may encourage manager to practice earnings management.

In the second model, the EM measured by Modified Jones Model with ROA, was negatively insignificant correlated with AC, LEV, SIZE, and CASH. While EM was positively insignificant correlated with ROA.

Table (4): Correlation Matrix

		1	2	3	4	5	6	7	VIF
1	DACC	1.00							-
2	DACC_ ROA	0.74***	1.00						-
3	AC	-0.01	-0.04	1.00					1.06
4	ROA	-0.20***	0.05	0.01	1.00				1.39
5	LEV	0.15***	-0.01	0.04	-0.37***	1.00			1.31
6	SIZE	-0.01	-0.01	-0.14***	0.31***	0.14***	1.00		1.24
7	CASH	-0.09**	-0.06	0.15***	0.19***	-0.22***	-0.02	1.00	1.10

Note: table (4) presented the correlation matrix. Different notations used in the table were defined as follows: DACC = earnings management measured by the level of discretionary accruals; DACC-ROA = earnings management measured by Modified Jones Model with ROA; AC = audit committee measured as: A dummy variable given the value 1 for the existence of an audit committee and 0 for no audit committee; ROA = ratio of return on assets; LEV = ratio of leverage; SIZE = natural logarithm of total assets; CASH = ratio of cash holding; *, **, or ***: Significant at a 10%, 5%, or 1% level, respectively.

Table (5) presented the regression results between the existence of audit committee and EM. In the first model (EM measured by DACC), it was found that there was a negative insignificant coefficient between the variables. In other words, there was no significant relationship between audit committee and earning management. This result is consistent with many studies, such as Peasnell et al. 2005; Abdul Rahman & Ali 2006; Osma & Noguer 2007; Habbash 2011; Waweru & Riro 2013; and Wan Mohammad et al. 2016. This result, as mentioned previously, is not surprising, as the mere existence of the audit committee, without taken into consideration its characteristics (e.g. independence, efficiency), cannot guarantee the efficiency of the monitoring process and thus the ability to detect and reduce earnings management (Siam, Laili & Khairi 2015).

By looking into control variables, it was found that both ROA and CASH variables were significant and negative at ($\beta = -0.1577, p < 0.05$; $\beta = -0.0248, p < 0.10$) respectively, while LEV and SIZE were statistically insignificant.

In the second model, the regression was run to determine the results between internal audit committee and EM using a different measure of earnings management (measured by DACC_ROA). The findings are consistent with the first model. All control variables were statistically insignificant except CASH which was significant and negative at ($\beta = -0.0275, p < 0.05$).

Table (5): OLS Regression Results Earnings Management and Audit Committee Existence

	EM_DACC	EM_ROA
Model	**1**	**2**
Constant	0.0670 (1.11)	0.1370 (2.50)**
AC	-0.0016 (-0.19)	-0.0043 (-0.55)
ROA	-0.1577 (-2.25)**	0.0452 (1.22)
LEV	0.0253 (1.58)	0.0056 (0.45)
Size	0.0001 (0.04)	-0.0049 (-1.64)
CASH	-0.0248 (-1.80)*	-0.0275 (-2.24)**
Industry effect	Yes	Yes
Year effect	Yes	Yes
Adjusted R-squared	0.0770	0.0548
F-Statistics	2.14	2.27
Probability	0.0006	0.0002
N	490	490

Note: table (5) presented the regression results between the audit committee and EM. Different notations used in the table were defined as follows: DACC = earnings management measured by the level of discretionary accruals; DACC-ROA = earnings management measured by Modified Jones Model with ROA; AC = audit committee measured as: A dummy variable given the value 1 for the existence of an audit committee and 0 for no audit committee; ROA = ratio of return on assets; LEV = ratio of leverage; SIZE = natural logarithm of total assets; CASH = ratio of cash holding; *, **, or ***: Significant at a 10%, 5%, or 1% level, respectively.

In table (6) the sample was further classified into two groups: (i) prior to approval of corporate governance code and (ii) after implementing the corporate governance code. In the first model (EM measured by DACC), before the implementation of corporate governance code, the study found a positive and insignificant coefficient between AC and EM, while after the implementation of corporate governance code there was a negative and insignificant coefficient. In the second model (EM measured by ROA), the same results were found as in the first model.

This implied that before and after the issuance of the corporate governance code, the existence of the audit committee had no impact on earnings management in the Jordanian industrial sector. This may be due to the timeframe associated with the implementation of the corporate governance code for Jordanian companies. It may also be due to, the nature of audit committees (qualified; audit committee independence; a

high level of audit committee expertise; frequent meetings; and a large audit committee), as a good audit committee structure serves to strengthen corporate governance and limit the level of earnings management (Davidson et al. 2005; Vafeas 2005).

Table (6): Earnings Management and Audit Committee Before and After CG

	EM_DACC		EM_ROA	
	Before CG	**After CG**	**Before CG**	**After CG**
Model	**1**	**2**	**3**	**4**
Constant	0.1333 (0.98)	0.0219 (0.35)	0.1851 (1.45)	0.1212 (2.16)**
AC	0.0089 (0.49)	-0.0063 (-0.66)	0.0027 (0.16)	-0.0076 (-0.83)
ROA	-0.1560 (-0.94)	-0.2521 (-3.06)***	-0.0165 (-0.18)	0.0186 (0.47)
LEV	0.0897 (2.22)**	-0.0081 (-0.55)	0.0577 (1.64)	-0.0136 (-1.17)
Size	-0.0020 (-0.25)	0.0037 (1.06)	-0.0067 (-0.93)	-0.0033 (-1.15)
CASH	-0.0128 (-0.18)	-0.0145 (-0.93)	0.0000 (0.00)	-0.0258 (-2.50)**
Industry effect	Yes	Yes	Yes	Yes
Year effect	Yes	Yes	Yes	Yes
Adjusted R-squared	0.1048	0.1139	0.0050	0.0527
F-Statistics	1.78	2.27	1.13	2.03
Probability	0.0000	0.0005	0.4300	0.0026
N	147	343	147	343

Note: table (6) presented the regression results between the audit committee and EM before and after corporate governance code. Different notations used in the table were defined as follows: DACC = earnings management measured by the level of discretionary accruals; DACC-ROA = earnings management measured by Modified Jones Model with ROA; AC = audit committee measured as: A dummy variable given the value 1 for the existence of an audit committee and 0 for no audit committee; ROA = ratio of return on assets; LEV = ratio of leverage; SIZE = natural logarithm of total assets; CASH = ratio of cash holding; *, **, or ***: Significant at a 10%, 5%, or 1% level, respectively.

7. Conclusions

This study examined the association between audit committee and earnings management in the Jordanian industrial sector as a case study. Many studies (e.g. Piot & Janin 2007; Baxter & Cotter 2009; Lin et al. 2009) have found a negative relationship between audit committee and earnings management. This study extended these studies, in order to investigate the relationship between audit committee and earnings management in the Jordanian industrial sector. Thus, it was expected that

audit committee would be negatively related to earnings management; consequently, the existence of an audit committee would be related to less earnings management practices.

This research used discretionary accruals as a proxy for measuring earnings management, which were derived from the Modified Jones and Modified Jones with ROA models. In addition, other control variables were identified. It was found that audit committee and earnings management were negatively but insignificantly related in the Jordanian industrial sector.

This result may be due to the current study only taking into consideration the existence of audit committee, without considering the audit committee's characteristics (e.g. qualified; audit committee independence; a high level of audit committee expertise; frequent meetings; and size of audit committee). This result has suggested that future studies within the Jordanian industrial sector should give more attention to the characteristics of audit committee. It suggests that the existence of a suitably qualified audit committee would improve the efficiency of monitoring system, improve the quality of the financial reports, and reduce earnings management, as mere existence of audit committee is not enough to improve the efficiency of monitoring process.

This study had several limitations: Firstly, this study focused only on the influence of audit committee on earnings management, so future studies could address other influential variables. Secondly, this study only focused on Jordanian industrial companies, so future studies could consider evaluating different sectors, companies or countries. Thus, future research could consider these issues as interesting lines of investigation.

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Appendix (A)

Summary of Variables

Table (A1) Definition and Measures for study Variables

Dependent Variable	Definition/Proxy
EM	Earnings Management measured as: Accounting accruals (modified Jones Model by Dechowetal. 1995).
Independent Variables	
Audit Committee (AC)	Audit committee measured as: A dummy variable given the value 1 for the existence of an audit committee and 0 for no audit committee.
Control Variables	
ROA	Return on assets measured as: ROA= net profit +interest expenses / total assets
LEV	Financial leverage measured as: LEV= the ratio of debt/ total assets.
SIZE	Firm size measured as: SIZE= Ln (Total Assets)
CASH	Cash holding measured as: CASH = Cash / (Total Assets-Cash)

Summary-Objective 3

Objective 3 was fulfilled in ***paper II***. The relationship between audit committee and earnings management practices was examined. The paper found that audit committee and earnings management, were negatively but insignificantly related in the Jordanian industrial sector. Other than corporate governance mechanisms (insider ownership, institutional ownership, and audit committee) that have been examined in this thesis, other factors may have an impact on earnings management practices, such as CSR, which has been investigated in the following section of this thesis.

CHAPTER 5: PAPER III

CORPORATE SOCIAL RESPONSIBILITY REPORTING AS AN ANTECEDENT OF EARNINGS MANAGEMENT: EVIDENCE FROM JORDAN

The following details show the share of the co-authors in the submitted paper for publishing in this thesis.

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Contributor	Statement of contribution	Contribution significance
Almadadha, R. (candidate)	Almadadha, R. formulated the hypothesis and the objectives of the research work, development of methodology, collected data, and wrote the initial draft and revised the final submission.	60%
Rashid, A.	Rashid, A. contributed in manuscript preparation and layout, hypothesis formulation and technical discussion.	15%
Jones, G.	Jones, G. reviewed the manuscript.	15%
Shams, S.	Shams, S. reviewed the statistical analysis of the manuscript.	10%

CORPORATE SOCIAL RESPONSIBILITY REPORTING AS AN ANTECEDENT OF EARNINGS MANAGEMENT: EVIDENCE FROM JORDAN

Abstract

Purpose - This study has examined the effect of corporate social responsibility (CSR) reporting on earnings management (EM) within the Jordanian context.

Design/Methodology/Approach - The paper has used discretionary accruals (DA) as a measure of earnings management. An ordinary least square regression was used to investigate the association between CSR and earnings management. The data was collected from 49 Jordanian industrial companies listed on the Amman Stock Exchange (ASE), during the period 2006-2015.

Findings - The paper found that CSR and earnings management were negatively associated. Furthermore, firms that provided higher levels of CSR reporting had lower levels of engagement in earnings management.

Originality/value - The findings of this paper are important for both advancing research literature and practice. In relation to the literature, this paper addressed a gap in the research regarding the relationship between CSR disclosures and earnings management practices. Regarding practice, this paper has provided users of the financial reports with information to understand earnings management practices, and increase their awareness of the factors which influence decisions to engage in earnings management.

Keywords - Earnings Management (EM), Corporate Social Responsibility (CSR), Jordan.

1. Introduction

Corporate social responsibility (CSR) is a significant issue for companies and previous studies have focused on CSR and its relationship with earnings management (Prior et al. 2007; Yip, Staden & Cahan 2011; Grecco, Geron & Grecco 2017; Karthika & Nair 2019). An important objective of CSR is about building sustainability for business in a responsible manner (Moir 2001). CSR relates to both the ethical and moral aspects of corporate decision-making and behaviour (Branco & Rodrigues 2006). It is considered one of the regulatory tools that encourages more effective use of companies' resources (Gras-Gil, Manzano & Fernández 2016).

Disclosure of CSR activities is a way for companies to communicate their response to these issues with stakeholders (Yip, Staden & Cahan 2011). Sun et al. (2010) indicated that CSR reporting practices require the company to be accountable to multiple stakeholders, but can also be used as a mechanism to divert the attention of shareholders from earnings management activities to other issues, and as a result, the share price could be enhanced.

Many studies have shown the importance of CSR in reducing earnings management activity (Hong & Andersen 2011; Scholtens & Kang 2013; Gras-Gil et al. 2016). Alternatively, CSR has also been misused by managers, with some managers using it to disguise opportunistic behaviour, cover manipulation, and practise earnings management. Managers who have manipulated earnings are able to manage stakeholder activism and vigilance by resorting to CSR practices (Prior, Surroca & Tribó 2008; Grougiou et al. 2014).

This study examined whether firms involved in corporate social responsibility (CSR) activities are simultaneously involved in earnings management. This study has specifically focused on Jordanian industrial companies listed on the Amman Stock Exchange (ASE).

The decision to focus on Jordan was motived by several factors. First, there is a dearth of studies on earnings management and CSR. Second, there is a high rate of failure, and bankruptcy cases of the Jordanian firms (Zureigat et al. 2014). Third, the significant financial collapses which have happened around the world have had an impact on the Jordanian economy, which provided further justification for this research. Finally, recently there has been a significant increase in the attention paid to improving corporate governance practices in Jordan (Al-Fayoumi et al. 2010). The corporate governance code for companies listed on the ASE, came into effect on 1

January 2009 (Securities Depository Centre, SDC 2017), and required improved corporate governance activities. For these reasons, Jordan made an interesting case study for this research.

This study has made an important contribution to both the research literature and practice. Firstly: contribution to literature; this study facilitates discussion about the link between CSR reporting and earnings management. It has clarified the factors which have the capacity to affect earnings management, and therefore affect the quality of earnings reporting. This study has also added to the literature by investigating CSR reporting on earnings management in the Jordanian industrial public-sector context during the period of 2006 to 2015. This period included important events within the Jordanian context: the corporate governance code was introduced in 2008; and the global financial crisis occurred in 2008. Consequently, the current study has provided an opportunity to compare the results of this study before and after the introduction of the corporate governance code. Therefore, it provided an analysis of the effectiveness of the code's introduction. Furthermore, this study is distinguished from other studies, in that it examined the relationship between CSR and earnings management with a specific focus on a developing market (e.g. Jordan) as a case study, whilst other studies have focused on developed countries (e.g. Australia, Canada, UK, and USA). Additionally, it focused on the industrial sector which has had high rates of failure, liquidation, and bankruptcy. The current study thus added value in terms of knowledge, to existing studies.

Secondly: contribution to practice; this study has provided information for supervisory and regulatory authorities about CSR reporting, and how it influences earnings management activities. This study has assisted the users or beneficiaries of financial reports to understand earnings management practices and increase their awareness about this phenomenon. Thus, it may contribute to increasing the reliability and usefulness of financial statements in the Jordanian industrial public sector.

This paper is structured as follows: Section 2 has discussed earnings management and CSR reporting in Jordan. Section 3 portrayed the theoretical framework. Section 4 presented the literature review and hypotheses development. Section 5 explained the research method. Section 6 has revealed the results of this study. Section 7 has discussed the conclusions reached by this paper.

2. Earnings Management and CSR Reporting in Jordan

Jordan as a developing country in the Middle East, has issued a set of regulations and laws, including a corporate governance code, to improve the reliability and credibility of financial statements, and to minimise manipulation of the financial statements (Zureigat et al. 2014). The corporate governance code for shareholding companies listed on the ASE, came into effect on 1st January 2009 (Securities Depository Centre, SDC 2017). However, there are still high rates of failure among Jordanian companies, especially in the industrial sector. There were 44 bankruptcy cases amongst Jordanian companies during the period 2000 to 2011, where 26 companies (59%) were from the industrial sector, 15 companies (34%) from the service sector and 3 companies (7%) from the financial sector (Zureigat et al. 2014). In addition, Jordan started total adoption of the full version of International Financial Reporting Standards (IFRS) in 2005 (Masoud 2017). However, like many other developing countries, Jordan ranks low on the IFRS favourable profile score (Rotberg 2016).

The Jordanian government has provided a number of incentives to investors, which is intended to attract foreign investment and increase industrialisation (Jaafar & El-shawa 2009). Growing industrialisation and foreign investment are factors which promote corporate accountability for social responsibility reporting (Muttakin et al. 2015). However, CSR consciousness among Jordanian firms is a relatively new consideration (Al-Jayyousi 2011). Consequently, the Jordanian Securities Depository Centre adopted an initiative called "Responsibility to the Local Community" which reflected the centre's recognition of the importance of its work, functions and ethical service, towards the local community. In addition, the Amman Chamber of Commerce plays a leading role in social responsibility in Jordan, where many efforts have been made in the area of social responsibility (e.g. education and helping poor students to study in schools or universities).

According to the Amman Chamber of Commerce (2017), a number of workshops have been held on the various aspects and prospects that can be achieved through social responsibility and the areas in which sustainable economic and social development can be pursued. The most prominent of these activities are environmental awareness, health care and public safety, education and training, job creation, development of remote areas, infrastructure development, youth and women support and strengthening their role in society. The Jordanian corporate governance guide

requires companies to disclose social and environmental information in their annual reports. This is covered in section five of the Jordanian Governance Guide under the title "Disclosure and Transparency", which stipulates every company must disclose its policies and programs regarding the local community and the environment (SDC 2017).

Few studies in the recent literature have examined the relationship between CSR and earnings management (Almahrog 2014), and there is similarly a lack of studies which have examined this relationship in the context of Jordan. According to, Al-Qutaish and Al-Sufi (2011), many firms in Jordan are involved in earnings management, and many departments have resorted to earnings management to enhance their financial statements in an effort to improve the financial situation of the company, in order to achieve their own targets. Al-Sartawi et al. (2013) supported this assertion, mentioning that many Jordanian companies listed on the ASE resort to earnings management, which would distort the meaning of financial reporting, and destabilise the confidence of users in this financial reporting. Thus, this study has examined the relationship between CSR and earnings management, and considered whether, and to what extent, CSR has been used by managers to achieve special goals within the Jordanian context.

3. Theoretical Framework

Earnings management behaviour has often been analysed using agency theory with many researchers providing evidence of the links (e.g. Davidson, Jiraporn, Kim & Nemec 2004; Prior, Surroca & Tribó 2007). Agency theory explains the relationship between the principals (owners/shareholders) and the agents (managers), and how that relationship may be best managed (Ross 1972; Mitnick 1973; Jensen & Meckling 1976). According to agency theory, the relationship between the principal and the agent may lead to conflicts where both managers and shareholders may have specific differing concerns and follow their own interests. Saltaji (2013, p.47) stated that:

> *Agency theory is considered as the main theory in business word separating ownership from management, which makes conflicts called "agency problems" as a result of interest conflicts between managers and shareholders. These problems are costs on a company to encourage high*

performance of managers, need to be monitored and minimized to protect the company from bankruptcy.

This conflict of interest leads to an agency cost. Earnings management is considered one type of agency cost. This is because if managers issue financial reports that do not provide a precise economic picture of the company, and shareholders make unfavourable investment decisions (Davidson et al. 2004), then there is an associated agency cost. Additionally, agency theory has proposed that managers are motivated by self-interest and may not faithfully present the company position (Prior, Surroca & Tribó 2007). Therefore, managers may be involved in earnings management to present a better picture of the performance of the company to achieve their personal motivations, such as meeting market expectations, improving their personal situation and interests, or receiving bonuses based on profit.

Furthermore, Agency theory has provided information about, the separation of ownership and control in modern corporations that incentivise managers to choose and apply estimates and accounting techniques that increase their own wealth (Kazemian & Sanusi 2015). Thus, the most important basis for the use of agency theory is that the managers often have incentives to pursue and achieve their personal interests, rather than to look after the interests of shareholders (Habbash 2010).

Agency theory has a number of assumptions, related to the manager's behaviour in conjunction with financial reporting (Fields et al. 2001; Iatridis 2010). Based on the earnings management concept, agency theory has indicated that managers use accounting figures to influence contractual outcomes which reflect the concept of opportunistic behaviour (Duru & Tsitinidis 2013). Thus, it can be concluded that managers may resort to altering and manipulating financial reports and/or CSR reporting to cover or deflect attention being paid to their opportunistic behaviour and earnings management.

Agency theory can be summarised as the problem which occurs as a result of separation between management activities and ownership in companies. This separation may cause a problem (Agency Problem) because of the different interests of both managers and shareholders. Thus, to minimise this problem, there must be an effective control system such as corporate governance, to reduce opportunistic behaviour and control management performance, and to protect shareholders' rights.

The adoption of a particular theory relies on contextual factors: information asymmetry, board power, and environmental uncertainty (Hendry & Kiel 2004). This

paper examined whether CSR reporting influences earnings management in the Jordanian industrial sector. As stated earlier, agency theory argues that the individual is primarily self-interested and self-opportunistic, rather than altruistic (Rashid 2009). Therefore, this study considered agency theory as an appropriate tool to clarify the motivations and incentives of earnings management practices. Thus, this study relied on agency theory in its hypotheses development, to test whether there was a relationship between CSR reporting and earnings management practices.

4. Literature Review and Hypotheses Development

Many previous studies have suggested that companies who provide CSR reports are less likely to be involved in financial manipulations and earnings management (see, Yip et al. 2011; Hong & Andersen 2011; Kim et al. 2012). The results of the study undertaken by Hong and Andersen (2011) showed that more socially responsible companies have less involvement in earnings management activities, and also, have high quality accruals, both of which positively affect the quality of financial reporting. Thus, when there is a more socially responsible environment, these companies may be more successful in preventing earnings management.

Gras-Gil, Manzano and Fernández (2016) supported that idea and explained that CSR has a negative impact on earnings management practices, as it can be considered an organisational device that leads to more effective use of companies' resources. Furthermore, in their study of the association of earnings management with CSR and investor protection with 139 firms in ten Asian countries, Scholtens and Kang (2013) have concluded that CSR plays an important role in reducing the management of earnings. This role is dependent on the legal system within which the companies are operating. Thus, increasing efforts in improving CSR and protecting investors, may limit the management of earnings and improve the business climate and economic and social development.

However, the current study is concerned that CSR may be used as a mask to cover earnings management, and that it is used by managers to achieve their own special goals. In other words, firms may use CSR reporting as a tool to hide their earnings management activities (Salewski & Zulch 2014; López-González et al. 2019).

Alternatively, CSR may be used by managers to enhance the firm's reputation; if this is done, a positive relationship between CSR and earnings management would

be observed (Kim, Park & Wier 2012). Likewise, Riahi-Belkaoui (2003) presented two hypotheses linking the level of social responsibility to both the reporting of earnings and the magnitude of discretionary accounting accrual adjustments. The findings showed that the level of CSR was positively correlated with the reporting of accounting earnings, and the magnitude of discretionary accounting accrual adjustments was significantly higher when the level of social responsibility is high. Prior et al. (2008) investigated the association between earnings management and CSR. They argued that earnings management is detrimental to the interests of stakeholders, therefore managers who manipulate earnings resort to CSR practices to deal with stakeholder vigilance.

The results of research conducted by Muttakin, Khan and Azim (2015) found a positive relation between the level of CSR disclosures and earnings management. They argued that managers use CSR disclosures to shift the attention of stakeholders away from their opportunistic behaviour. Moreover, analysis undertaken by Grougiou et al. (2014), demonstrated that there was a positive relationship between earnings management and CSR. They explained that bank managers who manipulate earnings tend to intensify their engagement in CSR activities.

On the other hand, Yip et al. (2011) referred in their study to the research undertaken by Chih, Shen and Kang (2008), who have investigated whether CSR is negatively related, positively related, or not related to earnings management. If CSR companies want to maintain financial transparency, they should be involved in lower earnings management, which means a negative relationship between CSR and earnings management. Alternatively, if CSR companies try to meet the multi-stakeholder demands, financial performance could suffer, prompting these companies to manage reported earnings upwards to hide weaker-than-expected results. They found that there is probably no relationship between CSR performance and earnings management, if earnings management is driven by institutional factors not associated with CSR.

Based on the previous discussion, which indicated that there is a relationship between CSR and earnings management, this study has expected CSR to be positively related to earnings management, and CSR disclosures to be related to more earnings management practices. In this case, the managers may resort to opportunistic behaviours to cover the company's weakness, or cover earnings management through CSR disclosures. This discussion had led to the following hypothesis:

H1: There will be a positive relationship between CSR and earnings management.

5. Research Method

5.1 Sample

This paper examined whether the CSR reporting practices of the firm influence the earnings management activities in the Jordanian industrial sector. Selected Jordanian industrial companies listed on the Amman Stock Exchange (ASE) during the period of 2006-2015 were examined. The study population consisted of industrial companies listed in ASE, consisting of 64 companies at the end of 2015. The study's sample consisted of all industrial companies with available data to achieve the research objective. It included 49 Jordanian industrial companies selected on the basis of: (i) the availability of data; (ii) the company had not merged; (iii) and the company was still trading and had not stopped trading during the period of the study.

The study gathered the necessary data from annual financial statements of these companies based on the company's guide issued by ASE during the period 2006-2015. The Jordanian industrial sector consisted of 16 different types of industries (e.g. metal mining, chemical and allied products, etc.). These 16 types of industries represented 49 firms which had financial statements and annual reports available for 10 years, which formed the total sample used in this paper, as shown in table (1).

Table (1): Industry Classification of the Sample

Industry type	Number	Percent%
Agricultural Production-Livestock	2	4.10
Metal Mining	1	2.04
Oil and Gas Extraction	1	2.04
Non-Metallic Minerals, except Fuels	2	4.10
Food and Kindred Products	8	16.32
Tobacco Products	1	2.04
Textile Mill Products	1	2.04
Apparel and other Textile Products	3	6.12
Lumber and Wood Products	1	2.04
Paper and Allied Products	2	4.10

Chemicals and Allied Products	10	20.40
Petroleum and Coal Products	2	4.10
Stone, Clay, and Glass Products	5	10.20
Primary Metal Industries	6	12.20
Electronic and other Electric Equipment	3	6.12
Transportation Equipment	1	2.04
Total	49	100%

5.2 Variables Definitions

5.2.1 Measurement of Earnings Management

- **Modified Jones Model (EM1)**

In this study, accounting accruals were used to detect the presence of earnings management. This was because managers may practise earnings management through the manipulation of discretionary accruals, as it is less likely to be exposed (Habbash 2010). Dechow, Kothari and Watts (1998) defined accruals as the difference between earnings and cash flows from operating activities. Accruals are classified into two categories of non-discretionary and discretionary accruals. Non-discretionary accruals are modifications to the cash flows of the company, by using the rules established by the accounting standards-setting bodies, whilst discretionary accruals are the modifications to cash flows selected by the managers (McNichols & Wilson 1988; Schipper 1989; Rao & Dandale 2008; Isenmila & Elijah 2012). Therefore, discretionary accruals can be a tool to manage earnings and have been used as a proxy by a number of researchers, to measure earnings management activities (Dechow et al. 1995). Due to the difficulty of revealing the discretionary accruals directly through financial statements, some mathematical models were used to calculate them (Healy 1985; DeAngelo 1986; Jones 1991; Young 1998). Prior studies used a number of models to detect and measure the earnings management such as: Healy Model 1985; DeAngelo Model 1986; Jones Model 1991; Modified Jones Model by Dechow et al. 1995.

Therefore, the discretionary accruals portion has been used as a proxy to measure earnings management, because discretionary accruals provide managers with different techniques and opportunities to manage earnings. Some studies such as that conducted by Healy (1995), used total accruals to measure earnings management, and

subsequently, a lot of studies have attempted to separate them into discretionary and non-discretionary accruals, and then used only discretionary accruals to measure earnings management; non-discretionary accruals reflect non-manipulated accounting accruals items because they are out of managers' control (Al-Fayoumi et al. 2010).

In this study, earnings management was measured by using the modified Jones Model (1995) developed by Dechow et al. (1995). The modified Jones Model (1995) is the most common and widely used model in accounting literature used for studying and measuring earnings management, and it provides the most power in detecting and measuring earnings management and discretionary accruals (Guay et al.1996; Peasnell, Pope & Young 2000; Bedard et al. 2004). Dechow et al. (1995) have pointed out that it is more powerful in exposing the discretionary accruals, compared to other models proposed in the earnings management literature.

The discretionary accruals are more susceptible to manipulation and thus considered a good measurement of earnings management (Al-Sartawi et al. 2013). In this regard, the total accruals were calculated and then the non-discretionary accruals. Then the discretionary accruals were calculated as the residual, being the difference between the total accruals and the non-discretionary accruals.

According to the modified Jones Model developed by Dechow et al. (1995), which has been used in many studies (e.g. Muttakin et al. 2015; Abbadi et al. 2016), total accruals (TA) were computed as the difference between earnings and cash flows from operating activities.

$$TACC_{it} = NI_{it} - OCF_{it}$$

The equation below was estimated for each firm and fiscal year combination. Thus, the industry specific parameters of the Jones model were estimated as follows:

$$TACC_{it}/TA_{it-1} = \alpha_1 \, (1/TA_{it-1}) + \alpha_2 \, [(\Delta REV_{it})/TA_{it-1}] + \alpha_3 \, (PPE_{it}/TA_{it-1}) + \varepsilon_{it}$$

Non-discretionary accruals were estimated for each year and fiscal year combination by using the equation as follows:

$$NDAC_{it} = \hat{a}_1 \, (1/TA_{it-1}) + \hat{a}_2 \, [(\Delta REV_{it} - \Delta REC_{it})/TA_{it-1}] + \hat{a}_3 \, (PPE_{it}/TA_{it-1})$$

Then discretionary accruals were estimated by subtracting the predicted level of non-discretionary accruals (NDAP) from total accruals, and estimated by using the following equation:

$$DACC_{it} = TACC_{it} - NDAC_{it}$$

Where,

$TACC_{it}$ = Total accruals for company i in year t;

NI_{it} = Net income before extraordinary items for company i in year t;

OCF_{it} = Operating cash flows for company i in year t;

TA_{it-1} = Previous year's total assets;

ΔREV_{it} = Change in operating revenues for company i in year t;

PPE_{it} = Gross property, plant and equipment for company i in year t;

$NDAC_{it}$ = Non-discretionary accruals for company i in year t;

ΔREC_{it} = Change in net receivables for company i in year t;

$DACC_{it}$ = Discretionary accruals for company i in year t;

α_1- α_3 = Regression parameters;

ε_{it} = Error term for company i in year t.

- **Modified Jones Model Using ROA (EM2)**

Choi, Lee and Park (2013) supported the suggestion made by Kothari et al. (2005) to use the modified Jones model, after introducing an additional independent variable, the current ROA, to control the impact of a firm's performance on discretionary accruals. Sincerre, Sampaio, Famá and Santos (2016) summed up the difference between the Modified Jones and the Modified Jones with ROA models as: The Modified Jones with ROA model takes into account the return on assets (ROA) variable in the estimation of non-discretionary accruals. In addition to considering the net revenue and receivables variables. Based on that, total accruals and nondiscretionary accruals have been defined as follows:

$$TACC_{it}/TA_{it-1} = \alpha_1\ (1/TA_{it-1}) + \alpha_2\ [(\Delta REV_{it})/TA_{it-1}] + \alpha_3\ (PPE_{it}/TA_{it-1}) + \alpha_4\ ROA_{\ it-1} + \varepsilon_{it}$$

$$NDAC_{it} = \hat{a}_1\ (1/TA_{it-1}) + \hat{a}_2\ [(\Delta REV_{it}- \Delta REC_{it})/TA_{it-1}] + \hat{a}_3\ (PPE_{it}/TA_{it-1}) + \hat{a}_4\ ROA_{\ it-1}$$

Where, ROA was calculated as the net income in year t divided by the total assets in year t-$_1$.

5.2.2 Measurement of Corporate Social Responsibility

To assess the CSR reporting, a checklist comprising 25 items was developed based on previous studies (Rashid & Lodh 2008; Omar & Zallom 2016). These 25 items (see Appendix) represent four themes (product, community, employee, and environment) which are relevant within the Jordanian environment. A dichotomous procedure is used where a value "1" was given to a particular item if it was disclosed and "0" if not disclosed. This measurement methodology has been used in numerous

studies (Haniffa & Cooke 2005; Rashid & Lodh 2008; Mohamad et al. 2010). Accordingly, the CSR was calculated as follows:

$$CSRD_j\ Index = \sum^{n}_{jt=1} X_{ij} / n_j;$$

Where,

$CSRD_j$ index = the corporate social responsibility disclosure index for j-th firm;

n_j = the number of items expected for j-th firm, where n<=25 and X_{ij} = 1, if j-th items were disclosed for firm j, otherwise 0.

5.3 Model Specification

The study used the following model to test the hypotheses which has been presented below:

$$DACC_{it} = \beta_0 + \beta_1 CSR_{it} + \beta_2 ROA_{it} + \beta_3 LEV_{it} + \beta_4 SIZE_{it} + \beta_5 CASH_{it} + e_{it}$$

Where,

$DACC_{it}$ = Discretionary accruals for company i in year t;

CSR_{it} = Corporate social responsibility, score/index;

ROA_{it} = Return on assets for company i in year t;

LEV_{it} = Financial leverage for company i in year t;

$SIZE_{it}$ = Firm size for company i in year t;

$CASH_{it}$ = Cash holding for company i in year t.

From the above-mentioned model, the measurement of earnings management (DACC) was the dependent variable, and CSR the independent variable. The control variables were: return on assets (ROA); financial leverage (LEV); firm size (SIZE); and cash holding (CASH).

Based on prior studies, this study included four control variables: ROA, LEV, SIZE, CASH, since these have been found to be associated with earnings management (Chen 2008; Sun & Rath 2009; Ardison et al. 2012; Gallap 2014; Kang & Kim 2014). ROA has been defined as the ratio of net profit and interest expenses to total assets; LEV defined as the ratio of debt to total assets; SIZE the natural logarithm of total assets; CASH defined as cash to total assets after extracting the cash. Table (A1) summarised the definitions of the key variables employed in this work.

6. Results

Table (2) has provided the descriptive statistics for the variables used in this study. The average level of discretionary accruals (DACC) was 8.12 (median = 6.23)

and DACC_ROA was 7.87 (median = 6.16). The average disclosure score (CSR ratio) was 56.26 (median = 56.00). By looking at the firms' characteristics, it was that the average level of return on assets (ROA) was 2.39 (median = 3.85). The average level of leverage (LEV) was 35.16 (median = 30.59). The average level of ln of firm size (SIZE) was 16.91 (median = 16.71). The average cash holding (CASH ratio) was 8.28 (median = 2.11).

Table (2): Descriptive Statistics

Variables	Mean	Median	Standard Deviation	Min	Max	Observe.
Residuals	-0.03	-0.05	9.74	-50.82	40.12	490
Absolute_Residuals	7.00	5.22	6.77	0.00	50.82	490
NDAC	-1.76	-1.94	11.28	-94.55	43.27	490
DACC	0.46	0.76	11.00	-49.17	41.10	490
Absolute_DACC	8.12	6.23	7.42	0.01	49.17	490
DACC_ROA	0.40	-0.52	10.32	-47.61	37.62	490
Absolute_DACC_ROA	7.87	6.16	6.68	0.02	47.61	490
CSR Ratio	56.26	56.00	15.68	20.00	96.00	490
Environment	42.86	37.50	21.00	0.00	100.00	490
Employees	64.93	57.14	14.35	0.00	100.00	490
Community	51.22	60.00	30.57	0.00	100.00	490
Product	70.61	80.00	19.57	20.00	100.00	490
ROA	2.39	3.85	9.39	-58.67	43.94	490
LEV	35.16	30.59	26.55	0.00	227.53	490
SIZE	16.91	16.71	1.35	13.99	21.31	490
CASH	8.28	2.11	20.97	0.00	197.20	490

Note: the following table has presented descriptive statistics of dependent and independent variables. Different notations used in the table were defined as follows: DACC = the level of discretionary accruals (measured by Modified Jones Model); *DACC_ROA* = the level of discretionary accruals (measured by Modified Jones Model with ROA); CSR Ratio = corporate social responsibility disclosure score/ index; Environment, Employees, Community, and Product = sup CSR sup score/

index; ROA = return on assets; LEV = leverage, SIZE = natural logarithm of total assets; CASH = cash holding.

Table (3) presented the correlation matrix. The dependent variable EM (measured by DACC) was negatively correlated with CSR (r = -0.06), ROA (r = -0.20), SIZE (r = -0.01), and CASH (r = -0.09). While, it was positively correlated with LEV (r = 0.15). The independent variable CSR was positively correlated with ROA (r = 0.23), LEV (r = 0.08), and SIZE (r = 0.57). While, it was negatively correlated with CASH (r = -0.03). On the other hand, the EM measured by Modified Jones Model with ROA was negatively correlated with CSR, LEV, SIZE and CASH (r = -0.10, -0.01, -0.01, -0.06) respectively, and positively correlated with ROA (r = 0.05). This meant that there was a negative relationship which existed between CSR reporting and earnings management level. In other words, Jordanian industrial companies exercised less earnings management when they make higher levels of CSR disclosures.

Table (3): Correlation Matrix

	DACC	DACC-ROA	CSR	ROA	LEV	Size	CASH
DACC	1						
DACC_ROA	0.74***	1.00					
CSR	-0.06	-0.10**	1.00				
ROA	-0.20***	0.05	0.23***	1.00			
LEV	0.15***	-0.01	0.08*	-0.37***	1.00		
Size	-0.01	-0.01	0.57***	0.31***	0.14***	1.00	
CASH	-0.09**	-0.06	-0.03	0.19***	-0.22***	-0.02	1.00

Note: the following table presented the correlation matrix. Different notations used in the table were defined as follows: DACC = earnings management measured by the level of discretionary accruals; DACC-ROA = earnings management measured by Modified Jones Model with ROA; CSR = corporate social responsibility disclosure score/ index; ROA = ratio of return on assets; LEV = ratio of leverage; SIZE = natural logarithm of total assets; CASH = ratio of cash holding; *, **, or ***: Significant at a 10%, 5%, or 1% level, respectively.

VIF of the correlation matrix: 1.64.

Table (4) presented the differences in the mean values of the explanatory variables analysis across the CSR scores for both group of firms with a score lower and higher than the median. A *Mann-Whitney* test has been used to test the statistical significance of the mean differences. It was noted that variables such as DACC_ROA, CSR, ROA, LEV and SIZE differed significantly between both groups of firms. Furthermore, the analysis revealed that other variables such as DACC and CASH differed insignificantly between both groups.

Table (4): Differences in the Value of the Explanatory Variables Between Firms with Lower and Higher CSR

	Low CSR firms		High CSR firms		Mann-Whitney test
	Mean	Median	Mean	Median	
DACC	-0.67	-0.31	1.53	1.69	2.24**
Absolute_DACC	8.65	6.21	7.64	6.25	0.81
DACC_ROA	-0.99	-0.82	0.16	-0.38	1.09
Absolute_DACC_ROA	8.43	6.54	7.34	5.78	1.86*
CSR Ratio	43.75	48.00	67.98	64.00	19.22***
Environment	29.43	37.50	55.43	50.00	14.33***
Employees	57.20	57.14	72.16	71.43	11.83***
Community	30.72	40.00	70.43	80.00	14.70***
Product	60.84	60.00	79.76	80.00	10.46***
ROA	0.84	3.49	3.84	4.46	2.67***
LEV	33.37	27.34	36.84	32.53	2.21**
SIZE	16.44	16.59	17.35	16.76	5.89***
CASH	10.80	2.26	5.92	2.04	0.53
N	237		253		

Note: the following table presented the results for the mean difference test among different variables. Different notations used in table were defined as follows: DACC = the level of discretionary accruals (measured by Modified Jones Model); DACC_ROA = the level of discretionary accruals (measured by Modified Jones Model with ROA); CSR Ratio = corporate social responsibility disclosure score/ index; Environment, Employees, Community, and Product = sup CSR sup score/ index; ROA = ratio

of return on assets; LEV = ratio of leverage, SIZE = natural logarithm of total assets; CASH = ratio of cash holding; *, **, or ***: Significant at a 10%, 5%, or 1% level, respectively.

Table (5) presented the regression results between CSR and EM (measured by DACC). In the full sample, a negative insignificant coefficient for the CSR variable was found. In other words, there was no significant relationship between CSR and earning management. The reason may be due to the fact that allocated cost by company towards CSR in the Jordanian industrial sector, is not high enough to have an influence on earning management. This result was consistent with many studies, such as Grougioua et al. (2014), who found in their study that banks active in CSR activities were also engaged in EM practices, however the reverse relationship was not significant. In other words, there is a negative insignificant relationship between CSR and EM. Chih, Shen and Kang (2008) found that there was probably no relationship between CSR performance and earnings management if earnings management activities were driven by institutional factors un-associated with CSR. In addition, CASH and ROA had a negative impact on the level of DACC, while SIZE and LEV had a positive impact. The coefficient of these control variables was statistically insignificant for LEV and SIZE, while ROA and CASH were statistically significant ($\beta = -0.1564$, $p < 0.05$; $\beta = -0.0263$, $p < 0.10$) respectively.

In column 2 of table (5), regression for two samples was run: (i) positive sample, and (ii) negative sample group. The analysis for positive discretionary accruals sample group found that CSR and CASH had negative insignificant coefficients. The ROA, and LEV had positive significant coefficients ($\beta = 0.1486$, $p < 0.05$; $\beta = 0.0367$, $p < 0.10$) respectively. SIZE had a positive insignificant coefficient. Similar negative insignificant results were found when the regression for negative sample group was estimated. The results showed that CSR had a negative insignificant coefficient. Turning to other coefficients, it was found that LEV and CASH had negative insignificant coefficients while ROA had a positive significant coefficient ($\beta = 0.3679$, $p < 0.01$).

Table (5): OLS Regression Results: The Impact of CSR Reporting on Earnings Management (DACC)

	Full Sample	Positive DACC	Negative DACC
Constant	0.0508	0.0794	-0.0596

	(0.92)	(1.11)	(-0.69)
CSR	-0.0053 (-0.20)	-0.0543 (-1.43)	-0.0457 (-1.15)
ROA	-0.1564 (-2.24)**	0.1486 (2.12)**	0.3679 (4.91)***
LEV	0.0264 (1.66)	0.0367 (1.81)*	-0.0105 (-0.51)
Size	0.0004 (0.12)	0.0023 (0.48)	0.0000 (0.01)
CASH	-0.0263 (-1.89)*	-0.0123 (-0.58)	-0.0003 (-0.02)
Industry effect	Yes	Yes	Yes
Year effect	Yes	Yes	Yes
R-squared	0.1312	0.1663	0.3561
F-Statistics	2.19	2.13	3.40
Probability	0.0006	0.0011	0.0000
N	490	263	227

Note: the following table presented the results of regression analyses. Different notations used in the table were defined as follows: DACC = the level of discretionary accruals; CSR Ratio = corporate social responsibility disclosure score/ index; Environment, Employees, Community, and Product = sup CSR sup score/ index; ROA = ratio of return on assets; LEV = ratio of leverage, SIZE = natural logarithm of total assets; CASH = ratio of cash holding.

Table (6) presented the regression results between CSR and EM (measured by DACC_ROA). In the full sample, a negative significant coefficient (β = -0.0566, $p < 0.05$) of CSR variable was found. This finding indicated that a higher CSR disclosure resulted in lower discretionary accruals (DACC), suggesting that a higher CSR disclosure reduced the earnings management practices of the firm. Thus, the study hypothesis was rejected, and implied that CSR may not be the way that managers resort to cover earnings management practices. In other words, managers in the Jordanian industrial sector may not resort to use CSR reporting as a way to practice opportunistic behaviour. This result was consistent with many studies, such as Hong and Andersen (2011), Almahrog (2014), and Gras-Gil, Manzano and Fernández (2016), as these studies also documented a negative relationship between CSR disclosures and earnings

management. They argued that more socially responsible companies have less reliance on earnings management activity, and also have high quality accruals, both of which affect the quality of financial reporting.

Thus, the above findings implied that firms with high CSR disclosure may be more successful in prohibiting earnings management, when there is a more socially responsible environment. Therefore, it may act as a regulatory mechanism leading to more effective use of companies' resources. It was also found that the level of DACC was also affected by other factors such as, ROA, LEV, and SIZE, as these variables were found to have a positive impact on the level of DACC, whilst CASH had a negative impact. The control variables' coefficients were statistically significant for ROA and CASH ($\beta = 0.0681$, $p < 0.10$; $\beta = -0.0226$, $p < 0.05$) respectively, while LEV and SIZE were statistically insignificant.

By looking at the sub sample of positive group, a negative and insignificant coefficient for the CSR variable was found. ROA and LEV had positive significant coefficients ($\beta = 0.1051$, $p < 0.10$; $\beta = 0.0342$, $p < 0.10$) respectively. The SIZE had a negative and insignificant coefficient and CASH a negative and significant coefficient ($\beta = -0.0524$, $p < 0.10$). For the negative accruals group, it was found that CSR had negative and significant coefficient ($\beta = -0.0693$, $p < 0.05$). It was also found that the coefficients of the control variables were statistically insignificant for the negative accruals group.

Table (6): OLS Regression Results: The Impact of CSR Reporting on Earnings Management (DACC_ROA)

	Full Sample	Positive DACC	Negative DACC
Constant	0.1039 (2.32)***	0.0874 (1.48)	0.0921 (1.38)
CSR	-0.0566 (-2.22)**	-0.0307 (-0.87)	-0.0693 (-2.10)**
ROA	0.0681 (1.93)*	0.1051 (1.80)*	0.0221 (0.53)
LEV	0.0033 (0.30)	0.0342 (1.75)*	-0.0141 (-1.08)
Size	0.0013	-0.0013	0.0035

	(0.43)	(-0.31)	(0.83)
CASH	-0.0226 (-2.43)**	-0.0524 (-1.83)*	-0.0096 (-0.76)
Industry effect	Yes	Yes	Yes
Year effect	Yes	Yes	Yes
R-squared	0.0639	0.1034	0.1326
F-Statistics	2.83	2.60	3.26
Probability	0.0004	0.0017	0.0001
N	490	232	258
Note: the following table presented the results of regression analyses. Different notations used in the table were defined as follows: DACC_ROA = the level of discretionary accruals (measured by Modified Jones Model with ROA); CSR Ratio = corporate social responsibility disclosure score/ index; Environment, Employees, Community, and Product = sup CSR sup score/ index; ROA = ratio of return on assets; LEV = ratio of leverage, SIZE = natural logarithm of total assets; CASH = ratio of cash holding.			

In table (7), the sample was further classified into two groups: (i) prior to approval of corporate governance code and (ii) after implementing the corporate governance code. Table (7) presented the regression results between CSR and EM (measured by DACC). Before the implementation of the corporate governance code, it was found that there was a negative and insignificant coefficient for the CSR variable, however after the implementation of the corporate governance code, a positive insignificant coefficient between those variables was found.

Table (7): OLS Regression Results: The Impact of CSR Reporting on Earnings Management (DACC) Before and After Corporate Governance (CG)

	Before CG	After CG
Constant	0.1410 (1.19)	0.0153 (0.25)
CSR	-0.0481 (-0.97)	0.0211 (0.64)
ROA	-0.1381 (-0.84)	-0.2553 (-3.06)***
LEV	0.0955	-0.0084

	(2.43)**	(-0.57)
Size	-0.0004 (-0.05)	0.0029 (0.75)
CASH	-0.0124 (-0.19)	-0.0139 (-0.86)
Industry effect	Yes	Yes
Year effect	Yes	Yes
R-squared	0.2411	0.1811
F-Statistics	5.48	2.21
Probability	0.0000	0.0008
N	147	343
Note: the following table presented the results of regression analyses before and after corporate governance. Different notations used in the table were defined as follows: DACC = the level of discretionary accruals; CSR Ratio = corporate social responsibility disclosure score/ index; Environment, Employees, Community, and Product = sup CSR sup score/ index; ROA = ratio of return on assets; LEV = ratio of leverage, SIZE = natural logarithm of total assets; CASH = ratio of cash holding.		

In table (8), the same model using DACC_ROA was re-estimated as an alternative proxy of earnings management. The results showed that before the implementation of corporate governance code, there was a negative and significant relationship between CSR and EM ($\beta = -0.1105, p < 0.01$). The coefficients of control variables were statistically insignificant. After the implementation of corporate governance code, a negative and insignificant coefficient between CSR and EM was found. The coefficients of control variables were statistically insignificant except CASH, which had a negative significant coefficient ($\beta = -0.0225, p < 0.01$).

This implied that before the issuance of the corporate governance code, the existence of the CSR disclosure requirements may have reduced the engagement of managers in earnings management practices, but after the issuance of the code, the CSR disclosure had no impact on earnings management. This may be due to the timeframe associated with the implementation of the corporate governance code for Jordanian companies; however, the result of the study showed that the commitment of Jordanian industrial companies to reporting of CSR, reduced the management of earnings practices. Therefore, if there are earnings management practices in the

Jordanian industrial companies, it may be driven by other institutional factors unrelated with CSR.

Table (8): OLS Regression Results: The Impact of CSR Reporting on Earnings Management (DACC_ROA) Before and After Corporate Governance (CG)

	Before CG	After CG
Constant	0.0459 (0.37)	0.1299 (2.91)***
CSR	-0.1105 (-2.19)***	-0.0164 (-0.59)
ROA	0.0362 (0.53)	0.0569 (1.49)
LEV	0.0472 (1.60)	-0.0041 (-0.37)
Size	0.0075 (1.01)	-0.0025 (-0.83)
CASH	0.0478 (1.11)	-0.0225 (-2.91)***
Industry effect	Yes	Yes
Year effect	Yes	Yes
R-squared	0.0982	0.0534
F-Statistics	1.61	1.87
Probability	0.1174	0.0368
N	147	343

Note: the following table presented the results of regression analyses before and after corporate governance. Different notations used in the table were defined as follows: DACC_ROA = the level of discretionary accruals (measured by Modified Jones Model with ROA); CSR Ratio = corporate social responsibility disclosure score/ index; Environment, Employees, Community, and Product = sup CSR sup score/ index; ROA = ratio of return on assets; LEV = ratio of leverage, SIZE = natural logarithm of total assets; CASH = ratio of cash holding.

7. Conclusions

This study examined the association between CSR reporting and earnings management in the Jordanian industrial sector as a case study. Based on the earnings

management concept, agency theory indicated that manager's use accounting figures to influence contractual outcomes, which reflects the concept of opportunistic behaviour (Duru & Tsitinidis 2013). Furthermore, the agency theory perspective implied that CSR is a misuse of firm resources, and indicative of self-serving behaviour of managers (McWilliams et al. 2006). Many studies (e.g. Prior et al. 2008; Grougiou et al. 2014; Muttakin et al. 2015) have found a positive relationship between CSR and earnings management. This research extended these studies, in order to investigate the relationship between CSR and earnings management in the Jordanian industrial sector. Thus, it was expected that CSR would be positively related to earnings management; consequently, CSR disclosures would be related to more earnings management practices.

This research used discretionary accruals as a proxy for measuring earnings management, which was derived from the Modified Jones and Modified Jones with ROA models. In addition, other control variables were identified. It was found that CSR and earnings management were negatively related in the Jordanian industrial sector. Furthermore, it was documented that firms that provide more CSR reporting had less engagement in earnings management. Thus, the study hypothesis has been rejected. This may be due to several factors:

- The CSR reporting was considered in many cases as a regulatory mechanism that resulted in more efficient use of resources, which then had a negative effect on earnings management practices (Gras-Gil et al. 2016);
- The existence of foreign ownership in the companies, as previous studies indicated that the companies with foreign ownership were encouraged to report or disclose CSR more broadly and supported in doing CSR (Barkemeyer 2007; Meutia, Mukhtaruddin, Saftiana, & Faisal 2017);
- Or there are other reasons that could be considered in future research.

These findings implied that if CSR companies want to maintain their financial performance and handle societies pressures to adopt CSR activities, they should be involved in lower earnings management (Chih et al. 2008). The theoretical implication of this study does not reject the perspective of agency theory about CSR, as firms will

adopt an approach or a combination of approaches, according to their targets for their respective CSR initiatives, and find an economic justification for adopting CSR projects (Boesso et al. 2013).

This study had several limitations: Firstly, this study focused only on the influence of CSR on earnings management, so future studies can address other influential variables. Secondly, this study only focused on Jordanian industrial companies, so future studies can evaluate different sectors, companies or countries. Thus, future research could consider these issues as interesting lines of investigation.

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Appendix (A)

Summary of Variables

Table (A1): Definition and Measures for Study Variables

Dependent Variable	**Definition/Proxy**
EM	Earnings Management measured as: Accounting accruals (modified Jones Model by Dechowetal. 1995).
Independent Variables	
CSR	Corporate social responsibility measured as: using CSR index, and a value "1" is given to a particular item if it is disclosed and "0" if it is not disclosed.
Control Variables	
ROA	Return on assets measured as: ROA= net profit +interest expenses / total assets
LEV	Financial leverage measured as: LEV= the ratio of debt/ total assets.
SIZE	Firm size measured as: SIZE= Ln (Total Assets)
CASH	Cash holding measured as: CASH = Cash / (Total Assets-Cash)

Appendix (B)

Table (B1): CSR Disclosure Items

(1) Product Information:

- Types of products disclosed.
- Product safety programs.
- Quality reward on products and services (such as ISO 900).
- R&D programs that aim to improve products and services.
- Distribution of marketing places in domestic and foreign markets.

(2) Community Involvement:

- Community program (health and education).
- Charitable donations of support other programs for community (i.e. art and sports).
- Creating job opportunities for unemployed individuals.
- Support for volunteer and social awareness programs.
- Support for the local community in training programs in the corporation.

(3) Employee Information

- Number of employees in the company.
- Employees' education.
- Employees' training.
- Employee health and safety programs.
- Employee social guarantee benefit scheme.
- Employee welfare.
- Loans to employees for housing and other facilities.

(4) Environment

- Compliance with environmental regulations.
- Support for public activities designed to protect the environment.
- Recycling plant of waste products.
- Improving the surrounding environment, such as tree plantation programs.
- Design pollution prevention programs (i.e. air, water, land and noise).
- Energy savings.
- Conservation of national resources.
- Awards for environmental protection (i.e. ISO 14001).

Summary-Objective 4

Objective 4 was fulfilled in ***paper III***. The relationship between company attitudes to CSR and earnings management practices was examined. The paper found that CSR and earnings management are negatively associated in the Jordanian industrial sector. Although, it was expected that CSR would be positively related to earnings management; consequently, CSR disclosures would be related to more earnings management practices.

CHAPTER 6: CONCLUSION

This study examined the factors that affect earnings management practices. These factors included corporate governance mechanisms (ownership structure and internal audit committees) and corporate social responsibility (CSR) disclosures.

Earnings management has captured the attention of researchers because accounting earnings are considered to be among the most important indicators of the financial performance of a company, and this subject remains a fruitful area for academic research. As a result of the practice of earnings management, financial crises may occur in companies, resulting in weakening reliability and doubtful fairness of published financial statements. There are many factors that may limit earnings management practices, such as corporate governance mechanisms. Corporate governance plays an important role in controlling and monitoring management activities. It includes rules, practices, policies, and processes for management, for the control and monitoring of companies. Another factor that may influence earnings management is CSR disclosures. CSR is a significant issue for companies, and previous studies have focused on CSR and its relationship with earnings management.

The current study has used discretionary accruals as a proxy for measuring earnings management, which was derived from the Modified Jones and Modified Jones with ROA models. In addition, other control variables were identified. The study's sample consisted of all industrial companies that have the available data to achieve the research objectives. The data was collected from 49 Jordanian industrial companies listed on the Amman Stock Exchange (ASE) during the period 2006-2015.

The thesis aims were addressed through papers. The first paper addressed the first and second aims of the thesis. It examined the effect of corporate ownership structure (insider and institutional ownership) on earnings management in the context of Jordan. The paper found that institutional ownership and earnings management were positively associated. Furthermore, the paper found that insider ownership had no effect on earnings management in the Jordanian industrial sector. The reason may be due to the Jordanian Securities Law being enacted creating several rules and restrictions to control insider trading; an ethical basis and an economic rationale. On the other hand, these laws eased restrictions on investors and outside ownership (Malkawi & Haloush 2007). This may explain why the insider ownership-earnings management relationship was insignificant, and the outsider ownership-earnings

management relationship was positively significant. Furthermore, in a specific economic environment, different ownership (diffused or concentrated) and types of shareholders (stable shareholders or market investors) (Hu & Izumida 2008), may determine whether the ownership-earnings management relation is positive, negative or insignificant. This implied that the theoretical implication of this study did not reject the perspective of agency theory about ownership structure, as the impact of ownership structure depended on the economic environment. Another monitoring mechanism, that is, audit committee, has been investigated in the second paper.

The second paper addressed the third aim of the thesis. It examined the effect of internal audit committees on earnings management in the context of Jordan. The paper found that audit committees and earnings management were negatively but insignificantly related to the Jordanian industrial sector. This result may be because the current study has taken into consideration only the existence of audit committee without considering the audit committee's characteristics (e.g. qualified; audit committee independence; a high level of audit committee expertise; frequent meetings; and size of audit committee). This result has suggested that future studies within the Jordanian industrial sector should give more attention to the characteristics of audit committee. This implied that the existence of a suitably qualified audit committee would improve the efficiency of monitoring system, improve the quality of the financial reports, and reduce earnings management, as mere existence of audit committee is not enough to improve the efficiency of monitoring process. Other than corporate governance mechanisms (insider ownership, institutional ownership, and audit committees) that have been examined in this thesis, other factors may have an impact on earnings management practices, such as CSR which has been investigated in the third paper.

The third paper addressed the fourth aim of the thesis. It examined the effect of corporate social responsibility (CSR) reporting on earnings management within the Jordanian context. The paper found that CSR and earnings management are negatively associated. Furthermore, the firms that provided higher levels of CSR reporting had lower levels of engagement in earnings management. This may be due to several factors: the CSR reporting is considered in many cases as a regulatory mechanism that results in more efficient use of resources, which then has a negative effect on earnings management practices (Gras-Gil et al. 2016); the existence of foreign ownership in the companies, as previous studies indicated that the companies with foreign ownership

are encouraged to report or disclose CSR more broadly and supported in doing CSR (Barkemeyer 2007; Meutia, Mukhtaruddin, Saftiana, & Faisal 2017); or there are other reasons that could be considered in future research. These findings implied if CSR companies want to maintain their financial performance and handle societies pressures to adopt CSR activities, they should be involved in lower earnings management (Chih et al. 2008). The theoretical implication of this study does not reject the perspective of agency theory about CSR, as firms will adopt an approach or a combination of approaches, according to their targets for their respective CSR initiatives, and find an economic justification for adopting CSR projects (Boesso et al. 2013).

This study has made an important contribution to both the research literature and corporate governance practice. Firstly: contribution to literature; this study facilitates discussion about the link between corporate governance mechanisms, CSR disclosures, and earnings management practices. It has clarified the factors which have the capacity to affect earnings management, and therefore affect the quality of earnings reporting. This study has also added to the literature by investigating the impact of corporate governance mechanisms and CSR disclosures on earnings management in the Jordanian industrial public-sector context during the period of 2006 to 2015, which included two periods 2006-2008 (before introducing the corporate governance code) and 2009-2015 (after introducing the corporate governance code), whilst other studies have taken into consideration only before or after introducing the corporate governance code. So, the current study provides an opportunity to compare the results of the study before and after the introduction of the corporate governance code. Therefore, it provided an analysis of the effectiveness of the code’s introduction.

Secondly: contribution to practice; this study has provided information for supervisory and regulatory authorities about the influence of corporate governance mechanisms, CSR disclosures, and how they may be used to help avoiding earnings management. This study has assisted the users or beneficiaries of financial reports to understand earnings management practices and increase their awareness about this phenomenon. Thus, it may contribute to improving the corporate governance practices, and increasing the reliability and usefulness of financial statements in the Jordanian industrial public sector.

The decision to focus on Jordan was motived by several factors. The dearth of the corporate governance mechanisms, CSR, and earnings management research in the Jordanian context as a developing country (Al-Fayoumi et al. 2010; Abed et al. 2012;

Alzoubi 2015); a high rate of failure, and bankruptcy cases in the Jordanian firms (Zureigat et al. 2014); the significant financial collapses that have happened in the world which had an impact on the Jordanian economy, provide further justification for this study. Finally, there has been significant attention paid to consolidating the support for corporate governance in Jordan (Al-Fayoumi et al. 2010) when the corporate governance code for shareholding companies listed on the Amman stock exchange (ASE), came into effect on 1 January 2009. For these reasons, Jordan has been selected as a case study for this research.

This study showed that corporate governance mechanisms and corporate social responsibility (CSR) are important factors that have the capacity to affect earnings management, and therefore may improve the quality of earnings reporting. However, any study has limitations and this study is not an exception. Firstly, this study focused only on the above-mentioned factors on earnings management, so future studies may address other influential variables. Secondly, this study only focused on Jordanian industrial companies, so future studies may evaluate different sectors, companies or countries. Thirdly, this study used the Modified Jones and Modified Jones with ROA models - future studies may use different models or the same model to compare the findings of this study with their findings. Thus, future research could consider these issues as interesting and important lines of investigation.

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