The role of management accounting in fraud control: The case of the City of Joondalup

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ABSTRACT

With the background of increased fraudulent activity within organisations in the 21st century, this study examines the pertinence of the management accounting function to fraud control, and its relationship to the traditional external and/or internal audit – based approaches. Given the essentially detail-driven and analytical outlook that management accountants must hold, it is argued that the function should be integral to any fraud control programme in an organisation.

The study further considers the role of the management accounting function within the specific sphere of local government organisations in Western Australia and argues that the importance of management accounting to fraud control is particularly relevant in this context. By way of application, the City of Joondalup, as a representative local government, is analysed and specific fraud control measures suggested that can be incorporated into the existing management accounting function there, as well as in Western Australian local governments generally.

It is argued, in conclusion, that incorporating fraud control activities as part of management accounting's role in an organisation is imperative to empower organisational leadership to successfully manage the risk of fraud.

Key terms: Fraud control, local government, management accounting

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The reader is reminded of the following:

- This mini-dissertation is presented in the article format in accordance with the policies of the North West University's Faculty of Economic and Management Sciences and comprises one research article, which has been accepted for publication in an upcoming edition of an accredited journal.
- In the instance of an article format mini-dissertation, the Faculty of Economic and Management Sciences' Regulation E.9.3 requires that the mini-dissertation consist of at least one (1) publishable article that has been submitted to a Department of Education – approved peer-reviewed journal.

CHAPTER 1: INTRODUCTION

1.1. Introduction

Occupational fraud and abuse is defined by the Association of Certified Fraud Examiners (ACFE) as “the use of one’s occupation for personal enrichment through the deliberate misuse or misapplication of the employing organisation’s resources or assets” (ACFE, 2011). In its latest *Report to the Nations on Occupational Fraud and Abuse* the ACFE (2014:4), as did the 6th PwC Global Economic Crime Survey (PwC, 2012a), noted that, after tips received from whistleblowers, the most common method of detecting fraud across organisations the world over was by management review, which uncovered 16% of occupational frauds reported, while the internal audit function detected just over 14% of occupational frauds with the external audit function responsible for bringing to light a mere 3% of such fraudulent activity.

Although the external audit function is not designed primarily to detect fraud (AASB: 2011, 8), public perception of the external (“independent”) audit function includes a strong expectation that such audit scrutiny will uncover fraud (Moussalli, Gray & Karahan, 2011). In the recent past, there have been several significant instances of corporate frauds brought to light which proved to have defied external auditors and regulators and which, on closer inspection, should not have. The notorious case of Enron springs to mind immediately (Li, 2010), as that of Satyam in India (Satyan, 2007), Parmalat in Europe (Kapner, 2004), and Bernie Madoff’s gigantic ponzi scheme (Gandel, 2008) as perhaps the most infamous of them all. The failure of the external audit function to detect the fraudulent activity in each of these cases has been well-documented. The debate over whether these were failures due to non-application of sound audit procedures or rather due to the weaknesses in the procedures themselves continues. The fact remains, as noted above, that external audit has often had limited overall success in preventing or detecting fraud.

While the internal audit function has definitely been more successful in detecting fraud than the external audit function, it still has been surprisingly less capable than the management function itself, as noted in the ACFE's report. Given that identification of fraudulent activity in an organisation is integral to the internal audit function (KPMG, 2003), it is reasonable to expect a much higher success rate than management reviews, which in turn are typically at a more strategic level. It is ironic that virtually every corporation mentioned earlier had an internal audit division. In at least one case – Satyam – there is significant evidence that internal audit itself was complicit in the perpetration of the fraud (Winkler, 2010). Since the emergence of some of these notorious cases, there has also been considerable debate about the independence of internal audit from management (Van Peursem & Pumphrey, 2005).

The ACFE also found that in nearly 55% of fraud cases reported in the survey, managers or owners/executives were the perpetrators (ACFE, 2014:40; PwC, 2012b) and these frauds took up to twice as long to detect (ACFE, 2014:41).

1.2. The role of management accounting in fraud control

Relying entirely or primarily on either external or internal audit to control fraud is a risky strategy for any organisation (Weil, 2004). Those tasked with the governance function within organisations must take the initiative to put in place the necessary systems to deter fraudulent behaviour and identify occupational fraud when it does occur, especially as research indicates that the costliest frauds are perpetrated by senior executives/managers (ACFE, 2014: 41). Clues to fraudulent behaviour are often contained in seemingly immaterial or insignificant events, which can tend to escape the higher level view that the audit function usually takes (KPMG, 2003). These clues are generally revealed through financial anomalies that emerge when information is properly analysed, in detail. The management accounting function is critical to this analytical approach, as it is generally responsible for budgetary control, reporting and analysis, and is ideally placed to identify aberrations that might be a clue to underlying fraudulent activity (Charron & Lowe, 2008:10).

Turpen & Messina (1997) argued that, just as the management accounting discipline has created value across organisations through the development of tools such as Activity-Based Management, the establishment of *a sound program of fraud prevention* is also an initiative that management accountants ought to drive. According to the Chartered Institute of Management Accountants (CIMA) its members, by virtue of their professional skills, have the potential to be key to fraud prevention and detection efforts in the wide variety of organisations that employ them (2009: 6). The recently formed joint venture between CIMA and the American Institute of Certified Public Accountants (AICPA) – Chartered Global

Management Accountant (CGMA) – has also pointed out that management accountants' professional skills are one of the key tools that organisations can employ in managing fraud risk (2012: 16).

Evidently, the management accounting profession sees its members playing a vital role in organisational fraud control.

1.3. Fraud control in the Australian public sector

The Australian Public Service Commission (APSC) notes that an "*ethical and values-based culture*" is essential to an effective system of corporate governance in a public sector organisation (APSC, 2007). A culture of ethics implies a zero tolerance for fraudulent behaviour. In turn, this indicates that maintaining an ethical culture in an organisation would imply the necessary capacity to prevent and detect fraudulent behaviour in order to eliminate it. It is therefore reasonable to argue that a system of fraud prevention and detection is critical to the corporate governance of any organisation and its overall effectiveness in the achievement of its objectives.

The Australian Institute of Criminology (AIC), in its 2009/10 report to the Australian government, reported that fraud was the most expensive crime category in Australia (AIC, 2012: 6). The report also noted an increasing trend in the total losses due to fraud perpetrated by employees (or internal fraud) (AIC, 2012: iii). This indicates a problem with the necessary ethical behaviour normally expected of employees and officers in the public sector.

The Commonwealth Fraud Control Framework implemented in 2014 mandates minimum fraud control measures that all government agencies are required to implement, (Australia, 2014: A-1). Compliance with these requirements is required to be reported on annually by the Attorney General's Department (AGD) and a report submitted to the Commonwealth government (Australia, 2014: C-20). The Framework replaced the Commonwealth Fraud Control Guidelines that were issued in 2011. Under the latter, the Australian National Audit Office (ANAO) was required to report on government agencies' compliance with the Guidelines. The most recent available report of the ANAO emphasises the absolute necessity for agencies to have proper systems in place to prevent and detect fraud (ANAO, 2010:12).

While the Commonwealth Fraud Control Framework is limited to the Australian Federal Government and its agencies, the general principles contained therein are reflected in similar policies that exist in the Australian State Governments. In Western Australia (WA), the Corruption and Crime Commission (CCC) was constituted in 2004 to monitor the conduct of public officers in the state, with jurisdiction over all state government departments and agencies, including local governments (WA, 2003). The definition of "*misconduct*" in the legislation (WA, 2003: 8-9) includes any act that might be described as occupational fraud, according to the definition noted earlier, and the CCC is empowered to investigate allegations of "*serious misconduct*" by public officers in Western Australia. The emphasis on misconduct reflects the seriousness with which violations of ethical behaviour are viewed by the Australian State governments.

1.4. Fraud control in the Western Australian local government sector

Local governments in WA are governed by the Local Government Act, 1995 (LGA) and the corresponding Regulations, while also subject to other state legislation such as the Corruption and Crime Commission Act, 2003.

Section 8.38(1) of the LGA refers to the "misapplication of funds of a local government or of local government property" by council members or employees of the local government. Sections 8.35(1) & (2) define misapplication of funds to mean "any monies paid from, or due to, any fund or account of the local government are misapplied to purposes not authorised by law", and define misapplication of property to mean "if anything that belongs to the local government is dealt with in a way that is not authorised by law and causes the local government to suffer loss". It appears evident from these two sections that any act of occupational fraud committed by either an employee or a council member would most likely fall within the definition of misapplication of funds or property in the Act, although the term '*fraud*' is not specifically mentioned there.

Section 5.103 of the LGA requires every local government to have a code of conduct that applies to council members and employees. While the Local Government (Administration) Regulations 1996 and the Local Government (Rules of Conduct) Regulations 2007 both contain some prescriptions of conduct for council members, very little is stipulated with respect to the conduct of employees, other than the requirement to disclose financial or other interests in any matter that an employee provides advice on, or reports, to council of the local government, as given in sections 5.70 and 5.71 of the LGA.

Legislatively, therefore, fraudulent behaviour by local government officers is considered to be governed by the provisions in the Corruption and Crime Commission Act 2003 and the relevant provisions of the Local Government Act 1995 and corresponding Regulations. There is silence, however, on specific direction regarding fraud by local government employees. There appears to be a presumption that such behaviour, which normally constitutes a criminal offence, is adequately dealt with under these provisions, as well as other state and federal laws that address criminal behaviour, including fraud.

1.5. Fraud by local government employees

Over the past several years, there have been a number of cases of misconduct, including fraudulent behaviour, by local government officers in the public eye. A very prominent recent case of procurement fraud occurred at the City of Stirling in Western Australia, which attracted much attention due to the suicide of a key witness on the eve of his testimony to the CCC (Cann, 2010). The majority of allegations investigated by the CCC involving local government employees or council members have involved corrupt behaviour, including procurement irregularities. A recent case in Western Australia that resulted in a criminal conviction involved an employee of the Town of Cottesloe who used his position to fraudulently benefit from the awarding of work contracts to a company he owned (Robertson, 2012). Similar recent instances of corruption and fraud at WA Local Governments include:

- The former CEO of the Shire of Murchison pleaded guilty to the repeated fraudulent use of a business credit card (CCC, June 2013);
- Possible conflicts of interest involving councillors and business lobbyists, as noted in the case involving the former deputy Mayor of the City of Wanneroo (CCC, Dec 2009);
- Undeclared conflicts of interest by senior employees of the City of Bayswater in the procurement of services from a supplier (CCC, Nov 2009).

According to a paper presented at the Australian Public Sector Anti-Corruption Conference (APSAC) held in 2011, the local government structure in WA is unnecessarily complex with a plethora of legislation and overlapping accountability structures that increase the risk of misconduct within the sector (Withnall, 2011). A review of the websites of the four largest local governments by population in metropolitan Perth, namely the City of Stirling, the City of Joondalup, the City of Wanneroo, and the City of Swan indicated that none of these local governments appear to have a specific published policy on fraud control. The City of Stirling indicated in its 2009-10 Sustainability Annual Report that the results of a fraud and corruption risk assessment were 'being used to develop a corporate fraud and corruption control plan' (Stirling, 2010: 96) but no separate policy can be found other than a reference to fraud in its Code of Conduct (Stirling, 2014: 21) and a hotline for misconduct reporting. The representative body of local governments in WA, the Western Australia Local Government Association (WALGA) has a similar paucity of published information on fraud control in WA local governments. Not even a fraud control planning template for local governments in the state appears to have been published by WALGA.

The CCC's counterpart in New South Wales, the Independent Commission Against Corruption (ICAC) reported over a decade ago that most frauds originate from within organisations (ICAC, 2002: 4) and observed that "*fraud control is a key element of good management in the public sector*". The ICAC further observed that "*the best way to minimise fraud is good prevention and a credible detection regime*".

1.6. The City of Joondalup

The City of Joondalup (COJ) came into existence on 1 July 1998, out of the-then Shire of Wanneroo, and is currently the second largest local government in Western Australia based on population. It covers an area of approximately 97 square kilometres (COJ, 2013) and contains an approximate population of 164,000 (ABS, 2011). A Council consisting of a Mayor, a Deputy Mayor and 10 councillors governs the City and sets its strategic direction. The administration of the City is delegated to a Chief Executive Officer (CEO) who is supported by four directors. Each directorate comprises business units headed by business unit managers, who oversee team leaders who supervise the various teams that make up the business units. Governance is vested with the Council and in accordance with section 5.42 of the Local Government Act, 1995, the Council delegates certain powers and duties to the CEO who may further delegate specific authority to the directors and officers.

In accordance with section 6.2 of the Local Government Act, 1995 the City prepares an annual budget for each financial year's activities. Section 6.8 further prohibits the City from incurring, in a particular financial year, any specifically unauthorised expenditure that has not been included in the annual budget for that year. A mid-year budget review is conducted half way through each year, at which actual performance is compared to budget and necessary revisions to projected activities are made. At the close of each financial year, the City prepares an audited annual financial report in accordance with Australian Accounting Standards (sec 6.4, LGA 1995).

All financial aspects of the City administration are handled through the Financial Services business unit. Within this, the financial accounting area is responsible for daily financial transactional processing, maintaining accurate financial records, applying the necessary financial controls and producing the annual financial report. The management accounting area looks after the annual budget, monthly and other regular reporting to the Council, CEO and other directors, and the business units, as well as regular analysis of financial information and determination of costs and pricing of services and is responsible for providing the necessary detailed analysis that management needs to make the decisions essential for the City’s immediate and long-term direction.

The management accounting function at the City of Joondalup handles the annual budget and mid-year budget review process, as well as regular reporting and analysis to management and the Council. In addition, management accounting reviews data on an ongoing basis, analyses trends and patterns in expenditure and revenue flows, monitors financial activity against budget, and also investigates unusual variances and patterns of financial activity.

Reflecting the wider profession, the function has the capacity to drive the establishment and continuance of unequivocal fraud prevention strategies and enhance the City’s ability to prevent, deter and detect fraudulent activity.

1.7. Problem Statement

Considering the above, two key considerations arise, which are also then defined as the research questions of this paper.

Q_1: Firstly, can the management accounting function at the City of Joondalup incorporate fraud control tools, techniques and practices into its regulatory functions of budgetary control, analysis and management reporting?

Q_2: Secondly, how can the management accounting function contribute to a dedicated system of fraud prevention and detection at the City of Joondalup?

1.8. Research Objectives

1.8.1. Primary Objective

In addressing the above stated research questions, the primary objective of this study will be to explore a specific role for management accounting in developing and implementing a fraud control program at the City of Joondalup, and to suggest tools and techniques that may be adopted by management accounting to strengthen fraud control systems.

1.8.2. Secondary Objective

Building on the primary objective defined above, the secondary objectives of this study will be:

i. To consider the role that management accounting fulfils in a local government environment in Western Australia;
ii. To investigate the existence and efficiency of existing fraud control strategies at the City of Joondalup and other local governments in Western Australia;
iii. To suggest key fraud control measures at the City of Joondalup;
iv. To consider the incorporation of fraud control mechanisms in the regular management accounting function at the City of Joondalup; and

v. To evaluate possible tools and techniques that may be adopted by management accounting at the City of Joondalup as part of fraud prevention and detection.

1.9. Research Methodology

In preparing for a study of this nature, it is necessary to clearly establish a proper foundation for the type of research and the approach adopted in achieving the purpose of the study. The background and methodology applied to this study is discussed in this section, along with the various aspects of the overall research design applied.

1.9.1. The meaning of research

The Oxford Advanced Learner's Dictionary of Current English defines research as *'investigation undertaken in order to discover new facts'* (1985:720). A somewhat more pertinent definition by the Illustrated Oxford Dictionary describes it as *'the study of materials and sources in order to establish facts and reach new conclusions'* (2011:572). These are general definitions of research that apply in any situation and to any discipline. Research of a more academic rigour has additional attributes that are essential for validity and application. Bajpai (2011) considers research a *'scientific, systematic and interlinked exercise'* requiring *'sound experience and knowledge'*. The inclusion of the term 'scientific' simply refers to the fact that information elicited through a research process should be '*accurate and objective'* (Zikmund *et al*, 2013: 5) for the purpose.

The Business Dictionary (2014) clarifies that research is categorised into two types: Basic Research, which increases an existing body of knowledge through the discovery of new facts; and Applied Research, which uses the results of basic research to solve particular problems or develop new processes or techniques in a specific context.

Business research is usually meant to discover and establish new facts about matters affecting business, management and organisations (Zikmund *et al*, 2013:5). Bryman and Bell go further and describe this as academic business research, distinguishing it from that conducted by business and other organisations – applied business research – which is intended to achieve a perceived benefit for themselves only (2007:xxviii). While Zikmund *et al* concur broadly with this approach, they also point out that most business research endeavours are usually an amalgam of both types, and rarely one or the other continuously (2013: 6).

The primary intention of research, then, is to bring to light hitherto hidden and undiscovered truths (Kothari, 2004:2). This is especially true in applied business research, where it would be a fruitless and wasteful exercise to expend time and resources in simply rehashing facts that are already established and known. Where matters concerning business and organisations cannot be adequately addressed by the application of what is already known, a need for business research arises.

According to Creswell (2014:5) every research endeavour comprises three primary components that define the direction and approach adopted: the philosophical worldview underpinning the research, the research design, and the specific research methods or procedures adopted, which are high-lighted below.

1.9.2. Research worldview

Creswell (2014:6) describes worldview as the fundamental beliefs that guide actions and postulates that a lucid discussion of the researcher's worldview is essential to a clear understanding of the particular research approach chosen. Mertens (cited by Mackenzie and Knipe, 2006) supports this view, suggesting that this *theoretical framework* clarifies the particular research work undertaken. Mackenzie and Knipe (2006) further assert that this worldview – which they term the *research paradigm* – is critical in explaining the basis for the methodology, design and techniques adopted in a research endeavour.

Studies have repeatedly demonstrated the costly and debilitating effects of fraud to organisations, particularly occupational fraud (ACFE, 2014; PwC, 2012; KPMG, 2012 & 2013). The additional cost burden imposed on organisations as a result of occupational fraud has been clearly established. Further, the continuing ill-effects of fraud in other ways are also well documented (Kapner, 2004; Li, 2010; Satyan, 2007). The fraud susceptibilities of internal systems have also been examined and identified, such as in the Parmalat case (Kapner, 2004). It is also established that these are failings that could have been eliminated with proper attention to basics (Sinnett, 2009 Miller, 2012); the frauds themselves were therefore preventable.

The philosophical basis for this research study thus encompasses the position that fraud – particularly employee fraud – is highly detrimental but preventable and that all organisations should take all necessary steps to combat it.

1.9.3. Research design

Kothari (2004:32) terms research design the *blueprint* of a research project, what has been described by De Vaus (2001:9) as its *structure plan*. A research project design is essentially a flexible, relevant and efficient framework that guides the researcher’s methods to enable the collection and analysis of data sufficient to answer a research question as clearly as possible.

Research design is inextricably linked to the type and extent of information that is necessary to answer a research question as well as to the nature of the problem itself. Kothari identifies a multiplicity of variables that impact on a final research design. While the overarching purpose of research is to find answers to questions through a structured approach (Kothari, 2004:2), the particular direction of a research process can depend on more than just one condition.

1.9.4. Research methodology

It is essential, when attempting to answer any research question, to have a properly considered strategy as well as an appropriate methodology for data collection, analysis and the final conclusion.

Research methodology refers to the structured, scientific and multi-dimensional approach employed in finding a valid solution to a question that clearly demonstrates the logic and techniques used in the process of reaching that conclusion (Kothari, 2004: 8). While there has been considerable debate about the identity and structure of research methodologies, with respect to theoretical paradigms (Chalmers, 1999: 104) that define specific methodologies, it is not the intention of this study to explore the arguments in this regard. The influence, or otherwise, of research paradigms does not alter the essential nature of research methodology, which encompasses not only the techniques employed in the research process but also the reasoning and logic applied to the use of specific methods. The importance of a coherent research methodology arises from the credibility of research findings being dependent for their validity on the methodology employed. A clear and lucid elucidation of the techniques and logic of the process is critical to demonstrate the objectivity of the research conclusion.

The research questions that this paper seeks to answer demand the assimilation of ample relevant data, arrangement and analysis of this data, the establishment of specific facts, application of these to the research questions and the postulation of the resulting conclusions that form the answers to these research questions.

This process commences with an examination of occupational fraud and prevention and detection strategies, primarily focussing on information available from the ACFE, as well as other fraud control assessments and reports conducted by consultants and government bodies in various parts of the world. This is followed by a review of management accounting literature, concentrating on the intersection of these with fraud control and management. Information sources for this part of the exercise include CIMA and similar professional body websites, Google Scholar, Emerald Publishing and EBSCO Host. Commonwealth, State and local government websites in Australia will then be reviewed to gather information on fraud control in the Australian public sector and to establish the structure of local government in Western Australia. The website of the City of Joondalup is reviewed to examine its operational structure and apply the analysis of the earlier information to suggest techniques that can be incorporated into its management accounting function to enhance its fraud control capacity.

1.9.5. Literature review

This phase will involve a comprehensive review of recent literature on the management accounting profession and its evolution over the years. The focus of the literature review is to gauge the involvement of management accounting in fraud control and also in the development and monitoring of organisational fraud control programs.

1.9.6. Empirical research

The empirical research phase focuses on the City of Joondalup, its organisational characteristics, susceptibilities to fraud and existing fraud control measures. Data pertaining to these aspects will also be examined from other local governments in WA and other states to establish the essential aspects of a fraud control mechanism for the City, and identify those that can reasonably be addressed as part of the management accounting function.

No questionnaires are planned and only information available in the public domain is expected to be included for collection and analysis.

1.10. Definitions and Concepts

For purposes of this study the following definitions are taken as correct.

- **Fraud**: This is defined by the Oxford Dictionary (2015) as wrongful or criminal deception intended to result in financial or personal gain. The Serious Fraud Office (2015) in the United Kingdom expands this definition to include loss caused to another party.
- **Fraud Control**: This term is not explicitly defined anywhere; however, several sources convey its meaning by implication. The Australian Government considers fraud control to be a system of measures that incorporate risk assessment, fraud control plans, and prevention, detection and investigation aspects (Australia, 2014: iii).
- **Local government**: The Merriam-Webster Dictionary (2015) defines local government as “the government that controls and makes decisions for a local area, such as a town, city or county”.
- **Management Accounting**: The Institute of Management Accountants (2008) defines it as a profession that involves partnering in management decision making, devising planning and performance management systems, and providing expertise in financial reporting and control to assist management in the formulation and implementation of an organisation’s strategy.
- **Occupational Fraud**: The Association of Certified Fraud Examiners defines occupational fraud as the use of one’s occupation for personal enrichment through the

deliberate misuse or misapplication of the employing organisation's resources or assets (ACFE, 2014: 6) or, in other words, fraud by which an employee defrauds his or her employer.

1.11. Chapter Overview

This research study comprises four chapters, as follows:

Chapter 1: Introduction

This chapter lays the groundwork for the study and contains the following:

- Background of research into occupational fraud, management accounting, local government and fraud control
- The problem statement
- Research objectives; and
- Methodology

Chapter 2: The role of management accounting in fraud prevention and detection

This chapter covers the literature study, including a discussion of management accounting, occupational fraud control, and fraud in local government.

Chapter 3 (Article): The role of management accounting in fraud control: The case of the City of Joondalup

This chapter is presented in the form of an academic article. It includes a discussion on occupational fraud and local government, and focusses on the interface of the critical organisational functions of management accounting and fraud control at the City of Joondalup.

Chapter 4: Summary and conclusions

In the final chapter, the prior discussions are summarised and weighed eventually concluding with an answer to the research problem articulated in the first chapter.

1.12. Summary

The objective of this chapter was to briefly introduce the concept of occupational fraud and its current impact on organisations globally and also in Australia. Consideration was given to the existence of fraud within the Australian public sector and, particularly, in local government. The pervasiveness of fraud and the challenge of fraud detection and prevention were also noted.

Simultaneously, brief consideration has been given to management accounting and its role within organisations, including its involvement in fraud control strategies. Its key role in organisational strategy and decision making, as opposed to mere accounting and reporting, was also reviewed and noted.

The next chapter will review literature that examines in more detail both these concepts and the extent to which management accounting has been involved in prevention and detection of fraud in organisations globally, particularly within a public sector context.

CHAPTER 2: THE ROLE OF MANAGEMENT ACCOUNTING IN FRAUD PREVENTION AND DETECTION

2.1. Introduction

The previous chapter high-lighted the actuality of the research topic, by presenting some background together with the research problem and objectives. This chapter examines the extent to which the role of management accounting in fraud control has been considered in academic and professional literature and the conclusions that the various sources have arrived at. This will include consideration of literature on the management accounting profession, fraud control and organisational management, as well as an examination of literature that incorporates fraud prevention and/or detection as part of the management accounting function in an organisation, or as part of the role of a management accountant.

2.2. The Purpose of Management Accounting

2.2.1. Origins

According to Johnson and Kaplan (1987), management accounting arose in the industrial explosion of the latter nineteenth century in the USA in response to the need to manage and control costs. It is asserted that management accounting arose out of the development of management principles driven by the engineering disciplines that underpinned industrial growth. The new technique was initially referred to as cost accounting and considered to have been first employed by manufacturers such as Du Pont in the USA.

This view has been long debated by a slightly divergent school of thought that holds management accounting to have originated instead out of managerial developments in the USA in government and the military (Waweru, 2010). Hoskin and Macve (1988) attribute the origin of management accounting to techniques that were first developed by engineers at West Point’s US Military Academy in the early 1800’s, and later refined into labour cost accounting at Springfield Armory and a number of US railroads.

There is yet another school of thought that disputes the US (and managerial) origins of management accounting altogether. Boyns and Edwards (1996) have compiled ample data suggesting that nineteenth century accounting systems at the Dowlais ironworks in Great Britain were used to generate information that aided management in strategic decision making, rather than simply as a tool for cost control.

An examination of the world outside the dominant Anglo-Saxon sphere reveals that management accounting practices have a significant history in Germany (Chapman *et al*, 2011: 1036) and Japan (Okano, 2015), among others.

While the term 'management accounting' might perhaps be of relatively recent origin (Kotas, 1999; Kulkarni & Mahajan, 2008), clearly the principles that underpin it arose much earlier. Straightforward definitions of management accounting have tended to be elusive (Coombs *et al*, 2005: 7). In fact, differences of opinion persist even in describing management accounting, but there is broad consensus that management accounting is used by those who require information to make decisions about an organisation (Coombs *et al*, 2005: 9).

2.2.2. Present status

Despite the differing views of its origins and exact meaning, management accounting has developed now into a clearly distinct accounting discipline with a body of knowledge uniquely its own. Robert Kaplan reports the opinion of Nobel laureate Herbert Simon that professions can be distinguished from sciences by having design at their core (Kaplan, 2006). Although professional accounting bodies, as well as various experts through the years, have now defined what management accounting is, and how it is distinguished from the other traditional accounting disciplines, the finer points may sometimes be lost even on management accountants themselves.

Management accounting is predominantly concerned with the collection, analysis and presentation of relevant information, deployed through the medium of specifically designed systems, tools and techniques to the management of an organisation to enable them to make the necessary decisions in the best interests of the organisation. CIMA defined management accounting in 2005 as "*the process of identification, measurement, accumulation, analysis,* *preparation, interpretation and communication of information used by management to plan, evaluate and control within an entity and to assure appropriate use of and accountability for its resources. Management accounting also comprises the preparation of financial reports for non-management groups such as shareholders, creditors, regulatory agencies and tax authorities*" (CIMA, 2005).

Although management accounting is undoubtedly concerned mostly with financial information, or even non-financial information expressed in financial terms, it is not as sharply focussed on historical financial results as financial accounting is, and a significant aspect of the discipline is the development of tools and techniques to aid in improving organisational performance. Within specific legislative and operational boundaries, financial accounting is usually directed towards the accurate recording and presentation of historical financial data in the context of applicable Generally Accepted Accounting Principles. Management accounting, on the other hand, is more diverse and analytical in focus, considering all relevant information necessary to proper decision-making in an organisation – whether financial or otherwise, and is not particularly focussed on historical transactional accounting. In other words, if financial accounting is the scribe, management accounting is the investigator. The clear implication is that management accounting is, or is intended to be, primarily forward-looking, concerned mainly with all information that will assist management in making decisions with a future impact, or to assess possible future outcomes based on present conditions. Financial accounting, on the other hand, is predominantly historical in focus in order to provide a sound reckoning of past financial events to mainly external stakeholders.

The International Federation of Accountants (IFAC) refers to management accounting synonymously with financial management and considers it to be the body of activities performed by what it calls the "professional accountant in business" (2005). It identifies the basic outlook of management accounting to be primarily concerned with decision-making for future outcomes.

The Institute of Management Accountants (IMA) in the USA defines management accounting as "…*a profession that involves partnering in management decision making, devising planning and performance management systems, and providing expertise in* *financial reporting and control to assist management in the formulation and implementation of an organisation's strategy*" (IMA, 2008). This elevates the profession to a new level, by involving it in the decision making process itself, rather than simply providing the tools and technical expertise for this purpose.

Kaplan (1984) advocated the need for management accounting to focus on the ability to meet business requirements as quickly as these change. He asserts that the management accounting profession must be focussed on enhancing its members' ability to respond to organisations' changing requirements for information and analysis in order to maximise value. In other words, management accounting has to be oriented towards decision-making for the future.

Kaplan followed this up in a joint paper with Johnson (1987) that concluded that the performance of management accounting against the benchmark of relevance to business (or corporate) strategy and operations had become inadequate and abstract. This discussion is considered to be a landmark one in the history of management accounting and Otley (2008) regarded the critique to have spurred significant innovations in management accounting techniques since it was first published. The premise of Kaplan and Johnson's treatise was the expectation of management accounting to be relevant to the future success of an organisation through an ability to be forward-looking and to anticipate changing requirements.

2.2.3. Distinction from financial accounting

Haq (1995) reported the result of research by Scapens *et al* at Manchester University that found organisations in the United Kingdom (UK) increasingly treating traditional financial [accounting and] reporting with its statutory focus on historical data in a particular form as progressively less relevant to evolving business requirements, and even considering the historical outlook a handicap to business success. The paper, commissioned by CIMA, further noted the significant rise in the co-option of the management accounting function into regular management processes, and the perception of the discipline's comparatively superior ability to add real value to organisations.

Chorafas (2006) contrasted the two fields by asserting that financial accounting is primarily concerned with the provision of information to those external to the organisation, such as government agencies, key stakeholders and the general public, while management accounting is focussed on information relevant to the organisation itself. This somewhat contradicts CIMA's definition of management accounting (2005), which clearly includes the preparation of information for non-management groups. It may be noted, however, that in both concept and practice, financial accounting, rather than management accounting, is associated with the preparation of information for non-management parties (Garrison *et al.*, 2007:8; Davis & Davis, 2011: 4-5). In reality then, management accounting is not concerned with the provision of information to non-management groups, unless particular circumstances dictate this.

According to Armstrong (2006) management accounting is primarily intended to provide management with information for optimal decision making and should not be concerned with any data that is not relevant for this purpose. This is similar to Chorafas' argument noted in the previous paragraph, and separates management accounting from the task of preparing historical financial reports for non-management groups.

A number of sources have also considered management accounting within the contexts of specific industrial or geographical settings. Ramos (2004) reiterated the position of management accounting as the primary source of information for decisions and control and argues that it is ideal to improve the value of supply chain systems. Ghosh and Chan (1997), in a survey of the adoption of management accounting in Singapore, made the point that the function is essential to enhance corporate efficiency and effective competition in the market.

2.2.4. A tool for decision making

More recent research in management accounting has tended to focus on the importance of management accounting being a part of business strategy and decision-making, which is a step up from simply providing reporting and analysis to this process. Brewer (2008) nominated the four pillars of his suggested management accounting framework – leadership, strategic management, operational alignment and continuous learning and improvement - which outline a profession meant to be focussed not only on providing the necessary tools, information and analysis to facilitate the desired future outcomes for an organisation and its stakeholders, but also in being intimately involved in the management process itself. This concurs with the updated definition of management accounting by the US Institute of Management Accountants (IMA, 2008).

Langfield-Smith (2011) noted Bhimani and Bromwich's criticism of the lead time that normally ensued before techniques like activity-based costing and the balanced scorecard were adopted widely and explored how this could be improved for future innovations. This appears to echo what Kaplan (1984) wrote nearly two decades before when he declared that management accounting needed to return to its roots of innovation from within real enterprise and industry, such as the development of concepts like prime cost and overhead recovery in Andrew Carnegie's steel factories, to positively influence the direction of business strategy and activity. Talha *et al* (2010: 94) examined a number of organisational scenarios and concluded that innovation in management accounting techniques and tools is needed to keep up with the evolving information and analysis needs of organisations in the present and future.

It is evident that a broad consensus exists, from both within and without the profession, that the primary purpose of management accounting is to empower the management of any organisation with the necessary tools and information analysis to prepare for the future in a manner that will improve the performance of the organisation in the pursuit of its primary objectives and increase value for its stakeholders.

2.3. Fraud and Organisational Management

In 2014 the Association of Certified Fraud Examiners (ACFE) released the latest edition of its *Report to the Nations on Occupational Fraud and Abuse* which confirmed previous findings that, after tips received from whistleblowers, most frauds detected in organisations came from management review. The report highlights two important points, namely:

i. The detection of fraud is still highly dependent on unpredictable and random, mostly anonymous, tips (ACFE, 2014: 4); and
ii. Management of an organisation is best placed to prevent and detect fraud in that organisation.

The ACFE defines occupational fraud as “the use of one’s occupation for personal enrichment through the deliberate misuse or misapplication of the employing organisation’s resources or assets” (2011). Globally, the annual losses arising from occupational fraud are estimated at the colossal sum of US$ 3.7 trillion (ACFE, 2014:8) which approximates to nearly 5% of the estimated Gross World Product of US$ 73.87 trillion (CIA, 2012). In Australia and New Zealand, the KPMG *Fraud, Bribery and Corruption Survey 2012* indicated that the total losses experienced by the 281 survey respondents (KPMG, 2013: 1) in the region was over AU$ 372 million, resulting in an average loss per defrauded organisation of over AU$ 3 million. Both the ACFE and KPMG surveys reveal that the incidence and cost of fraud is increasing. While the KPMG survey does include fraud perpetrated by parties external to organisations (eg. tender fraud), it notes that over 75% of frauds covered in the survey were perpetrated by those within the organisation and that this proportion is rising (KPMG, 2013:5).

The Australian Institute of Criminology (AIC) examined crime statistics in 2005 and estimated the cost of fraud to be much higher than other crime categories at approximately AU$ 8.5 billion (Rollings, 2008: 41). While this includes categories of fraud other than occupational fraud, such as welfare fraud or identity theft, it provides a guideline to understanding the extent of fraud as a serious problem in society as a whole. Mayhew noted that for every recorded fraud offence, as many as three may go unreported or undetected (Rollings, 2008: 38). This highlights the pervasiveness of fraud throughout the community and organisations, both public and private.

The KPMG *Fraud Barometer* reported that total fraud losses in Australia for the four years to December 2011 exceeded AU$ 1 billion (KPMG, 2012: 2). When it is considered that this only includes fraud offences brought before a court or as a charge against a person or persons that involve a loss of at least $100,000, it can be concluded that the actual cost of all fraud in Australia is in the region of the AIC’s estimate, if not significantly more.

There is sufficient evidence to indicate that preventing fraud in an organisation is greatly strengthened by an anti-fraud or ethical culture in the organisation, and that the tone for this culture is set by top management as can be seen below. This applies to all organisations, whether public or private.

Murphy *et al.* found that organisational culture is an important indicator of the possibility of fraud (2011: 23) and argued that culture influences motive and rationalisation, and management that promotes ethical behaviour has a great impact on that organisation's ability to prevent fraud. Kroll (2012: 22) reinforced this view by asserting that a corporate culture which discourages fraudulent behaviour is essential in fraud prevention strategies.

In examining fraudulent financial reporting, Gereish (2003) reached the conclusion that organisational culture plays a critical role in the inclination of people within an organisation to engage in fraudulent reporting. An examination of companies like WorldCom showed that the tone set by senior management had encouraged the tendency of others in the organisation to engage in fraudulent behaviour. Li, too, noted that a corporate culture of unethical behaviour was a key factor in the ultimate implosion of the energy firm Enron (2010: 39). The pattern of fraudulent behaviour was driven by the CEO, Jeff Skilling, and other senior executives, and others in the organisation took their cue from this example.

Lovik *et al.* (2007) even concluded that corporate culture was the primary <u>cause</u> of fraudulent and unethical behaviour in an organisation and found that a robust management example of integrity was essential for a healthy organisational culture. The authors also noted that implementation of section 404 of the Sarbanes-Oxley Act 2002 (SOX), pertaining to assessment of internal controls, requires that the appropriate pattern of ethical behaviour be established by organisational executives (2007).

KPMG found in its 2012 survey that the top contributor to corrupt behaviour in an organisation was a lack of visible commitment to ethical behaviour in the organisation by senior management (2013:36).

The ICAC in New South Wales notes on its website that top management is critical to the healthy, ethical culture of an organisation (ICAC, n.d.). In addition, the *Fighting Fraud: Guidelines* report that the ICAC's research has found that behaviour of top management is the most important factor in setting an ethical culture in an organisation (2002: 11). Gabor and Alger (2012) reported that "tone at the top" is the primary efficient and inexpensive way to prevent fraud.

The Australian National Audit Office (ANAO) noted that an ethical culture in any [public sector] agency is critical to managing fraud risk (ANAO, 2010: 73) and that this is strongly influenced by the pattern of behaviour set by the leadership of that agency.

The Commonwealth Fraud Control Guidelines emphasise that fraud control must be an essential aspect of [public sector] organisational culture (Australia, 2011: 4) and that prevention requires the encouragement of an ethical culture in the organisation (2011: 12) that is the CEO's responsibility to implement.

2.4. Fraud control

Apart from instituting an ethical organisational culture and setting an example of integrity, management of an organisation can employ a number of systemic elements to prevent and detect fraud. While fraud cannot be completely prevented, a robust system of fraud control can reduce the incidence of fraud as well as improve the efficiency of fraud detection (ICAC, 2002:11; CGMA, 2012:2).

Holtfreter's (2004: 94) review of fraud control mechanisms in organisations located in the United States found that implementing and enforcing control strategies is essential in fighting fraud. This corroborates Ziegenfuss' (2001: 322) finding about the importance of an organisation's control environment in preventing fraud.

The Commonwealth Fraud Control Guidelines identify three key aspects that must underpin an effective fraud control framework: Prevention, Detection, and Response (2011: 27). CGMA goes further by asserting that an effective combination of these aspects will enable a fourth critical component of a good fraud control approach: Deterrence (2012:2). The Fraud Control Guidelines make the point that each aspect comprises specific control mechanisms that must be coordinated together to ensure that the overall fraud control strategy achieves its objectives.

Mouton (2013: 39) wrote that prevention, detection and prosecution of fraud should be essential aspects of any organisation's strategy for combating fraud.

Kramer (2009: 15) concluded that the best approach to fraud control in an organisation is the institution of preventive internal controls that increase the perception of detection by would-be fraudsters and thus deter possible fraudulent activity. Sinnett (2009) also found that internal controls are fundamentally important in preventing fraud.

The ACFE (2012: 36-37) reported that the presence of specific anti-fraud controls in organisations can reduce the median loss from fraud by up to 69% when compared to organisations without these controls. Likewise, the duration of frauds is up to two-thirds shorter in organisations that implement these anti-fraud measures.

Miller (2012) reported that most undetected fraud tends to be the result of incomplete or faulty internal controls. The Victorian Auditor-General (2012: 22) noted research conducted by KPMG that found the majority of frauds take place due to faulty or overridden internal controls.

There is clearly a general consensus that a coherent fraud control structure is essential for any organisation.

2.5. Fraud control in local government

The fraud control framework in local government is essentially no different to any other organisational context, as the same fundamental aspects of prevention, detection, response and deterrence would apply in this environment.

New South Wales' ICAC applies its guidelines on fighting fraud to both state government agencies and local governments without distinction (2002: 11). While the Commonwealth Fraud Guidelines are statutorily applicable to federal agencies only, the overall structure of fraud control mechanisms includes the essential elements of prevention, detection and response (2011: 11). Victoria's Auditor-General's audit of fraud control in Victorian local governments echoed this position by noting that prevention, detection and response are essential aspects of a fraud control plan (2012: 12) and that fraud control recommendations in ANAO's Fraud Control in Australian Government Entities, which are primarily directed towards Federal government agencies, are definitely relevant for local governments in Victoria (2012: 4).

The South Australian Local Government Association (SALGA) emphasised that fraud control is an essential part of good governance at the local level (2007: 2). Further afield, in the United Kingdom, the National Fraud Authority included prevention, detection and response among the basic essential elements of fraud prevention in UK local governments (2011: 9). Ziegenfuss (2001: 312) found that local governments in the United States needed to establish proper internal control environments to reduce the incidence of fraud while Huefner's (2011: 27) review of local government audits in the state of New York concluded that effective internal control and consequent reduction in fraud is essential for efficient utilisation of finite financial resources.

2.6. Fraud control and management accounting

Although the idea of management accounting as an integral part of fraud control is not an absolute novelty, a review of management accounting literature seems to indicate that it has not been explored extensively. This may be due to the conventional view that fraud prevention and detection is the domain of disciplines like internal audit (DeZoort & Harrison, 2008:3; KPMG, 2003:2). It may also be due to what Johnson and Kaplan (1987: 198) referred to as the subservience of management accounting to financial accounting disciplines which, as a consequence, prevents proper discernment of the distinct role that management accounting can and should play in fraud control (Turpen & Messina, 1997: 37).

Charron and Lowe (2008: 10) made the point that management accountants have a more panoramic view of the organisation, financial structures and other aspects than other professions, and are better acquainted with a wider variety of information, thus better positioning them to detect fraudulent activity in an organisation.

CIMA (2008: 41) supports this view and emphasises that the management accounting skill set is ideal for use in fraud control initiatives. It is noteworthy that the variety of tools and techniques that CIMA considers can be utilised in fraud control – such as systems analysis, ratio analysis, modelling, exception reporting, etc. – are all regularly employed by management accountants in normal management reporting and analysis practices.

Kroll (2012) noted the opinion of the Institute of Internal Auditors that management should encourage and foster a culture of scepticism within an organisation, which makes it normal for questions to be asked about any aspect of operation. This helps employees to become acclimatised to a critical appraisal of any activity that might appear questionable. While professional scepticism is specifically expected of auditors (FRC, 2012: 12), Charron and Lowe (2008: 10) considered it paramount that management accountants must exercise high levels of professional scepticism that will assist in the function in being essential to detecting and preventing fraud.

2.7. Summary

This chapter of the study analysed the origins and purpose of management accounting, as well as its perceived role in organisations today from a number of sources. The key issue of fraud control was also examined, along with the significance of management involvement in fraud control, the nature of fraud control in a local government environment, and culminated with a review of current perceptions of management accounting involvement in fraud control.

It was found that the primary role of management accounting is to support and strengthen the ability of managements to make informed decisions on the direction of their organisations. Further, management is primarily responsible for creating and fostering an anti-fraud culture within an organisation, along with a strong fraud control structure.

The essential elements of effective fraud control were identified and examined for relevance to the local government environment. Finally, the involvement of management accounting in direct fraud control strategies was considered. Despite the relatively minimal research on the latter aspect, the study found that management accounting's significance to strategic decision making makes it essential for preventing, detecting and responding to fraud. There appears to be broad implication that that management accounting can be a vital part of fraud control strategies and should be directly involved to prevent, detect and respond to occupational fraud.

The next chapter will specifically consider the case of the City of Joondalup as a context of the possible interaction between management accounting and fraud control.

CHAPTER 3: RESEARCH ARTICLE

The reader is requested to take note of the following:

The article has been accepted for publication in the following IBSS and Scopus indexed, peer-reviewed academic journal as follows:

- Oommen, R. & **Buys P.W.** (2015). The role of management accounting in fraud control: The case of the City of Joondalup. *Risk Governance and Control: Financial Markets and Institutions*, 5(4): (In press). (IBSS & Scopus / ISSN: ISSN - 2077-429X).

The article was written in line with the journal's submission guidelines, which are included in ***Annexure A: Instructions to authors***. Proof of acceptance of the article is provided in ***Annexure B: Confirmation of acceptance of publication.*** The article is expected to appear in December 2015.

The article was researched and written by the first author as the candidate and primary author, while the second author fulfilled a reviewer function thereto as the study leader of the research project.

CHAPTER 3: THE ROLE OF MANAGEMENT ACCOUNTING IN FRAUD CONTROL: THE CASE OF THE CITY OF JOONDALUP

Abstract

The 2014 'Report to the Nations on Occupational Fraud and Abuse' released by the Association of Certified Fraud Examiners estimates that the potential projected losses from occupational fraud globally could run as high as US$3.7 trillion every year. In Australia, several studies have found that the Australian public sector entities are also significantly exposed to fraud. This article considers the case of the Australian City of Joondalup and asks whether its management accounting function can provide city management with the necessary data to enable effective control over occupational fraud and whether fraud control activities specifically directed towards fraud control can be a regular feature thereof. It is concluded that although aspects of fraud control are encompassed within the broader strategies of the City, it can significantly enhance its ability to control occupational fraud by leveraging its regular management reporting and analysis function.

Keywords

Occupational fraud, fraud prevention, fraud detection, management accounting, local government, trend analysis, financial ratios

3.1. Introduction

On 17 April 2012, the Federal Bureau of Investigation (FBI) arrested Rita Crundwell at the offices of the City of Dixon (a small municipal government with an annual budget of less than US$9 million) in Illinois, U.S.A. (Grimm and Jenko, 2012). At the time Dixon's city comptroller and treasurer, Crundwell was charged with misappropriating public funds from the municipal coffers. During the time leading up to a guilty plea in 2013, it was revealed that she had single-handedly defrauded Dixon of more than US $53 million over a period of two decades (Pope, 2013). The money embezzled was applied to several luxuries that Crundwell could not afford on her city salary. The misappropriated funds each year directly contributed to repeated financial deficits and budget cuts at Dixon (Pope, 2013). The Dixon case is only one in a number of occupational local government fraud cases that have occurred in several countries. However, what makes it stand out is the duration of the fraudulent activity and the amount of money involved. Evidence indicated that Crundwell's behaviour began in 1990 and was only detected in 2012 when she was on leave (Smith *et al*, 2012). The key question that arises is how Crundwell got away with so much for so long without anyone, city executives and statutory auditors included, detecting the fraud.

While the above instance of local government fraud took place in the United States, fraudulent behaviour by employees is a disturbing feature in organisations the world over. Occupational fraud, i.e. fraud committed by employees within an organisation, is rising significantly according to recent reports by both PwC (2012a) and KPMG (2013). In fact, KPMG (2013) found that 75% of all corporate fraud is perpetrated by organisation insiders. Public sector fraud also has not lagged behind private sector fraud. The Association of Certified Fraud Examiners (ACFE) notes that as much as 15% of victim organisations globally were in the public sector (ACFE: 2014). In an Australian context around 46% of government and state-owned enterprises surveyed reported at least one incidence of fraud (PwC, 2012a: 4), of which as much as 33% reported more than 10 incidents in the same period. In terms of monetary losses, 50% of those defrauded had lost at least US$ 100,000 with as many as 20% losing over US$ 5 million.

In its recent *Report to the Nations on Occupational Fraud and Abuse*, the ACFE (2014) found that the average organisation loses around 5% of revenues to fraud. In identifying fraud, the single largest source of fraud detection (over 42%) being through tips received, predominantly from employees, with a further 16% discovered through management reviews (ACFE, 2014). The internal audit function surprisingly uncovered only 14% of frauds with external audit uncovering just 3% (ACFE, 2014). Furthermore, the ACFE (2014) also indicated that as much as 50% of all frauds could have been prevented by the diligent application of adequate internal controls and better management reviews. Concurring with this, both Kramer (2009) and Sinnett (2009) independently confirm that internal controls are fundamental to fraud prevention. Several sources, including Boulter *et al* (2013) and Lovik *et al* (2007), have also concluded that corporate culture is a key influencer of occupational fraudulent behaviour and that management sets the tone for the culture of an organisation (Murphy, 2011; Kroll, 2012). In support hereof, KPMG (2013) and Gabor and Alger (2012) found that visible commitment to integrity and ethics by senior management is the primary driver of a robust anti-fraud culture in an organisation.

While fraud in any organisation is debilitating, public sector fraud has a particularly severe impact (Gee *et al*, 2011). Local government is an important tier of government, often more so than other levels because of its close interface with the community. For this reason, fraud by a municipal employee has a potentially much greater impact on the local community than if it occurred in a federal or state government level. To this effect the Commonwealth of Australia, as well as various other State governments and agencies, have recognised the risk of fraud in local government, whether as a distinct sphere of government (ICAC, 2002; Vic A-G, 2012; LGASA, 2007; TAO, 2013) or as a part of the public sector *per se* (ANAO, 2011). Occupational fraud in a local government context is not significantly different in character from that occurring in other corporate or organisational environments.

In 2013, the Western Australian Auditor General conducted audits of major WA public sector agencies to assess fraud control mechanisms. The report arising from this audit disclosed a number of concerning findings. Seven out of nine agencies have experienced fraud or corruption in the recent past (AGWA, 2013). Despite this, almost none actively considered the risk of fraud and corruption as part of their risk-management framework and none had, at the time, any cohesive plan to prevent or detect fraud and corruption. The report also highlighted the alarming trend of rising fraud in the WA public sector (AGWA, 2013:4) and noted that an effective fraud control regime is essential to minimise its occurrence and impact (AGWA, 2013: 13). These findings come on the heels of earlier studies conducted into fraud and corruption in public sector organisations in Australia that note a rising trend in public sector occupational fraud, coupled with a persistent failure by organisations to employ effective fraud management tools (PwC, 2008). A paper presented at the Australian Public Sector Anti-Corruption Conference (Withnall, 2011) pointed out that the structure of local government in WA enhances the risk of misconduct by officers and makes it more difficult to improve accountability.

The City of Joondalup, as one of the largest and most prominent of Perth's metropolitan local governments, controls assets worth over A$1 billion along with a total annual capital and operating budget of approximately A$190 million (COJ, 2014a) on behalf of a 168,000-strong community. As the steward of these public resources, there is no question that a Dixon-like scenario might have immeasurably severe repercussions for the City and its ability to deliver services to the community.

3.2. Research problem and method

In consideration of the above, it is evident that fraud is a reality of contemporary society, including the public sector, which has a vulnerable and broad stakeholder group in the form of the society it serves. In the context of the City of Joondalup therefore, the questions that need to be answered are therefore: i) whether management accounting can provide city management with the necessary data to enable effective control over occupational fraud and ii) whether fraud control activities or information analysis specifically directed towards fraud control, can be a regular feature of the management accounting function.

To meet this objective, a structured research approach is required. Without undertaking an overly detailed analysis of fraud risks specific to the City of Joondalup, it is firstly necessary to identify the potential role of management accounting in the context of the fraud control and –management, and secondly the identification of broader managerial accounting-based tools and techniques necessary to support a fraud prevention strategy within the context of the city. In meeting these objectives a qualitative and descriptive research methodology is utilized. Based on publicly available data specific to the City of Joondalup an assessment is made of such management accounting tools, techniques and principles as are applicable to the processing of such information. The remainder of the paper is set out as follows: firstly the possible role of management accounting in fraud prevention is considered, which is then secondly followed by an evaluation of current fraud control aspects at the City of Joondalup as disclosed by the city, including more specific best practice strategies and clear management accounting tools and techniques that can be recommended. This is then finally followed by some concluding discussions and comments.

3.3. The role of management accounting in fraud prevention

3.3.1. Introduction

Even though organisations vary greatly, be it in purpose, structure or organisational characteristics, there are certain fundamental principles in fraud prevention and detection that apply regardless, particularly when it comes to occupational fraud. The ACFE's 2014 *Report to the Nations on Occupational Fraud and Abuse* found that fraud is pervasive across national and organisational boundaries. In other words, it can happen anywhere and anytime, regardless of the type of organisation. It also found that the vast majority of fraudsters are first-time offenders, meaning that attempting to predict future actions by reference to past employee behaviour yields very little benefit. Furthermore, the ACFE notes that most organisations fail to put effective fraud control measures in place that significantly reduce the risk of fraud (ACFE, 2014).

According to the Australian National Audit Office (ANAO), organisational governance is the key to a proper fraud control strategy (ANAO, 2011: 12). Governance that is not driven by ethical senior management will be incapable of inculcating in an organisation the anti-fraud culture vital to effective fraud management (ICAC, 2002; CGMA, 2012). Fraud control can therefore be considered as an essential aspect of organisational risk management and places the responsibility for robust fraud control on the leadership of the organization. It is evident that fraud control is considered a fundamental part of organisation strategy – which is the core responsibility of management.

3.3.2. Management accounting perspectives

The US-based Institute of Management Accountants (IMA) emphasises that design and execution of organisational strategy is a fundamental professional attribute of a management accountant, and the profession's position is essentially one of partnership with management through the provision of financial reporting and control expertise (IMA, 2008). The era of the management accountant as a mere preparer of reports appears to have been overtaken by the management accountant as a key role player in organisational strategy and decision making (Forsaith *et al*, 2004: 19; Clinton and White, 2012: 43). Some of the most important management accounting developments of the past twenty years, such as Activity-based Costing and the Balanced Scorecard, are rooted in the profession's engagement with strategy development and decision making processes in the contemporary organisation, rather than simply extracting and reformatting organisational data (Talha *et al*, 2010: 94). This emphasize the vital need for management accounting to be proactively involved in addressing real business difficulties that demand strategic solutions (Johnson & Kaplan, 1987). A robust and high-performing management accounting function has a correspondingly positive impact on organisational performance (Nevries *et al*, 2010: 21). Notably, management accounting as such is primarily a function in the organisation, rather than a departmental/divisional appellation. Traditionally, management accounting has been identified as part of an organisation's finance and accounting function. However, Forsaith *et al* (2004: 19) and Clinton and White (2012: 43), among others, have found that management accounting has been evolving away from the perceived *backward looking* accounting function to that of a more strategic partner in an organisation. The hierarchical *position* of management accounting in the organisational structure is, therefore, not the critical factor, but rather its *function and purpose* in the organisation.

The involvement of the management accountant in organisational strategy formulation and execution should logically, therefore, include fraud control wherever this is driven as a strategic imperative.

3.3.3. Fraud control and the management accountant

One of the fundamental aspects of fraud prevention and detection in an organisation is the requirement that management must continually pay close attention to effective management basics (Turpen and Messina, 1997:37). Very simply, organisational management should have strategies and measures in place that allow for critical, accurate and relevant information to be regularly and prominently available to ensure pragmatic actions to reduce the risk and incidence of fraud. With the increasing trend of occupational fraud (KPMG, 2013), it has never been so important for management to get this right.

As alluded to before, fraud control is considered an essential aspect of organisational risk management. The Chartered Institute of Management Accountants (CIMA) considers a proper fraud control strategy to incorporate the four aspects of prevention, detection, deterrence and response (CIMA, 2009: 25). None of these can be effectively executed without sufficient and proper data analysis and adequate consideration of fraud as part of an overall risk management framework. The comprehensive understanding of an organisation's structure, operational environment and financial activity that management accountants possess (Charron and Lowe, 2008: 10) is an asset that can be leveraged to maximum benefit. CIMA and the American Institute of Certified Public Accountants (AICPA) agree that management accountants have the critical expertise and knowledge essential to be key participants in effective fraud risk management (CGMA, 2012).

As indicated above, an efficient management accounting function is the key to a structured and well-ordered system of financial information flow and analysis that enables the organisation to take appropriate and timely decisions. This could not be truer where fraud control is concerned. Organisations cannot be effective at preventing or detecting fraud without the right information that is accurately analysed and interpreted. There is a pivotal role here for the management accountant to enhance an organisation's capacity to fight fraud.

3.4. Fraud Control at the City of Joondalup

3.4.1. Introduction

With an estimated population of 168,000, the City of Joondalup is one of WA's largest and fastest developing local government areas. Considering its significant annual budget and asset base, the nature and diversity of its operations and the findings of the ACFE's 2014 study, it would be naïve to presume that the City has no risk of occupational fraud. Apart from the elected Council, which is the ultimate decision-making body, the City is led by a CEO supported by 4 Directors, and comprises several functional streams (COJ, 2014b). The City, as a local government, covers a wide spectrum of activities, including library services, engineering and parks maintenance, waste management and community safety. A structure incorporating such diverse functions requires robust fraud control measures to minimise the risk and incidence of fraud.

The Corruption and Crime Commission (CCC) in Western Australia (WA) governs misconduct by public officers in all tiers of government in the state, including local government. A number of investigations in recent years have drawn attention to the vulnerability of local governments to fraudulent employee behaviour, exemplified by a 16-month jail sentence handed down to the former CEO of a WA local government for fraudulent corporate credit card use (CCC, 2013). Such instances of occupational fraud in local governments in recent years have highlighted the seriousness of fraud here. Local governments in WA are governed by the Local Government Act, 1995 (LGA) and the corresponding regulations. Neither the Act nor the regulations explicitly address fraud or fraud control. However, the LGA contains provisions dealing with misapplication of funds and property (Part 8, Division 4) which, on examination, essentially describe fraudulent activities by employees and prescribe certain actions to be taken by the local government on discovery of such activity. Virtually no preventive or detective measures are, however, prescribed or recommended. According to the ACFE, the most effective way to minimise fraud is to prevent it happening in the first place (ACFE, 2014: 76). With this as the primary objective, the ACFE (2014:76-77) recommends a fraud management approach that includes the following key elements:

- A management climate of honesty and integrity;
- Proactive fraud risk assessments to identify and minimise vulnerabilities;
- Anti-fraud controls properly implemented and functioning effectively;
- Ongoing anti-fraud training provided to all employees;
- Effective fraud reporting mechanism implemented; and
- Active measures against fraudulent behaviour visible to employees as a deterrent.

While not exhaustive, these components are basically the same recommended by the ICAC (2002: 11) for fraud management in state and local governments in NSW. CGMA (2012: 8) suggests a holistic and encompassing fraud risk management strategy as illustrated below:

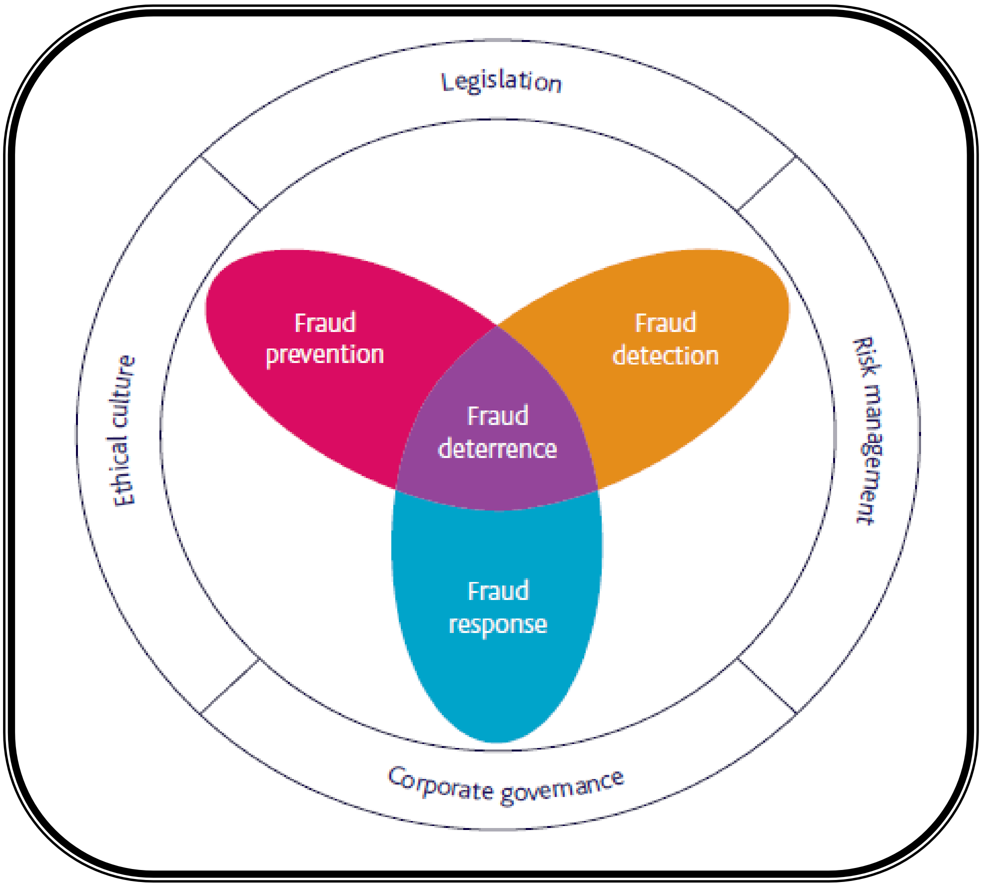

Figure 1: Anti-fraud Strategy (CGMA, 2012)

As can be seen in figure 1, CIMA identifies the four strategies, i.e. i) fraud prevention, ii) fraud detection, iii) fraud response, and iv) fraud deterrence as overlapping strategies. These four strategies don't stand separately, but are integrally part of a holistic approach, and may be considered management accounting best practice for fraud prevention. Similarly to the above CIMA framework, PwC (2008: 1) also depicts the fraud control system as an intersection of the various components.

Figure 2: Fraud control system (PwC, 2008)

In PwC's perception of fraud control as per figure 2, the *control* of fraud culminates in a holistic approach that includes i) risk assessment, ii) prevention, iii) detection and iv) investigation. The City of Joondalup's fraud risk management strategy ideally should have the above indicated critical strategies adequately addressed. Even though the current risk management policy and governance framework, available on the City's website, refer to overall risks, it does not explicitly address fraud, and the City's publications do not give clear indication of a dedicated fraud management plan. This is however, not necessarily an indication that fraud risk is not considered at the City, particularly since the Australian National Audit Office strongly urges that fraud risk should be considered by organisations within their wider risk contexts (ANAO, 2011). It is acknowledged that the actual format of fraud risk management plans is not uniform across organisations and industries. Nevertheless, it is recommended that senior management's commitment to fraud risk management should be explicitly communicated. This is especially important when it comes to employee awareness, which is a key component of an effective anti-fraud strategy and then especially for occupational fraud deterrent purposes.

The City's management accounting function falls within the Financial Services business unit (COJ, 2014a), in line with the traditionally financial nature of the function. Management accounting's potential input into each aspect of a best-practice fraud management strategy is considered in Table 1 below. The table high-lights specific elements, strategies, necessary actions and key outputs that is required. For each of these elements, an indication of the respective responsibilities and inputs are also provided.

BEST PRACTICE – FRAUD MANAGEMENT STRATEGY				
Element of Plan	**Fraud strategy aspect**	**Necessary actions**	**Key Outputs required**	**Input from/Managed by**
"Tone at the top"	Prevention, Deterrence	Establish ethical behaviour as a culture in the organisation	Senior management lead by example Communication to employees	Executive Management

Proactive fraud risk assessments	Prevention	Conduct regular assessments at reasonable intervals	Assessment reports to senior management	Management Accounting/Executive and Risk Services
Anti-fraud controls	Prevention, Detection	Design, implement and monitor controls, including key measures	System of anti-fraud controls accompanied by clear measures and reporting thereon	Management Accounting/Executive and Risk Services
Employee anti-fraud training	Prevention, Deterrence	Regular dissemination of fraud awareness and training to employees	Employee attendance at training events and indication of awareness	Human Resources/Executive and Risk Services
Fraud Reporting mechanism	Detection	Institute channels for fraud reporting to occur	Reports of fraudulent activity	Executive and Risk Services/Human Resources
Visible action against detected fraud	Response, Deterrence	Decisive, prompt, visible and deterrent action	Clear, transparent communication of action taken	Executive Management/Human Resources

Table 1: Best practices: Fraud management strategy (Source: Own research)

Bearing in mind that a distinct *strategic and organisational development* function exists, it would appear that the City presently construes a role for management accounting more aligned to the classical finance function. The contribution of management accounting to fraud control at the City, in this context, is therefore likely to be best made within the traditional context, namely financial analysis and reporting to management.

3.4.2. Proactive fraud risk assessment

A risk assessment is simply a tool that facilitates continuous improvement in an organisation. In this respect, fraud risk assessments consider the organisation's vulnerability to fraud with the relevant information and understanding to effectively manage this risk. The City of Joondalup's risk management policy clearly mandates analysis, evaluation and mitigation of all risks facing the organisation (COJ, 2013:2). Fraud risk is not a separate discrete risk in itself, but one that is rather intrinsically connected to other organisational risks (ANAO, 2011). The City's consideration of fraud risks, within its wider risk assessment processes, would inform any fraud management plan. The whole concept of fraud risk assessments are also in keeping with the principle of continuous management attention to basics, referred to earlier, and should not be treated simply as a checklist exercise.

This, of course, means that City management needs to consider all relevant organisational data and analysis, particularly of a financial nature, in order to be proactive in their fraud assessment practices. In support hereof, the management accounting function not only has access to the full extent of the financial information, but also other significant operational information across the entire organisation, along with the technical capacity and capability to analyse this data. Management accounting can therefore report on key activity measures of various operational aspects of the City that could be possible indicators of fraud, and assist in tailoring the assessment to consider all relevant fraud risks that might arise out of the functional structure and operational activities of the City.

3.4.3. Anti-fraud controls

The purpose of a fraud control plan is to mitigate risks identified in a fraud risk assessment. The essence of a fraud control plan is therefore the controls that are put in place to minimise these risks (ANAO, 2011). The controls are designed as preventive measures, in line with the principle that fraud prevention is preferable to fraud detection. The specific nature of fraud controls that are put in place depends almost entirely on the weaknesses highlighted through the fraud risk assessment process, subject to the operational structure of the organisation and the tools available to capture, record and measure data.

Anti-fraud controls at the City typically form part of the overall structure of internal controls (COJ, 2014c). The quality of anti-fraud controls depends on the regular monitoring and reporting of relevant control indicators, which reveal measures of activity that provide insight into the performance of a particular control. Depending on the tolerance level that the organisation has for a particular indicator, this information would allow management to identify control lapses and, progressively gauge whether an inherent control weakness exists, which needs addressing. The reporting of such indicators that measure the effectiveness of anti-fraud controls are easily incorporated into regular management reports, with management accounting performing further analysis of the underlying data to measure these and include them in regular reporting. The analysis from anti-fraud control reporting should also feedback not only into the design and structure of the controls themselves, but also into the structure of subsequent fraud risk assessments as the data is considered in the risk evaluation process.

3.4.4. Management accounting contributions

Effective management of fraud involves both minimising the possibility of fraud incidents and maximising the probability of early detection of such incidents. As mentioned earlier, minimising the risk of fraud occurrences requires robust systems and controls that will act as a filter to prevent most fraud from starting at all. Establishing these control mechanisms requires a clear understanding of the City's activities and the vulnerabilities that require controls to mitigate.

At the City of Joondalup, the management accounting function has the primary responsibility for budgeting and financial reporting in the organisation. This provides for an extensive understanding of the City's varied operations, giving insight into the different systems in place and the risks associated with these activities. Management accounting, while not directly responsible for risk management at the City, can nevertheless provide significant input into the process of identifying fraud risks and strategies to minimise them. Charron and Lowe (2008, 10) agree that management accounting generally possesses a level of knowledge of activities in an organisation that transcends that of the audit and other functions.

Continuous monitoring of relevant data and analysis of the information generated is critical to fraud prevention strategies (ICAC, 2002: 14). The identification of key fraud indicators and regular reporting of these to detect anomalous activity is therefore central to the strength or weakness of a fraud control strategy. Fraud indicators, correctly defined and measured, can be applied to both detection of existing fraud and prediction of future fraud. This is really where the importance of the management accounting function to fraud control at the City lies. Table 2 (below) considers a number of fraud risks and relevant controls, along with key indicators that can be measured and reported on regularly.

KEY INDICATORS FOR FRAUD REPORTING				
Risk area	**Indicator**	**Activity**	**Suggested tolerance level**	**Organisational impact**
Procurement	Number of purchases without purchase orders	Purchasing	<10% of total $ value of purchases	
Procurement	Number of purchase orders raised after supplier invoice date	Purchasing	<1% of purchase orders	
Procurement	Number of purchase orders below quotation threshold	Purchasing	<20% of total value of purchase orders, subject to pattern identification and trend analysis	Possible active avoidance of purchasing protocols
Procurement	Number of purchase requisitions approved by an employee	Purchasing	To be determined after analysis of patterns and trends	
Procurement	Number of purchase requisitions raised and approved by the same employee in excess of purchase authority levels	Purchasing	Zero	System control weakness.
Payables	Number of supplier invoices authorised for payment by purchase requisition approver/requestor	Purchasing	Zero	
Payables	Number of payments to suppliers without an invoice	Purchasing	Zero	Misappropriation of funds
Payables	Number of supplier payments raised and approved by the same person	Payments	Zero	System control weakness
Payables	Number of creditors unpaid for 90 days or more		Zero, except for specific exceptions directed by CEO	Misappropriation of funds

KEY INDICATORS FOR FRAUD REPORTING				
Risk area	**Indicator**	**Activity**	**Suggested tolerance level**	**Organisational impact**
Payables	Number of employee names corresponding to suppliers	Purchasing	<5%, to accommodate similar names and relatives	
Payables	Number of employee bank details corresponding to supplier bank details		Zero	
Payables	Number of one-off suppliers	Purchasing	<1%. Trends to be closely monitored	
Payables	Number of supplier credit notes recorded in the last 30 days	Purchasing	<10% of total invoices processed.	Error or fraud
Payables	Frequency of single-use suppliers in the past 24 months	Purchasing	<1%. Trends to be closely monitored	
Payables/Receivables	Supplier details matching non-rates debtor details	Payments	<10%. Trends to be closely monitored	
Receivables	Number and $ value of debtors (rates/other) outstanding for 90 days or more		<10%. (Exclude state and commonwealth government agencies)	
Receivables	Number of debtor debit notes raised in the last 30 days		<1%. Trends to be monitored.	
Cash Management	Number and $ value of monthly payments to suppliers over 12 months		Pattern to be consistent with yearly trend	
Cash Management	Number and $ value of monthly collections from rates debtors over 12 months		Pattern to be consistent with yearly trend	
Cash Management	Number and $ value of cash and		Observe pattern proportional to	

KEY INDICATORS FOR FRAUD REPORTING				
Risk area	**Indicator**	**Activity**	**Suggested tolerance level**	**Organisational impact**
	cheque receipts in the last 30 days		total number and value of receipts and compare to trend	
Cash Management	Number and $ value of cash and cheque payments in the last 30 days		Observe pattern proportional to total number and value of receipts and compare to trend	
Revenue	Number of rateable properties without issued rate notices for the year		Zero	
Revenue	Number of eligible properties without issued waste collection charges for the year		Zero	
General Financial	Number of journal entries posted during the month		To be determined, based on expected month-end activity, etc.	
General Financial	Number of journals raised and approved by the same person in the last month		Zero	Lack of separation of duties
General Financial	Number of journals entries posted without supporting documents		Zero	Control weakness

Table 2: Key indicators for fraud reporting (Source: Own research)

The most significant fraud risks in any organisation tend to occur predominantly within the procurement and payments areas (PwC, 2008:24), which would be no different for a local government like the City of Joondalup, as evidenced by the Dixon case. There are a number of other risks that would be similarly significant in the City's context, which are also considered. These risks (per table 2) are primarily classified into procurement, payables, receivables, cash management, revenues and general financial categories. Table B also suggests key indicators that could be set as benchmark control measures to gauge potential instances of fraud. These indicators however, may not by themselves be clear signs of the presence or absence of fraud, but must be considered in conjunction with other controls, such as fraud reporting and data analytics. Fraud measures must be designed in the context of the particular organisation and industry. In addition, there are several indicators that can be included in reports that may not correspond directly to a particular risk or control but may provide indirect substantiation of untoward activity elsewhere. It is important, therefore, to consider indicators collectively when analysing the information obtained. The table therefore high-lights only some of the more prominent indicators that the City of Joondalup could identify, analyse and report on a regular basis. Tolerance levels should be carefully considered and set and all deviations investigated. Adverse measures are not always indicative of fraud but they highlight possible deficiencies that the organisation needs to address.

3.5. Summary and Conclusion

At the City of Joondalup, the primary role of management accounting presently is the traditional one. While including a wide range of fraud control aspects in management accounting outputs has been considered across various industries internationally; within the local government sector in Western Australia, this does not appear to have had much traction. Government authorities and investigative agencies also appear to limit the fraud control measurement and reporting to traditional disciplines. The fact remains, however, that proper information and related analysis provided to organisation management on a regular basis is imperative for success in all respects, but especially for fraud control. This paper has looked at the various aspects of management accounting and how these activities contribute to fraud control. There is really no question that the capacities of management accounting functions appear to be significantly under-utilised by organisations across Australia, including local government, when it comes to fraud prevention and detection.

Occupational fraud is on the rise. It is the conclusion of this paper that the City of Joondalup would greatly benefit by leveraging its management accounting function into its overall fraud management strategy to maximise its ability to minimise occupational fraud.

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CHAPTER 4: SUMMARY AND CONCLUSIONS

4.1. Background

The previous chapter considered the potential role of management accounting in fraud prevention and detection against the backdrop of a major Australian local government namely the City of Joondalup. The chapter concluded it would seem that within the local government sector in Western Australia, management accounting principles are not widely employed in the fight against fraud and that government authorities appear to limit the fraud control measurement and reporting to traditional disciplines. This chapter summarises the key points of the research undertaken in this paper. This was aimed at considering the inclusion of occupational fraud prevention and detection activities within the management accounting function at the City of Joondalup.

As was noted in section 1.7, the paper considered two key research questions namely whether i) the management accounting function at the City of Joondalup incorporate fraud control tools, techniques and practices into its regulatory functions of budgetary control, analysis and management reporting, and ii) how can the management accounting function contribute to a dedicated system of fraud prevention and detection at the City of Joondalup? Based hereon, the research objectives, as highlighted in section 1.8, centred on the exploration of the specific role for management accounting in developing and implementing a fraud control programme at the City of Joondalup, and to suggest tools and techniques that may be adopted by management accounting to strengthen fraud control systems. As such, the study looked at the concept of occupational fraud – or fraud perpetrated by employees - and found that it is pervasive across national and industrial boundaries. Data examined from numerous sources has shown that fraud can occur and persist in any organisation unless effective measures are taken. The debilitating cost of fraud on organisations is also well documented. There is consensus across different sources that the key to successfully countering fraud in organisations is to prevent fraud before it occurs and, if it does, to detect and deal with it as quickly as possible.

Organisations thrive on strategic decisions made on the basis of sound and relevant information that enables them to succeed. The study examined the management accounting profession and its relevance to strategic decision making in organisations. Fraud prevention and detection is just as much a strategic initiative as any other and successful control of fraud depends on its treatment as a strategy to be driven from the topmost echelons of organisations.

Public sector fraud was examined and noted as having even more impact on the community than its counterpart in the private sector. Research uncovered the fact that public sector fraud in Australia is higher than the global average and found that various Australian Federal and State jurisdictions have enacted various pieces of legislation to combat fraud within public sector organisations. In particular, fraud within local government was recognised as particularly significant due to the nature of its interaction within the community.

Juxtaposing the importance of management accounting’s role in organisations next to the critical need for fraud control leads logically to the examination of the interface between the two, which forms the major part of the research study with the context of the City of Joondalup as a local government in Western Australia.

4.2. Research Summary

4.2.1. Overview

Multiple studies have demonstrated the necessity for management of organisations in all kinds of industries to have regular access to relevant information and analyses in order to make successful strategic decisions. This is the case in any industry, whether in the public or private sectors. In most organisations, the provision of such information is executed by the management accounting function. The role of management accounting in the analysis and presentation of information to management is well researched and considered critical in a wide spectrum of literature.

Research on fraud control, on the other hand, also emphasises the need for critical information that can identify and prevent fraud. Literature extensively documents the need for fraud control to be driven by management as an organisational strategy. From a decision making perspective, this is no different to any other strategic initiative.

Given the significance of the City of Joondalup as a local government in the community of Western Australia, the primary objective of this study (Section 1.3: Research Objectives) considered whether the management accounting function could incorporate fraud control activities in its role within the organisation. From this derived other objectives (Section 1.3: Research Objectives) of examining management accounting's role within the City of Joondalup and consider the possible techniques and tools that could be employed by the function in fraud control.

4.2.2. Chapter synopsis

In chapter one, the groundwork for the study was laid by considering the incidence and cost of fraud across several industries and countries, as well as the necessity for fraud control within organisations. The prevalence of fraud in the public sector was particularly noted, with a focus on Australia and the local government sector in Western Australia. The critical role of management accounting in providing key information for decision making was considered and affirmed. The relative paucity of material regarding the interface between management accounting and fraud control was noted. This allowed the articulation of the research question; to examine the feasibility and possibility of fraud control activities being incorporated in management accounting within the City of Joondalup's local government context.

Chapter two comprised a review of relevant literature on management accounting, fraud control and the interaction between the two. In particular, studies examining the inclusion of fraud control as part of the management accounting role within organisations received particular focus. An examination of the origins and history of management accounting and its distinction from financial accounting proceeded to the articulation of management accounting's current role and function within organisations. This was followed by a detailed consideration of fraud and its primary drivers, followed by an evaluation of fraud control and, in particular, fraud control within a public sector and local government environment, culminating in a review of the interaction of management accounting with fraud control activities.

Chapter three comprised the empirical analysis of management accounting at the City of Joondalup and its capacity to incorporate fraud control within its functional ambit. In seeking to address the primary research objective, the study found unequivocally that fraud control can and should form an integral aspect of the management accounting function at the City. Consideration of the specifics of this integration led addressing the secondary objectives, including the extent of fraud control activities capable of inclusion in management accounting's regular responsibilities.

4.2.3. Conclusion

In the final analysis, the key to successful fraud control is prevention and early detection, to which information analysed and acted on quickly is fundamental. Management accounting can include a variety of fraud control aspects, particularly reporting on key fraud indicators. Evaluating management accounting at the City of Joondalup, however, reveals that the extent of this integration depends on the structure of the organisation and the exact role it envisages for the function.

The study revealed that the City of Joondalup likely envisages management accounting primarily fulfilling a reporting and analysis role in the organisation, rather than a more overtly strategic function. In addition, the City's organisational structure reveals the existence of dedicated Strategic and Organisational Development and Executive and Risk Services business units. Clearly, a core strategic role for the management accounting function does not appear to be evident. However, reporting to management has always been a core management accounting function in any organisation, and there is no question of the City's position in this regard concerning management accounting.

The primary role that management accounting can play in fraud control at the City, therefore, is in its core function as the provider of relevant information reporting and analyses to management with some secondary involvement in the fraud control planning aspects.

4.3. Research restrictions

The results of this study are specifically considered within a local government context, although the application of the principles formulated herein can be adapted to any organisation in any industry. In addition, the research specifically limited its focus to a Western Australian context, with legislation that differs from other Australian jurisdictions, not to mention other countries or industries.

4.4. Further research

There has hitherto been limited consideration of management accounting's involvement in fraud control, particularly in a public sector context, in both management accounting and fraud control literature. This study can be expanded to other government environments and into private sector organisations, specifically examining this question. In addition, further enquiry is warranted into the extent to which management accounting's strategic role is actually being leveraged, not just in fraud control, but in the overall context of organisational management.

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ANNEXURE A: INSTRUCTIONS TO AUTHORS

1. Papers must be written in **English**. Submit a paper to the editor by e-mail: alex_kostyuk@virtusinterpress.org or to the secretary of the board. The paper must be submitted in a form of **MS word file**. The secretary of the Editorial board sees to making the submitted papers meet the style requirements.
2. Upon acceptance of a paper, authors will be asked to grant the copyright of the article to the publisher so we will have a possibility to publish the paper. However upon request we allow authors to upload their papers to various repositories, use them in the educational process, in their research etc.
3. The cover page of manuscript should contain
    - Title
    - Name(s) and institutional affiliation(s) of the author(s)
    - Name, address, phone and fax numbers, and e-mail address of the corresponding author
    - Abstract of not more than 120 words on the first page after the title and the name of the author
4. The paper should be divided into separate parts. Each part should have a short and clearly defined heading, which should be numbered. Usually a paper includes the following headings:
    - Introduction
    - Literature review
    - Methodology
    - Results
    - Conclusion
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5. Notes or Endnotes should be used only if absolutely necessary and must be identified in the text by consecutive numbers, enclosed in square brackets and listed at the end of the article.
6. Figures should be of clear quality, in black and white and numbered consecutively with Arabic numerals.

7. Tables should be typed and included as part of the manuscript. There should be a possibility to edit the tables.
8. References to other publications must be in Harvard style and carefully checked for completeness, accuracy and consistency. This is very important in an electronic environment because it enables your readers to exploit the Reference Linking facility on the database and link back to the works you have cited through CrossRef. You should include all author names and initials and give any journal title in full. You should cite publications in the text: using the first author's last name (Adams, 2006), or both names for works by two authors (Adams and Brown, 2006), or the first author's last name followed by "et al. "for works by multiple authors (Adams et al., 2006).
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   - For journals: surname, initials, (year), "title of article", journal name, volume, number, pages, e.g. Capizzi, M.T. and Ferguson, R. (2005), "Loyalty trends for the twenty-first century", Journal of Consumer Marketing, Vol. 22 No. 2, pp. 72-80.
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