

**University of KwaZulu-Natal**

**The role of fraud awareness in promoting anti-fraud culture to prevent occupational fraud within a professional services department at a higher education institution**

**Priya Singh**

**Student Number: 9801806**

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**Graduate School of Business and Leadership  
College of Law and Management Studies**

**Supervisor: Dr S Suknunan**

**Co-supervisor: Dr TN Mtetwa**

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## Declaration

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## **Abstract**

Occupational fraud remains an increasing global concern across various sectors. The higher education sector is no exception. However, the focus of academic literature has been more on academic related fraud, such as dishonesty and cheating during examinations or research-related fraud. Hence, there has been limited focus on occupational fraud from a support or administrative sector at universities despite instances of occupational fraud being widely reported on in the media. This study contributed to addressing this gap by determining the role of fraud awareness in promoting anti-fraud culture to prevent occupational fraud within an administrative department at a South African university. This descriptive study was undertaken in the context of the Student Academic Administration department, a professional services department at the University of KwaZulu-Natal. The objectives were to establish existing occupational fraud risks, determine the level of employee awareness relating to existing occupational fraud risks, find ways of promoting fraud awareness to prevent occupational fraud and to determine how increased fraud awareness can play a role in preventing occupational fraud and build an anti-fraud culture with the department. The study drew on two applicable theoretical constructs being the fraud triangle theory (1953) and organisational culture model (1985). A census approach was used whereby all 29 employees within the department were selected as the target census population. A quantitative approach was adopted and a questionnaire was distributed to the targeted census population. Data analysis included reliability analysis and descriptive statistics. The study confirmed the existence of potential occupational fraud risks within the department. The most common being bribery of staff. Findings also confirmed the value of increased fraud awareness in promoting an anti-fraud culture and preventing occupational fraud. Moreover, this study provides support for the application of both theories in preventing occupational fraud and promoting an anti-fraud culture. The study concluded by putting forth recommendations to benefit the department through measures to increase fraud awareness, encourage employee involvement in fraud prevention and promote an anti-fraud culture. In addition, directions for further related studies are provided.

**Key Words:** Fraud, anti-fraud, culture, awareness, higher education, employee, occupational fraud prevention.

## TABLE OF CONTENTS

Title	i
Declaration.....	ii
Acknowledgements .....	iii
Abstract.....	iv
CHAPTER ONE.....	1
OVERVIEW OF THE STUDY.....	1
1.1 Introduction .....	1
1.2 Defining occupational fraud in the context of the study .....	1
1.3 Motivation for the study .....	2
1.4 Focus of the study.....	2
1.5 The Research Problem.....	3
1.6 Background to the Problem .....	5
1.7 Aim of the Study .....	6
1.8 Objectives of the Study .....	6
1.9 Research Questions .....	7
1.10 Research Methodology .....	7
1.10.1 Research Approach.....	7
1.10.2 Location of the study .....	8
1.10.3 Population and Sampling.....	8
1.10.4 Data Collection.....	8
1.10.5 Data Analysis.....	9
1.11 Models underpinning the study .....	9
1.13 Outline of the Study.....	9
1.14 Summary.....	10
CHAPTER TWO.....	11
LITERATURE REVIEW .....	11
2.1 Introduction .....	11
2.2 Global perspectives on fraud .....	11
2.3 The landscape of occupational fraud and prevention measures in developed countries	14
2.4 Whistle-blowing and organisational culture.....	15
2.5 Fraud prevention measures .....	17
2.6 The Middle East – creating anti-fraud culture.....	19

2.7	ASIA: South Eastern Region – an increasing focus on fraud prevention .....	19
2.8	Key fraud prevention strategies – Indonesian public sector .....	22
2.9	General perspectives and challenges on occupational fraud: BRICS.....	23
2.10	Fraud and corruption in Sub-Saharan Africa.....	25
2.11	South Africa: the reality of fraud and corruption across the private and public sector ..	27
2.12	The effects of fraud on the sustainability of South Africa’s business sector .....	27
2.13	Fraud and corruption - South African public sector .....	28
2.14	Higher Education and fraud.....	30
2.15	South African Higher Education .....	34
2.16	Gaps for further research .....	37
2.17	Theoretical Frameworks .....	38
2.17.1	Fraud Triangle Theory .....	38
2.17.3	Organisational Culture Model.....	40
2.18	Summary.....	43
CHAPTER THREE .....		44
RESEARCH METHODOLOGY .....		44
3.1	Introduction .....	44
3.2	Aim of the study .....	44
3.3	Research paradigm .....	45
3.4	Research design and methods.....	47
3.6	Study population and census approach.....	51
3.7	Construction of the research instrument.....	52
3.8	Data collection.....	53
3.9	Reliability and validity of the study .....	54
3.10	Bias .....	56
3.11	Data analysis.....	57
3.12	Research mapping.....	58
3.13	Ethical considerations.....	59
3.14	Summary.....	60
CHAPTER FOUR .....		61
PRESENTATION OF RESULTS AND DISCUSSION.....		61
4.1	Introduction .....	61
4.2	Recap of Research Questions and Objectives .....	61
4.3	Description of the census.....	62

4.4	Demographic characteristics.....	62
4.4.1	Race .....	62
4.4.2	Demographic profile in terms of gender and age category.....	63
4.4.3	Level of education .....	64
4.4.4	Figure 4.2: Education level.....	64
4.4.5	Period of employment.....	64
4.4.6	Employment status.....	65
4.5	Reliability analysis .....	65
4.6	Descriptive frequency analysis.....	67
4.7	Objective one: To establish the existing occupational fraud risks within the department . .....	67
4.7.1	Main types of occupational fraud risks that may exist in the department .....	67
4.7.2	Prevalence of occupation fraud risk within certain sections in the department .....	70
4.8	Objective two: To determine the level of employee awareness relating to existing occupational fraud risks.....	72
4.8.1	Employee understanding of fraud.....	72
4.8.2	Level of employee awareness to occupational fraud risk probability and management.....	72
4.8.3	Frequency of fraud awareness training and communication .....	74
4.8.4	Level of employee awareness of anti-fraud measures.....	75
4.9	Objective three: To find ways of promoting fraud awareness to prevent occupational fraud within the department.....	78
4.9.1	Initiatives aimed at improving fraud awareness to prevent occupational fraud .....	78
4.10	Objective four: To determine how increased fraud awareness can play a role in preventing occupational fraud and build an anti-fraud culture within the department ..	81
4.10.1	Current strength of Anti-fraud culture at the department.....	81
4.10.2	Current underlying departmental culture in relation to fraud awareness and prevention.....	82
4.10.3	The presence of anti-fraud controls.....	84
4.10.4	Increased fraud awareness can play a role in preventing occupational fraud and building an anti-fraud culture .....	87
4.11	Results in relation to the fraud triangle theory .....	89
4.11.1	Factors that may motivate employees to commit occupational fraud.....	89
4.11.2	Circumstances that may create opportunities for occupational fraud risk .....	91
4.11.3	Rationalisation of why individuals may consider engaging in occupational fraud.....	94
4.12	Application of theoretical frameworks to the study findings .....	97
4.12.1	Application of the fraud triangle framework (1953).....	97

4.12.2	Application of the organisational culture model (1985)	99
4.13	Conclusion	101
CHAPTER FIVE		102
RECOMMENDATIONS AND CONCLUSIONS		102
5.1	Introduction	102
5.2	Problem statement, Research objectives and questions of the study	102
5.2.1	Problem statement overview	102
5.2.2	Research objectives	103
5.2.3	Research questions	103
5.3	Determining if the research questions have been answered	103
5.3.1	Current occupational fraud risks within the department	104
5.3.2	Employee awareness of existing occupational fraud risks so as to support fraud risk management	104
5.3.3	Initiatives to improve fraud awareness to prevent occupational fraud within the department	104
5.3.4	Improving fraud awareness to play a role in preventing occupational fraud and build an anti-fraud culture within the department	105
5.4	Findings in relation to models / frameworks	105
5.5	Did the study fulfil the intended objectives	105
5.5.1	Objective one: Establish the existing occupational fraud risks within the department	105
5.5.2	Objective two: Determine the level of employee awareness relating to existing occupational fraud risks	106
5.5.3	Objective three: Find ways of promoting fraud awareness to prevent occupational fraud within the department.	106
5.5.4	Objective four: Determine how increased fraud awareness can play a role in preventing occupational fraud and build an anti-fraud culture within the department	106
5.6	Recommendations made by this study	106
5.6.1	Increased fraud awareness to prevent occupational fraud	106
5.7	Limitations	109
5.7.1	COVID-19 pandemic	109
5.7.2	Limited time and resources	109
5.7.3	Population and Sampling	110
5.7.4	Individual perceptions at a given point in time	110
5.8	Directions for future researchers	110
5.9	Conclusion	111



APPENDICES .....	117
Appendix 1: Ethical clearance .....	117
Appendix 2: Gatekeepers consent .....	118
Appendix 3: Informed consent letter .....	119
Appendix 4: Questionnaire .....	122
Appendix 5: Turnitin report.....	132

## TABLE OF FIGURES

<b>Figures</b>	<b>Page</b>
Figure 2.1: Fraud triangle	39
Figure 2.2: Levels of organisational culture Schein (1985)	41
Figure 3.1: Four paradigms for organisational analysis	46
Figure 3.2: The research onion	48
Figure 3.3: Construction of research instrument	53
Figure 3.4: Stages that must occur if a question is to be valid and reliable	55
Figure 3.5: Research mapping of the study	58
Figure 4.1: Race composition of respondents	62
Figure 4.2: Education level	64
Figure 4.3: Number of years employed within the department	64
Figure 4.4: Overview of employment status	65
Figure 4.5: Ranking of main occupational fraud risks	68
Figure 4.6: The probability of occupational fraud risk per section within the department	70
Figure 4.7: Level of employee awareness to occupational fraud risk probability and management	73
Figure 4.8: Frequency of anti-fraud communication and training	74
Figure 4.9: Level of employee fraud awareness to support anti-fraud culture	76
Figure 4.10: Occupational fraud prevention strategies	79
Figure 4.11 Current strength of Anti-fraud culture at the department	81
Figure 4.12: Current beliefs of departmental anti-fraud culture	82
Figure 4.13: Current anti-fraud measures in place	85
Figure 4.14: The value of increased fraud awareness and anti-fraud culture	87
Figure 4.15: Motivating factors for committing fraud	90
Figure 4.16: Potential opportunities for individual to commit occupational fraud	92
Figure 4.17: Individual rationalisation of occupational fraud	95
Figure 4.18: Application of Cressey's Fraud Triangle framework (1953) to the study results	98
Figure 4.19: Application of Schein's Model (1985) to the current study results	100

## LIST OF TABLES

<b>Tables</b>	<b>Page</b>
Table 4.1: Gender and age profile	63
Table 4.2: Cronbach alpha reliability scoring	66
Table 4.3: Respondents' understanding of fraud	72

# **CHAPTER ONE**

## **OVERVIEW OF THE STUDY**

### **1.1 Introduction**

Occupational fraud within the higher education sector is a current reality and has been in historical existence. The dynamic and constantly changing macro and micro-environment that higher education institutions operate within to ensure sustainability makes the risk of occupational fraud an increasing reality. This is because of the increasing pressure and opportunity as well as various ethical dilemmas that employees are likely to experience or be presented with during the course of their daily responsibilities. This study therefore examines the issues of fraud and more importantly the role of awareness in preventing occupational fraud and promoting anti-fraud culture. The study was conducted within a Higher Education environment and more especially focused on fraud prevention within a professional services department that fulfils the role of student academic administration. This chapter provides the introduction and overview to the entire study outlining the research problem and background. It also outlines the research questions and objectives followed by the research design and methods employed.

### **1.2 Defining occupational fraud in the context of the study**

Occupational fraud is defined ... “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, 2018,p. 78). Several researchers have adopted the definition provided by the Association of Certified Fraud Examiners (ACFE) which is a global professional organisation, to understand white-collar fraud or fraud perpetrated by employees (Suh,Shim and Button, 2018). The main categories of occupational fraud are financial statement fraud, asset misappropriation and corruption and within each category, there are several types of fraud schemes that maybe perpetrated by employees as a result of their employment within an organisation (Suh et al., 2018). Typical occupational fraud schemes include, amongst others, financial misconduct, misuse of information, human resources misconduct or procurement irregularities (Van der Wal,Graycar and Kelly, 2016).

For the purposes of the current study the definition of occupational fraud as put forth by the ACFE will be used to examine the role of fraud awareness in promoting an anti-fraud culture to prevent occupational fraud within the Student Academic Administration Department (the department) at the University of KwaZulu-Natal (UKZN).

### **1.3 Motivation for the study**

Occupational fraud presents both organisational and societal problems. Behaviours such as theft, misrepresentation, and excessive absenteeism can reduce the effectiveness and efficiency of organisations. Furthermore, such behaviours have far reaching adverse consequences for national and global economies (Harvey, Martinko and Borkowski, 2017). Higher education institutions form the basis of societal growth it thus becomes apparent that occupational fraud within the higher education sector will have a direct negative impact on any society and will not support national or global economic growth. Whilst there has been extensive research into misconduct by students and academic staff, the support sector has received less attention.

Occupational fraud risk management is central to an organisation achieving its objectives. The strategic need for the study is to support the vision of the UKZN to be the Premier University of African Scholarship and with the aim of, amongst others, being the institution of choice for employees and students. Should UKZN fail to ensure a robust fraud risk management strategy, underpinned by occupational fraud risk management and sound culture based on UKZN's REACH<sup>T</sup> values, the credibility and reputation of UKZN and its stakeholders will be adversely impacted and its vision will not be achieved. The UKZN's guiding values are 'Respect, Excellence, Accountability, Client Orientation, Honesty and Trust' and are represented through the acronym REACH<sup>T</sup> which forms the basis of the institutional culture.

### **1.4 Focus of the study**

This study focuses on fraud awareness as a preventative measure towards occupational fraud within a professional services department at UKZN. It further examines how fraud awareness can contribute to building an anti-fraud culture within the department. The department specifically focused on was the Student Academic Administration department due to the

potential for high occupational fraud risk based on the functions, which fall within the responsibility of this department.

### **1.5 The Research Problem**

Globally and nationally, reported instances of occupational fraud have adversely impacted the relevant entities as well as the economy. This includes, amongst many others, the cases of Enron, Siemens, Steinhoff and the current scandal involving Gupta-owned entities and South African public and private entities. As asserted by the ACFE, occupational fraud possibly presents the largest risk to organisations due its extent and prevalence within organisations (ACFE, 2018). Whilst most of these cases related to business and governmental agencies, an awareness and focus on fraud in the educational sector is still evolving.

According to a global study into occupational fraud and abuse, including the Sub-Saharan Africa region, the form of occupational fraud most prevalent within the education sector was ‘corruption’ (ACFE, 2018). Within the education sector, lies the key entities of Higher Education Institutions. Corruption in higher education is an increasing global concern amongst stakeholders such as government, academics, professional/support staff, students, as well as external stakeholders (Chapman and Lindner, 2016). The article further relays that employees within higher education encounter various pressures that result in increased threat to the ethical culture and integrity of such institutions. According to Mohamedbhai (2016), occupational fraud in developed countries occurs due to the commercialisation of higher education and the public private partnership between universities and industry, as industry often fund and control the research undertaken by universities.

However, in developing countries, occupational fraud occurs due to the demand to gain admission to universities and specific programmes and to obtain qualifications once admitted. The pressure to undertake research, publish articles, secure funding, and thereby progress within academia further results in instances of occupational fraud (Mohamedbhai, 2016). It becomes clear from the aforementioned concerns that occupational fraud within the higher educational sector is a serious and global concern, not limited to any specific region or country, with wide ranging consequences for all stakeholders and society as a whole.

Occupational fraud adversely affects the culture within an organisation and reduces employee productivity and morale (Hess and Cottrell, 2016). Both developed and emerging economies are adversely impacted by occupational fraud yet perpetrators of fraud are ahead of detection methods by organisations (Ocansey and Ganu, 2017). Employees have first-hand knowledge of their operational environments and are likely to be well placed to identify, report and prevent occupational fraud risks by being aware of such risks thus highlighting the role of fraud awareness so as to alleviate occupational fraud risks. Research by Peltier-Rivest (2018a) asserts that employees maybe more likely to report theft, human resource or operational issues, rather than reporting instances of fraud and corruption. Moreover, as highlighted by Peltier-Rivest (2018a), there is a need for more training and awareness campaigns about the consequences of not reporting fraud and corruption.

From the literature perused for the period 2015 to 2020, there is limited literature in the South African context relating to the role of employee awareness of occupational fraud as a basis for promoting organisational culture to prevent occupational fraud within the higher education sector. This study attempts to bridge this gap from the angle of employee awareness of occupational fraud risks within a central professional services department that focuses on student academic administration in a large Higher Education Institution setting, that being UKZN. The UKZN's institutional risk profile highlights the reality of fraud risks at the university through its annual reports (UKZN, 2017, UKZN, 2018). The risk of 'Institutional fraud and corruption, including the area of Student Academic Administration' has been noted as one of the top 20 critical risks faced by the university in its 2017 Annual Report. The 2018 Annual Report highlights 'Low Integrity and Ethics' as one of the top ten risks in the institution's risk profile.

Therefore, this study attempts to establish the role of fraud awareness as a proactive means to mitigate fraud at the institution with a focus on the Student Academic Administration department and thereby promoting an anti-fraud culture.

## **1.6 Background to the Problem**

Research studies note that corruption within the education sector is an increasing global concern and provide various reasons for their findings. However, it should be noted that often-international studies do not differentiate between the specific education sector (Chapman and Lindner, 2016). The research study by Chapman and Lindner (2016) focuses specifically on corruption within the higher education sector. Hence, according to Chapman and Lindner (2016), within the university context, decisions made result in important consequences on individuals' lives and the decision-making process occurs across various employee functions. For instance, administrators involved in student admission process or capturing of assessment scores, academics and student services staff, each make decisions that are likely to have significant consequences for students and staff (Chapman and Lindner, 2016). Moreover, these activities are often undertaken with a certain degree of independence, trust and responsibility placed on the employees performing such activities which are related to their job profile, such as lecturers assessing assignments and administrators that capture assessment scores. Due to the extent and nature of activities that occur within a university context there are several opportunities for employee fraud and corruption which then present the opportunity for occupational fraud (Chapman and Lindner, 2016). Corruption within a university context might include extortion, fraud, nepotism, collusion, favouritism, ghost employees, plagiarism or academic misconduct (Liu and Peng, 2015). Research studies reveal that corruption within university admissions is a common practice in, both developed and developing countries (Liu and Peng, 2015, Tierney and Sabharwal, 2017).

Research relating to fraud within a corporate context highlights that in addition to the pressure or incentive, opportunity and rationalisation of fraud by employees there was clear evidence of a lack of fraud awareness which further contributed to fraud (Steinmeier, 2016). According to the ACFE, employee tip-offs were the source of 53% of tip offs within affected organisations (ACFE, 2018). This is of significance as employees have a key role in identifying and preventing fraud risks as well as supporting fraud risk management within an organisation through awareness of fraud risks and institutional culture that supports anti-fraud initiatives. These highlight the significance of fraud awareness measures in mitigating occupational fraud through strong institutional culture.



Research conducted by Van der Wal et al. (2016), within the public sector in Australia, revealed that fraud risk management strategies should include tailored corruption prevention strategies, focused anti-corruption training for all stakeholders and leadership commitment and engagement to create an ethical culture to prevent fraud. Moreover, once-off, untargeted awareness training was unlikely to have long-term value. The article also noted important challenges that require attention when attempting to improve fraud risk management within organisations, such as the implementation of austerity measures that may lead to increased risks, whilst resources allocated to fraud risk management were decreased.

Organisational culture should also support employees at all levels to question anomalies and report instances of fraud (Ocansey and Ganu, 2017). The article also highlights that organisational culture is directly related to managing occupational fraud risks. Fraud risk management strategies should be aligned to advances in technology, and include detection techniques to identify potential anomalies using data analytic techniques (Suh et al., 2018). Increased perception and awareness of detection within the work environment reduces employee perceptions of opportunities to commit fraud (Peltier-Rivest, 2018b).

Based on the afore-mentioned literature, employee fraud awareness should focus on prevention and detection initiatives, which are supported by organisational culture that deters occupational fraud.

## **1.7 Aim of the Study**

This study is aimed at determining the role of fraud awareness within the Student Academic Administration department at a Higher Education Institution (University of KwaZulu-Natal) to promote an anti-fraud culture that supports the prevention of occupational fraud within the department.

## **1.8 Objectives of the Study**

The background and research problem generated the following objectives:

1. To establish the existing occupational fraud risks within the department.

2. To determine the level of employee awareness relating to existing occupational fraud risks.
3. To find ways of promoting fraud awareness to prevent occupational fraud within the department.
4. To determine how increased fraud awareness can play a role in preventing occupational fraud and build an anti-fraud culture within the department.

## **1.9 Research Questions**

The questions answered by the study included:

1. What are the current occupational fraud risks within the department?
2. How aware are employees to the existing occupational fraud risks so as to support fraud risk management?
3. What needs to be done to improve fraud awareness to prevent occupational fraud within the department?
4. How can increased fraud awareness play a role in preventing occupational fraud and build an anti-fraud culture within the department?

## **1.10 Research Methodology**

This section outlines the key aspects of research approach, location of the study, data collection and analysis techniques used.

### **1.10.1 Research Approach**

Due to the descriptive nature of the study, a quantitative approach was adopted and entailed developing and distributing a quantitative questionnaire to the targeted census population.

### **1.10.2 Location of the study**

This study was based at UKZN and the research focused on the Student Academic Administration department, which is a central professional services department within the Registrars Division at UKZN.

The department was selected due to the potential for high occupational fraud risk based on the following functions, which falls within the responsibility of this department.

- Administration of student applications prior to College involvement,
- The control of examination questionnaires,
- Generating and storage of degree certificates,
- Issuing student academic transcripts, and
- Maintaining student records.

### **1.10.3 Population and Sampling**

The study followed a census approach whereby an entire ‘population’ of respondents were targeted within a specific space and timeframe. All employees within the department were selected as the target census population. During the data collection phase, the department had 20 permanent and nine temporary employees in office (Total = 29). Hence, it was manageable for data to be collected from the entire population (census approach as mentioned above). Selecting the entire population to form part of the current research assisted in ensuring meaningful arguments and conclusions were drawn from the population.

### **1.10.4 Data Collection**

Data collection was done using an online questionnaire that was distributed via the university notice system and directed to the department only. This was done whilst taking physical social distancing into account due to the COVID-19 virus that was in occurrence during this time.

### **1.10.5 Data Analysis**

Data analysis involved reliability analysis and descriptive statistics. This was primarily due to the nature of the study being descriptive, which was targeted to a key department but with a relatively small population of staff. The response rate of this entire population was approximately 52%.

### **1.11 Models underpinning the study**

The fraud triangle theory (1953), together with the organisational culture theory as put forth by Edgar Schein (Schein) (1985), were used to form the theoretical framework for the study. These therefore underpinned the study and were applied via the instrument whereby questions were built around the constructs of the models.

### **1.13 Outline of the Study**

- Chapter 1 – Chapter 1 provides an introduction and an overview of the study. It defined the research problem and background as well as the research questions and objectives. It outlined the motivation for the study and research methods employed.
- Chapter 2 – This chapter details the key literature applicable to the study. It examined past and current literature forming the theoretical grounding for the study.
- Chapter 3 – This chapter details the actual research methodology employed to fulfil the study. It covers the aspects of research design, research approach, population and census, instrument development, data collection and response rate.
- Chapter 4 – The data collected is presented, analysed and discussed in relation to the literature review and research objectives.
- Chapter 5 – This chapter is the final chapter and concludes by providing recommendations based on the findings from chapter four, that the department may consider to prevent occupational fraud risks and improve the anti-fraud culture. Limitations of the current study and directions for further studies are also put forth.

## **1.14 Summary**

This chapter aimed to provide an introduction and background to the current study, thereby highlighting the importance, motivation and focus of the current study. The research problem and aim of the current study informed the research objectives and questions. An overview of the research methodology applied to satisfy the study was presented. Furthermore, the relevant theoretical frameworks were briefly alluded to in relation to their applicability to the current study. Chapter two provides a detailed literature review of occupational fraud from a global to local perspective across sectors with a specific focus of the higher education sector.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

Having highlighted the importance of the sustainability of higher education institutions in contributing to global knowledge as well the opportunity for and existence of occupational fraud in chapter one, it becomes apparent that occupational fraud and the prevention thereof within universities cannot be overlooked. The purpose of this chapter is to provide a vast examination of literature commencing from a global perspective of occupational fraud, across sectors and more specifically the higher education sector. The main focus of the study is on existing occupational fraud risks, employee awareness of occupational fraud risks and ways in which increased employee fraud awareness may contribute to preventing occupational fraud so as to create an anti-fraud culture. Therefore examining the occupational fraud risks within the higher education sector and increased employee awareness of fraud so as to build an anti-fraud culture that prevents occupational fraud is the basis for this literature review. This will in turn address the objectives of the current research. In light of this, the literature review further interrogates the theoretical frameworks that being the fraud triangle and organisational culture model, which underpin the study and are applied via the study methods. This chapter therefore provides the theoretical grounding for the study.

#### **2.2 Global perspectives on fraud**

Fraud and corruption is of global concern and there is a wealth of academic literature on such acts. The global phenomenon of fraud and seriousness thereof to the affected nations and consequently the global economy has been widely recognised (Abdullahi and Mansor, 2018, Said, 2018). The need to understand and thereby mitigate the risk of occupational fraud to limit financial loss, manage reputational damage, gain public confidence and contribute to economic and social growth cannot be overlooked across the various sectors in either a developed or an emerging economy. This is further supported by the current literature review. The collapse of reputable corporates, such as Enron, have occurred as a result of corruption and fraud committed by its management (Jizi, Nehme and Elhout, 2016, Said, 2018).

It is estimated that organisations lose approximately 5% of its annual revenue to fraud and this translates to global fraud loss of approximately 4.5 trillion US dollars (ACFE, 2020). These findings are based on reported instances of occupational fraud losses across 125 countries ranging from small businesses to multi-national corporations. The Report to the Nations in 2020 by the ACFE is a comprehensive global study on occupational fraud and widely used (ACFE, 2020). Albeit, the results show the existence and magnitude of occupational fraud within private, public and non-profit organisations as well as the public sector and relates mostly to occupational fraud committed against private sector entities (ACFE, 2020). This is not to say that occupational fraud is of a lesser issue in the public sector instead, that the reported instances were higher in the private sector.

Occupational fraud has been described as a “growth industry” over the last few years (Klein, 2015 cited in Said, 2018, p.908). This is because occupational fraud can lead to organisational failure (Said, 2018). Although studies have highlighted the seriousness of occupational fraud, most research has been undertaken in the context of developed countries (Said, 2018). Moreover, developing countries are behind in their research relating to fraud, specifically in the public sector where there is a high risk of occupational fraud. Yet, developing countries are more adversely impacted by the effects of fraud (Abdullahi and Mansor, 2018).

It becomes apparent, from widely publicised occupational fraud instances, such as that of Enron, Lehman Brothers and Siemens, that managing occupational fraud is an area that requires a strategic approach that extends beyond traditional measures of reaction by management. Research findings by Jizi et al. (2016) provides support that fraud prevention and detection is a management responsibility through ensuring adequate internal controls. They further suggest that a shift in focus to encouraging employee awareness of fraud and the inclusion of employees in the management thereof is central to ensure a sustainable triple bottom line and achieve organisational objectives. Hence, should fraud, material mis-statements or weak internal control environments be uncovered during the course of audits, whilst auditors have a responsibility to report on it however the actual prevention and detection of fraud is not the responsibility of auditors (Jizi et al., 2016). In addition, the article highlights organisational culture as an area that should be explored with regard to fraud prevention and detection (*ibid*). Recent research

has noted the adverse consequences of occupational fraud for organisations as well as socio-economic growth, especially in emerging markets (Ocansey and Ganu, 2017, Peltier-Rivest, 2018b). Peltier-Rivest (2018b), further expand on the social and economic consequences of corruption on a macroeconomic level. For instance, the unfair advantage that financially affluent organisations and countries benefit from as a result of corruption such as paying of bribes for capital gain, or the adverse impact of corruption on poorer economies due to the diversion of international funds by corrupt public officials and contractors are examples cited.

Research findings relating to employee perceptions of corruption, from within a compliance function, at a global organisation across Europe, Middle East and Africa (EMEA) support the general view that fraud and corruption are a genuine and widespread issue that adversely affects society, despite variables such as geographic location or culture (Baldock, 2016). The findings by Baldock (2016) indicated that individuals in positions of authority within government administration were most susceptible to corruption. A noteworthy research finding related to whether corruption had increased over the last five years within the respondents' country of employment (Baldock, 2016). The perception was that corruption had not increased in Europe, there was mixed opinion in the Middle East whereas respondents from Africa were of the opinion that corruption had increased. However, the perception amongst respondents from Europe may be attributed to the fact that, until recently, engaging in corruption abroad was accepted by most member countries of the Organisation for Economic Co-operation and Development (OECD) (Hauser, 2019). OECD member countries are mostly from Europe. Nevertheless, there has been an increase in the number of individuals and entities that have been prosecuted by German and Swiss authorities for engaging in corporate fraud abroad (Hauser, 2019). It has however been agreed by many governments globally that fraud and corruption is widespread in international business and that there is a need for anti-corruption measures such as legislation to aid in the prevention, detection and the criminalisation of corruption (Nwoke, 2019).

Research by Nwoke (2019) further highlight the increase of occupational fraud associated with embezzlement and corruption as a result of the global interconnectivity of corporates and internationalisation. This makes employees a very valuable resource relating to the timeous



reporting of anomalies and fraud prevention and detection within organisations. Hence, effective whistle-blowing mechanisms are an important tool to prevent fraud and support early detection, response and remediation of fraudulent activity before it results in reputational damage and corporate collapse, such as that of Enron or Arthur Andersen (Nwoke, 2019). In addition to regulations and legislations in support of whistle-blowers, management support of the process and sound corporate culture that is committed to fraud prevention is critical to alleviating occupational fraud risks (Nwoke, 2019). However, a challenge, amongst others, is due to differing cultures related to doing business in different regions, there is a blur in the understanding of whether corruption is necessarily unethical based on culture or by the definition of an unethical act (Hauser, 2019). Research findings highlight the importance of employee awareness through anti-fraud training to promote shared corporate culture that prevents occupational fraud (Hauser, 2019).

### **2.3 The landscape of occupational fraud and prevention measures in developed countries**

Fraud is widespread even in developed countries. It is thus not surprising that the focus on fraud prevention appears to be more holistic and strategic to extend beyond traditional measures of investigation (Riney, 2018, Brown, Hays and Stuebs, 2016, Richardson and Healy, 2019). For instance, recognising the value of employees and their contribution to organisational culture that prevents occupational fraud. Organisations are therefore in a strategic position to shape not only the control environment but to also influence anti-fraud attitude by employees and build an anti-fraud culture (Brown et al., 2016).

Occupational fraud has been acknowledged as an increasing risk to socio-economic development in Australia (Kumar, Bhattacharya and Hicks, 2018). The research findings show that the perception of leniency in the organisational culture to fraud is an important contributor to the rationalisation thereof by employees. Hence, based on the research undertaken in Australia amongst industry experts, relaxed organisational culture is related to occupational fraud in a negative way. This is because employees are able to rationalise fraud based on organisational culture that is perceived to take a lenient stance towards fraud. Research findings by Brown et al. (2016) also highlight the benefit to organisations of anti-fraud measures such

as, mechanisms to support employees' to report fraud and positive employee attitude to anti-fraud measures achieved through training and policies. These can serve to build an anti-fraud culture.

According to research by Riney (2018), undertaken in the United States of America (USA) amongst business leaders it was shown that similarities exist amongst companies in the nature of fraud reported. For instance, leaders are not aware of appropriate fraud prevention measures and poor internal controls that lead to the increase of fraud and the decrease of revenue. A reactive and laissez-faire approach to fraud requires more effort and costs in terms of the investigation of the fraud subsequent to the fraud occurrence (Riney, 2018). In addition, there is the financial loss and reputational damage as a result of the fraud which leaders then need to manage. The research by Riney (2018), highlights the significance of organisational culture and processes in relation to fraud prevention. This is similar to research put forth by Brown et al. (2016) and Kumar et al. (2018) in that preventing occupational fraud is related to organisational culture and anti-fraud measures, and that employee awareness of fraud has a central role.

Research by Nicolaides and De Beer (2017) provides a comparison of healthcare fraud amongst countries. The presence and seriousness of fraud within the healthcare sector in the USA is highlighted through its adverse costs amounting to billions of dollars. Government's prioritisation in preventing healthcare fraud and malpractice has extended beyond criminalising acts of healthcare fraud to increasing public awareness of healthcare fraud in the USA (Nicolaides and De Beer, 2017). This highlights the value placed on increasing fraud awareness as a prevention measure.

#### **2.4 Whistle-blowing and organisational culture**

A country's underlying corporate governance system has an influence on employee whistle-blowing practices (Pittroff, 2016). The article highlights the importance of corporate governance regulations adopted by a country, which in turn support whistle-blowing measures implemented by organisations. According to Pittroff (2016) countries such as the USA and United Kingdom (UK) have made far greater progress relating to whistle-blower protection through corporate governance systems supported by regulations as compared to Germany.

Moreover, an organisation is able to influence the perceived authority, responsibility and commitment of an employee by implementing an effective whistle-blowing system (Pittroff, 2016). This extends beyond simply implementing a whistle-blowing system but requires ensuring measures to guard against whistle-blower retaliation, communicate the whistle-blowing process and monitor the whistle-blowing process and system (Pittroff, 2016). Similarly Lubisi and Bezuidenhout (2016) highlight, based on studies in South Africa, that good whistle-blowing systems, implementation and positioning of whistle-blowing systems so that employees see the value thereof and trust in organisations are regarded as motivational factors to encourage whistle-blowing within organisations. Pittroff (2016) further suggests that appropriate communication regarding the benefits of the whistle-blowing system and a code of ethics may increase employees' moral responsibility to report fraud within an organisation. However, whistle-blowing systems are often implemented ineffectively. This results in employees having no confidence in utilising whistle-blowing systems either due to fear of reprisal or the perception that management will not act against instances of reported fraud (Pittroff, 2016). Research findings have been put forth by Brown et al. (2016) which indicate that training programmes and management policies that support anti-fraud measures are likely to improve employee whistle-blowing. This results in reduced instances of fraud and promoting culture that supports reporting fraud.

However, creating culture that promotes whistle-blowing has been noted as a long-term process because it is influenced by the social context, that being the background of the society, as well as corporate governance regulations adopted within a country as whistle-blowing is regulated differently amongst countries (Pittroff, 2016). According to Brown et al. (2016), both individual factors (such as rationalisation and attitude) and organisational factors (such as reporting channels and strong ethical culture) significantly influence whistle-blowing intentions by organisational accountants relating to the reporting of accounting fraud. The research by Brown et al. (2016) focused on members of the Institute of Management Accountants and the sample parameters were limited to, amongst other factors, practicing accountants in the USA. The practical implications of the afore-mentioned research is that the findings highlight the role of organisations in influencing individual factors such as attitude to whistle-blowing. Moreover, given that fraud within the corporate sector and whistle-blower victimisation are increasing, organisations are in a position to improve employee whistle-blowing practices and the ease of

reporting fraud (Brown et al., 2016). The findings from the research by Brown et al. (2016) suggest that creating an environment which supports fraud detection, and reduces victimisation of whistle-blowers can in turn mitigate occupational fraud risks.

According to Brown et al. (2016), given that employees' attitude was found to be an important determinant in relation to whistle-blowing, organisations should promote positive employee attitudes and encourage employee perceptions of control relating to whistle-blowing. These are related to organisational factors inclusive of policies and organisational culture (Brown et al., 2016). The research by Brown et al. (2016) highlights that promoting training and organisational policies results in organisational commitment and trust by employees. This in turn leads to stronger organisational culture, which builds a positive attitude within the organisation to employee whistle-blowing. In this regard, organisations may need to review reporting channels, promote ethical culture and motivate credible employee reporting practices (Brown et al., 2016). These measures to create organisational culture are aimed at preventing occupational fraud risks. Based on the afore-mentioned research, it becomes apparent that encouraging an awareness of fraud supported by organisational processes and policies is central to promoting organisational culture that discourages occupational fraud.

From a review of the current literature, the difference in applicable corporate governance regulations and attitude to whistle-blowing which filters to organisational culture may be the reason why, even amongst developed countries, there are differences noted in the literature relating to employee perceptions of the existence of fraud as well as the willingness by employees to report fraud.

## **2.5 Fraud prevention measures**

In recent years there has been increasing discourse relating to fraud and corruption and the prevention thereof by both researchers and professionals (Hauser, 2019). Moreover, the adverse social and economic effects of fraud and corruption has been widely acknowledged in academic literature (Omar, Nawawi and Salin, 2016a, Peltier-Rivest, 2018b). Doing business in a global economy requires organisations to extend their focus beyond operational practices and profits to include fraud prevention measures to ensure sustainability. Given the extent of existing

international standards against corruption, international companies need to ensure corporate culture that clearly communicates across all levels that corruption will not be tolerated (Hauser, 2019). Hence, employees need to be aware that even if such practices are perceived to be in the interest of the company, the corporate culture will not condone fraud and corruption. This requires communication of the importance of adherence to applicable legislation, regulations and ethical standards upon which companies conduct business (Hauser, 2019).

An empirical study by Hauser (2019) examined whether business professionals who had participated in anti-corruption training were more likely not to rationalise corrupt practices as compared to those who had not participated in such training. A noteworthy finding was that trained respondents exhibited a significantly lower tendency to rationalise or justify corruption as compared to respondents who had not received such training. The research by Hauser (2019) highlighted that in addition to having relevant legislation and regulations in place, employee training and awareness is central to address various employee justifications, such as attributing fraud and corruption to socio-cultural practices or uncertainty. Furthermore, regular employee training was noted as one of the most effective ways to prevent occupational fraud. It should be noted that the study was limited to a context which included only German and Swiss professionals and that it was a cross-sectional study which focused on associations.

The research by Hauser (2019) draws on theoretical frameworks, such as Cressey's fraud triangle theory (1953). Hauser (2019) show that should an employee be presented with the pressure and opportunity to engage in occupational fraud but if the employee is taught that the action is not justifiable then he/she will not engage in the occupational fraud. Hence, the author highlights the importance of employee anti-corruption training and measures to create awareness as well as provide clarity on socio-cultural differences or ethical challenges. This will promote corporate culture that demonstrates that corruption is not justifiable or acceptable (Hauser, 2019).

Peltier-Rivest (2018b) put forth a more holistic approach to fraud prevention which includes measures as presented below:

- A positive work environment and sound governance.

- A compliance risk management programme that includes fraud risk assessments.
- An employee psychological assistance programme.
- Regular anti-fraud training for employees.
- Effective and adequate internal controls such as proper segregation of duties.
- Fair remuneration practices and practical and fair individual performance goals.
- An independent, accessible and anonymous reporting mechanism.
- Regular analyses of abnormal patterns (red flags) within the organisation.

The approach put forth by Peltier-Rivest (2018b) is an attempt to address the three elements of the fraud triangle which if present together within an organisation give rise to fraud.

From the above literature, research undertaken in the context of differing countries all highlight the importance of fraud awareness in creating anti-fraud culture. Furthermore, organisational culture that prevents fraud within organisations has been noted or suggested as an area related to preventing occupational fraud (Hauser, 2019, Jizi et al., 2016, Peltier-Rivest, 2018b).

## **2.6 The Middle East – creating anti-fraud culture**

Despite internal and external audits, fraud within the corporate sector in the Middle East is still present (Jizi et al., 2016). According to Jizi et al. (2016) corporates should facilitate more fraud awareness workshops and training so as to equip employees' with knowledge as to how to deal with fraud, such as fraudulent financial reporting. Furthermore, the research highlights the role of exploring corporate culture so as to create a culture of honesty. Corporate culture, based on honesty, supported by an internal control environment helps to prevent and detect fraud (Jizi et al., 2016) and thus preventing organisations from becoming victims of fraud.

## **2.7 ASIA: South Eastern Region – an increasing focus on fraud prevention**

Research by Prabowo (2016) relating to corruption within the Indonesian government supports research findings by (Mantzaris, 2017a) relating to Brazil, Russia, India, China and South Africa (BRICS), whereby despite extensive anti-corruption measures, corruption remains a challenge within government. The article by Prabowo (2016) made reference to the 2013 Corruption Perception Index (CPI) results by Transparency International which was based on 177 countries,

from regions across the globe, surveyed in respect of the perceived levels of public sector corruption. According to the 2013 CPI results, Indonesia was placed amongst the most corrupt countries globally at a ranking of 114. However, based on the 2019 CPI results, perceptions of public sector corruption in Indonesia have significantly improved as Indonesia ranked 85 out of 188 countries surveyed globally (CPI, 2019). In addition, Indonesia was highlighted as a favourable emerging economy however ongoing corruption was noted as a threat to its economy.

According to Prabowo (2016), in addition to reducing the opportunity for corruption, prevention and detection requires that the public, as the service users, have appropriate knowledge and awareness so as to identify potential misconduct within government. The article highlights the importance of an awareness of red flags by the public, specifically behavioural red flags. Prabowo (2016) describes behavioural red flags as possible indicators of corrupt behaviour that should not be overlooked. The author maintains that an awareness of red flags will assist to identify corrupt practices by public officials. This will in turn assist to reduce the risk of inadvertently supporting corrupt public officials thereby reducing corruption within the country (Prabowo, 2016). The focus on red flag analysis has also been highlighted in the context of Canadian research where the research noted amongst others, the importance of ethical leadership and a sound control environment in preventing occupational fraud (Peltier-Rivest, 2018b).

Research by Said (2018) relating to employee fraud from the perspective of public officials from the Royal Malaysian Custom Department in Malaysia which is an enforcement agency involved in the administration of public funds, aimed to alert stakeholders of the significance of individual and organisational factors in preventing employee fraud. The article highlighted that, despite employee fraud resulting in reduced investor confidence and market uncertainty, it remained widespread. However, the adverse impact on emerging economies was more profound. Furthermore, there was limited empirical research undertaken on employee fraud in Malaysia. Research findings indicated that individual factors such as ethical values and the quality of being religious significantly contributed to fraud prevention as compared to organisational factors, such as whistle-blowing and ethical leadership (Said, 2018). Thus, organisational and environmental factors played a less important role in mitigating employee fraud. The findings

indicated that an individual's ethical values were more likely to influence adherence to organisational policies and thereby mitigates employee fraud (Said, 2018). Hence, organisations should promote intrinsic factors, such as individual ethical values and a sense of religiousness, through ongoing reminders and trainings so as to improve individual integrity. This would bring together internal and external control factors in preventing employee fraud (Said, 2018). Research finding by Said (2018) provide a different perspective as compared to research findings by Peltier-Rivest (2018b) and Prabowo (2016) relating to occupational fraud prevention measures.

Research undertaken by Omar, Said and Johari (2016b) in Malaysia relating to cases charged under the Securities Commission and Bank Negara Malaysia indicate that corporate crimes are increasing annually. Furthermore, corporate crime has an adverse impact on employees, investors, creditors and public confidence (Omar et al., 2016b). Corporate crimes can be described as white collar crime and are perpetrated by professionals or a corporation for the benefit of the individual or corporation (Omar et al., 2016b). The authors cite corporate crimes in Malaysia involving for instance Transmile Group, Berhad, and Megan Media Holdings as instances of publicised corporate fraud scandals.

Based on the analysis of cases charged under the Securities Commission, findings by Omar et al. (2016b) indicated that

- 27% of companies charged were from the industrial product industry.
- 24% from construction.
- 19% from trading or services.
- 16% from consumer product.
- 5% from finance.
- 3% from properties, hotels and real estate investment trust (Omar et al., 2016b).

Furthermore, the findings indicated that directors and senior management were usually involved in the corporate crimes examined (Omar et al., 2016b).



## **2.8 Key fraud prevention strategies – Indonesian public sector**

Occupational fraud risk management requires identifying individual factors and understanding opportunities within a work environment that encourage fraud. According to Rustiarini, Nurkholis and Andayani (2019), public procurement is a high fraud risk area. Furthermore, the presence of situational factors and the capability of an individual to rationalise such action makes fraud prevention strategies crucial, especially within the public procurement sector.

The article by Rustiarini et al. (2019) provides a theoretical framework so as to understand procurement fraud within the Indonesian public sector. The article further puts forth a perspective based on the context of occupational fraud within the public procurement sector. The research considers both individual behaviour such as one's position of authority and individual capability to justify fraudulent actions or collude with others as key contributing factors to corruption as well as the organisational factors (Rustiarini et al., 2019).

The article further highlights the importance of identifying and understanding individual and organisational characteristics that lead to occupational fraud so as to implement occupational fraud risk management strategies. In this regard, Rustiarini et al. (2019) suggest four broad strategies focusing on, fraud prevention, the control environment, fraud detection and investigation, each of which include specific measures to provide a holistic approach to preventing fraud in the public sector. Some of the key measures suggested by Rustiarini et al. (2019) are summarised below:

- (i) Training of procurement officials so as to promote institutional integrity such as honesty, fairness, non-discrimination, compliance with anti-corruption strategies and the ability to identify procurement fraud.
- (ii) Training programmes relating to best practice, sound governance practices and rational decision-making processes. Best practice in public procurement includes amongst others, clear roles and responsibilities, transparency, documented procedures and an effective whistle-blowing system.
- (iii) Effective and efficient internal control systems as well as external audits and forensic audits.

- (iv) Sound understanding of the nature and characteristics of fraud, which includes an understanding of red flags as an early warning signal relating to fraud detection.
- (v) Creating an environment, which encourages and supports whistle-blowing.
- (vi) Efficient management and teamwork to promote transparency and accountability. Thereby promoting an environment, which prevents corruption.
- (vii) Implementing clearly defined regulations and sanctions and the ability to conduct multi-disciplinary investigations. In addition, given the increase in global procurement there is a need to engage in international partnerships with relevant stakeholders to ensure joint efforts to combatting procurement fraud and corruption.

The afore-mentioned research suggests that occupational fraud risk management requires an understanding and awareness of fraud at both an individual and organisational level. This is to in turn encourage fraud awareness and promote anti-fraud culture that prevents occupational fraud. The research findings relating to fraud prevention are similar to that put forth by other research undertaken in Canada as well as Indonesia which have found that fraud awareness is central in preventing fraud (Peltier-Rivest, 2018b, Prabowo, 2016). Furthermore, the research by both Peltier-Rivest (2018b) and Rustiarini et al. (2019) put forth a more comprehensive approach to fraud prevention which, amongst others, highlights fraud awareness and anti-fraud culture.

## **2.9 General perspectives and challenges on occupational fraud: BRICS**

The inclusion of South Africa into the Brazil, Russia, India and China partnership in 2010 was in response to their acknowledgement of South Africa's similar socio-economic challenges as a developing economy (Daniel Francois and Natanya, 2019). Furthermore, Brazil, Russia, India, China and South Africa (BRICS countries) have formed a partnership to collaborate on matters of mutual development (Finardi and Buratti, 2016). This is because BRICS are emerging economies that are comparable based on indicators such as population, geographical size and gross domestic product (Daniel Francois and Natanya, 2019).

Ensuring environments that extend beyond only regulatory frameworks and that also support fraud prevention measures within emerging economies such as the BRICS countries is a non-

negotiable so as to promote a zero tolerance stance to fraud. This approach will support economic growth of the BRICS countries. However, despite extensive regulatory frameworks, the presence of fraud and corruption within the public sector in BRICS countries is of ongoing global concern. This is supported by research by (Mantzaris, 2017a) which focused on the improvement of awareness relating to the need for regulatory frameworks in BRICS countries so as to ensure public sector ethics and thereby encourage fraud prevention.

According to Mantzaris (2017a) fraud remains rife and continues to increase within each of the BRICS countries. This is despite extensive regulations, association with international anti-corruption conventions as well as repercussions applicable to public officials within each of the BRICS countries for acts such as embezzlement, fraud and corruption. Brazil is not short of regulations guiding public sector conduct, however, there are limitations relating to defining of the roles and responsibilities of public officials with regard to transparency (Mantzaris, 2017a). Furthermore, compliance to applicable legislation is not a priority in certain BRICS countries and there appears to be a degree of flexibility relating to the interpretation of applicable legislation within the public sector such as in China and Russia. In China, the culture does not support whistle-blowing and is frowned upon by the larger community. Furthermore, the practice of giving of gifts is important due to its history within the culture and traditions of the country (Mantzaris, 2017a). However, this culture of 'gift giving' has extended beyond the meaning associated with tradition and culture. Instead it has resulted in many instances of major corruption and fraud, such as the GlaxoSmithKline bribery scandal within the healthcare sector in China (Mantzaris, 2017a). This example demonstrates how non-compliance with regulation by public sector officials paved the way for corruption and fraud involving both the public and private sector consequently resulted in adverse effects for both sectors, the economy and society as a whole. This scandal also demonstrated the extent of fraud and corruption by employees and executives trusted to act in the interest of shareholders of GlaxoSmithKline, a multi-national corporation.

Research in the context of India provides evidence to show that whistle-blowing is influenced by three factors (D'Cruz, 2016). D'Cruz (2016) describe the three factors as follows. Firstly, the process of whistle-blowing which involves:

- (i) The presence of wrongdoing.
- (ii) Recognising wrongdoing.
- (iii) Deciding to engage in whistle-blowing.
- (iv) Actually blowing the whistle.
- (v) Consequence for the whistle-blower, offender, of the transgression and for the workplace.

The second factor put forth by D'Cruz (2016) is socio-cultural dynamics such as perception of fairness, material benefit, social relations and power distribution. Finally, international influences, institutional framework, workplace culture together with individual orientation work together with the socio-cultural dynamics to affect the whistle-blowing process (D'Cruz, 2016).

D'Cruz (2016) maintains that individuals, specifically those in positions of authority with high degrees of integrity can insist on utilising institutional mechanisms to expose wrongdoing even if this hampers their social relationships and threatens their material benefits. Therefore, integrity by leaders and managers is crucial. D'Cruz (2016) put forth that promoting workplace culture based on integrity supports the reporting of wrongdoing. Furthermore, management have a central role to play in ensuring workplace environments that support the reporting of fraud and implementing appropriate sanctions with regard to fraud. Hence, workplace culture can determine potential whistle-blowers' choices with regard to reporting fraud (D'Cruz, 2016).

In India, the absence of political commitment is highlighted as the main reason for the increase in corruption. In addition, budgetary constraints, lack of co-operation, synergy and human resources within the public sector further add to the challenge of increasing corruption (Mantzaris, 2017a). The article highlights a similar scenario in South Africa, which is largely attributed to the lack of commitment by political leaders.

## **2.10 Fraud and corruption in Sub-Saharan Africa**

Fraud and corruption is often more rife in countries where collusion between the public and private sector are supported due to the disparity in wealth distribution which creates the opportunity for corruption and fraud. According to CPI (2019) results, corruption is more

prevalent in countries where government is influenced by the wealthy and where large amounts of money can easily be channelled into politics from private individuals and entities. Furthermore, Sub-Saharan Africa was rated as the lowest scoring region with countries such as Somalia, Syria and South Sudan being the most corrupt in the region.

The presence of fraud within the Nigerian public sector is widespread and has been largely attributed to public officials using their positions to defraud their organisations (Abdullahi and Mansor, 2018, Said, 2018). To address occupational fraud risks in Nigeria where the focus on reporting and prevention of corporate fraud is a fairly new concept, Nwoke (2019) suggests the following:

- comprehensive whistle-blowing legislation similar to South Africa and the UK be introduced,
- an effective reporting platform and response plan, and
- awareness and training measures aimed at management and employees as well as mandatory training for all relevant stakeholders.

In essence, legislation, regulations and guidelines in support of anti-fraud measures, such as whistle-blowing tools, positively influence organisational culture. The importance of appropriate management response to disclosures was also noted as a measure to enhance organisational culture (Nwoke, 2019).

Research by Mykhalchenko and Wiegatz (2019) has recognised the existence and impact of fraud as a challenge globally as well as for African countries. The article focused specifically on anti-fraud measures in four Southern African countries, being Botswana, Malawi, South Africa and Zambia. Increased fraud awareness was noted as a key anti-fraud measure to combat fraud and corruption supported by technology, such as anonymous whistle-blower facilities, computer software as well as compliance checks. A noteworthy finding was that anti-fraud measures should extend beyond implementing and sustaining prevention measures due to an interest in preventing fraud but extend to firms and government interest in re-inventing and repositioning themselves relating to, amongst others, the economy and business as well as the legitimacy thereof (*ibid*).

## **2.11 South Africa: the reality of fraud and corruption across the private and public sector**

In South Africa, fraud and corruption has become a common occurrence and is often the subject of many reported cases in the media. This includes that of the Bosasa scandal which involved the fraud and corruption between the public and private sector so as to influence the award of government tenders estimated at millions of rands (Insider, 2020). The formation of the ‘Judicial Commission of Inquiry into Allegations of State Capture, Fraud and Corruption in the Public Sector Including Organs of State’ by the South African Judiciary demonstrates the extent of fraud and corruption in South Africa, specifically in the public sector.

Based on the current literature review, the widespread nature and extent of fraud and corruption, inclusive of South Africa highlights the need for environments that prevent occupational fraud through anti-fraud measures. Academic literature recognises that fraud in South Africa is a serious issue that requires the attention of both government and the private sector due to its adverse socio-economic consequences (Lubisi and Bezuidenhout, 2016, Nwoke, 2019, Rispel, De Jager and Fonn, 2016). Moreover, prevention measures such as fraud awareness, are central to addressing the occurrence of fraud.

## **2.12 The effects of fraud on the sustainability of South Africa’s business sector**

The sustainability of South African businesses, inclusive of small, medium and micro-enterprises, are faced with various risks due to the tough economic climate of a developing country. In addition to strategic and compliance risks as well as poor internal controls, occupational fraud risk is a reality which further adds to the risk of business and operational sustainability in a developing country such as South Africa (Ashwin, Juan-Pierré and Suzaan Le, 2018).

Occupational fraud is also a risk faced by large corporates. Prominent multi-national corporates in the construction industry, such as Aveng and Murray & Roberts, have been involved in procurement fraud (Insider, 2020). A further instance is that of Tongaat-Hulett, where senior management were involved in financial statement fraud and bonus scandals. Both instances, are evidence of widely reported fraud within the corporate sector (Insider, 2020). Furthermore,

when the private sector aid public sector fraud and corruption the consequences are even more far-reaching. Reported instances include, KPMG, SAP which is a German software developer, and the renowned Gupta owned entities (Insider, 2020). These reported instances of fraud in South Africa's business sector further support the current literature review that fraud is a global phenomenon that is pervasive across sectors and that knows no borders.

### **2.13 Fraud and corruption - South African public sector**

According to CPI (2019), South Africa was ranked at 70 out of the 180 countries assessed thus indicating that public sector fraud and corruption is a very real risk within the public sector. Corruption within municipalities, provincial departments and parastatals have become a reality in South Africa, with supply chain processes and procurement being the focal point (Mantzaris, 2017b). Public procurement and supply chain processes are susceptible to procurement fraud and corruption (Fourie and Mazibuko, 2017). In addition, poor administration of procurement practices in the South African public sector results in low public confidence in the procurement environment, wasteful expenditure and threatens legitimacy of the public sector. Similar findings were noted in the research by Rustiarini et al. (2019) relating to public procurement fraud.

To understand fraudulent practices in the procurement sector, the article by Fourie and Mazibuko (2017) refers to the culture of non-compliance together with the lack of transparency and accountability as contributing factors to unethical procurement practices. Furthermore, fraudulent practices by public officials has resulted in global dialogue relating to good governance. Unethical behaviour of procurement officials is associated with fraud, corruption, bribery, and nepotism which impacts negatively on the public sector and inevitably the private sector through for instance poor service delivery and reduced value for money (Fourie and Mazibuko, 2017). This related to a similar scenario in India, where corruption and inefficiencies in supply chain management have resulted in annual losses conservatively estimated at approximately \$65billion (Mantzaris, 2017b). Moreover, public procurement and supply chain management and have for several years been the cornerstone upon which corruption has progressed within the country. Corruption in public procurement has been the direct result of the involvement of politicians, either directly or indirectly, as well as the private sector

(Mantzaris, 2017b). The article maintains that in both South Africa and India, strong political leadership supported by most importantly ethical leadership and an ethical culture together with the appropriate risk management strategies and evaluation thereof is needed to address the challenge of public procurement fraud. Hence, this requires an awareness of risk indicators so as to prevent ongoing corrupt practices.

According to Nicolaides and De Beer (2017), the prevalence of healthcare fraud due to collusion between medical aid members and healthcare providers is of growing concern in South Africa. The largest funders in the healthcare sector are the South African government and medical aid schemes thereby making healthcare fraud a public-private concern. Moreover, healthcare fraud occurs at all stages of the healthcare supply chain from medical professionals to suppliers of healthcare equipment and it is estimated that 15% of all medical aid claims are likely to be fraudulent, placing healthcare fraud as a notable crime in South Africa. The article highlights statistics that corrupt healthcare professionals, such as doctors, pharmacists, physiotherapists and radiologists are defrauding medical aid schemes of approximately R22 billion per annum resulting in members having to pay increasing premiums and additional medical fees. The misalignment between the perception of the healthcare sector offering huge potential for financial reward and an enhanced bottom-line with diminishing focus on the triple-bottom-line does not promote anti-fraud or ethical behaviour within the profession, especially for medical students entering the profession (Nicolaides and De Beer, 2017). In light of this above, higher education institutions should also increase its focus on training related to ethics and values associated with honesty, truthfulness and courage with emphasis on the triple-bottom-line for medical professionals. This would in turn promote a culture of integrity within the profession thereby aiding in preventing healthcare malpractice and fraud. Healthcare fraud and malpractice is not unique to South Africa and exists in major emerging markets as well as developed countries (Nicolaides and De Beer, 2017).

According to Nicolaides and De Beer (2017), despite stringent regulations by the Health Professions Council of South Africa (HPCSA), healthcare practitioners should be subjected to mandatory ongoing education and training relating to professional and ethical behaviour so as to enhance their professional development and promote compliance with HPCSA standards.



This would in turn create operational cultures, which promote ethical conduct and discourage fraud. Research by Rispel et al. (2016) also highlight the worsening trend of corruption in the South African healthcare sector and findings indicate that corruption is a challenge that needs to be addressed through measures which extend beyond only ensuring appropriate legislation is in place.

According to Rispel et al. (2016), corruption exists in both the private and public healthcare sector albeit corruption in the public provincial level was found to be more prevalent. Significant findings from the afore-mentioned research relating to corruption in the public healthcare sector are, amongst others, oversight due to political interference, the perception that the consequences of engaging in corruption are minimal and that inefficiencies within the healthcare system in itself results in corruption. In addition, the public healthcare system is plagued with capacity constraints. The research by Rispel et al. (2016), highlights that this may result in lack of awareness relating to adhering to legislation and regulations that govern public expenditure. This leads to irregular expenditure of public funds, without necessarily the intention for self-enrichment.

Based on the current literature review there appears to be more research on occupational fraud in the public sector in emerging countries such as South Africa, whilst in developed countries the focus on occupational fraud appears to be more extensive in the private sector. This is possibly because as highlighted in the current literature review, occupational fraud within the public sector of an emerging country has the ability to cripple an emerging economy. For instance, due to lack of investor confidence, public distrust, and the potential to threaten legitimacy of the country. In addition, the potential for fraud and corruption due to political influence or interference is more of a risk in an emerging economy.

#### **2.14 Higher Education and fraud**

It is suggested that academia focuses more on combating or responding to academic dishonesty such as plagiarism, presenting false research data or theft of examination papers more than it does on encouraging ethical habits and a healthy ethical environment (Richardson and Healy, 2019). Moreover, the focus in both research and policy tends to be more on student misconduct

with limited focus on misconduct by staff and the institution. This is further supported in the article by Overman, Akkerman and Torenvlied (2016) who also highlighted the limited focus on academic and support staff misconduct.

Recent research by Richardson and Healy (2019), which was limited to the university, faculty and students at a UK university show the need to conceptualise and structure important values that are central to a higher education institution in a constantly changing landscape. This can create an ethical environment that encourages compliance based on underlying values of integrity and common values within a university environment without the punitive element. In addition, an ethical environment was described not in comparison to an unethical environment but based on an approach to establish common understanding and characteristics so as to achieve an 'ethical ecology' (Richardson and Healy, 2019). Although support staff were not included in the study, they were acknowledged as important contributors to the ethical environment.

Based on the afore-mentioned research, Richardson and Healy (2019) suggest a holistic framework, comprising the institution, academics and students, within the ethical environment of the university so as to bring together what is often regarded as dissimilar and sensitive issues. Furthermore, the authors argue that being "ethically aware" is an important factor in the development of academic competence for all stakeholders (Richardson and Healy, 2019, p. 1101) However, Meyers, (2004; Arnold et al., 2000 cited in Richardson and Healy, 2019, p. 1091) maintain that to establish an ethical environment, it is important to first examine the organisational culture and the behaviour of employees. Furthermore, a lack of understanding and awareness relating to rules and responsibilities has the potential to erode an ethical environment. Hence, this emphasised importance of ensuring a sense of awareness so as to develop competence for all stakeholders responsible for creating and maintaining an environment which supports fraud prevention and ethical conduct. The significance of the afore-mentioned research is its focus on organisational culture so as achieve an environment based on a common awareness of ethics and shared values thereby preventing misconduct, such as occupational fraud.

Similarly research by Burke and Sanney (2018), focused on academic misconduct and fraud perpetrated by students. It is suggested that an institutional response to the fraud triangle (1953)

by Donald Cressey (Cressey) to create a culture of integrity can help to improve academic integrity. The institutional response is described as changes such as, educating students on academic misconduct and changing the environment of acceptance of dishonest conduct. Furthermore, the authors maintain that it is imperative that adequate resources are dedicated to faculty, administrators and ethics officers to enable them to support higher education institutions to address factors that cause students to commit fraud. This highlights the importance of all staff having access to dedicated resources to alleviate fraud and promote a culture of integrity within higher education.

Occupational fraud has often been attributed to the output driven management practices within the higher education sector. For instance, the occurrence of a prominent academic falsifying research data or the diploma fraud uncovered at a Dutch University of Applied Science in 2011 are examples of occupational fraud at an individual and at an institutional level (Overman et al., 2016). However, according to further findings by Overman et al. (2016) a positive relationship between performance indicators and academic integrity was revealed. Furthermore, performance assessments and clearly defined targets were found to encourage an acceptance of results orientated behaviour and motivate employees to perform. According to Overman et al. (2016), the possibility of extrinsic factors may have overruled the intrinsic factors in relation to the incidents of occupational fraud referred to above.

The aforementioned article by Overman et al. (2016) highlights the importance of organisational integrity and is described as the disposition for behavioural support and corroboration to professional norms and principles. Thus, “integrity norms and regulations” are principles of accuracy, fairness and honesty, within the profession, towards colleagues and clients and in turn promotes positive employee behaviour (Overman et al., 2016, pp. 1142). The authors maintain that integrity within the organisational context extends beyond simply compliance to rules and regulations. Moreover, there needs to be an alignment of incentive structures at both an institutional and a systemic level. At an institutional level contradictory incentive structures within organisations may actually encourage misconduct (Overman et al., 2016). For instance, despite the potential harm to universities as a result of fraud, potential whistle-blowers often do not report fraud due to the perception of victimisation or other negative consequences (Overman et al., 2016).

Despite the limited focus to certain university stakeholders and types of fraud, based on the research by Burke and Sanney (2018), Richardson and Healy (2019) and Overman et al. (2016) the potential value of fraud awareness in creating organisational culture that prevents occupational fraud becomes a key area of consideration. Similar to research undertaken at universities within the UK and Western Europe regions, the focus of research undertaken in the context of Malaysian universities has also focused on academic misconduct within the research space, such as plagiarism or breach of research ethics (Olesen, Amin and Mahadi, 2018). The article highlights the scarcity of research into studies of research misconduct in the context of Malaysian universities. Olesen et al. (2018) maintain that although research fraud or misconduct does exist, researchers are often reluctant to report such incidents. This is because it is time consuming and they are afraid of the adverse consequences thereof. A significant finding by Olesen et al. (2018) was that individual, structural, situational and organisational factors are key influencers of research fraud or misconduct within the context of Malaysian universities. For instance, the authors further explain that organisational factors such as placing too much trust on individuals or lack of communication lead to a non-conducive work environment which supports research misconduct. Institutional culture that overlooks research misconduct or that fails to consider shared culture was also found to influence research misconduct (Olesen et al., 2018).

Organisational culture supports fraud detection through principles of good corporate governance (Ginting and Panggabean, 2019). The research was undertaken at an Indonesian university and limited to staff referred to as 'education staff'. According to Ginting and Panggabean (2019) good corporate governance facilitates anti-fraud systems and processes. However, the foundation of good corporate governance is organisational culture and shared values. A significant finding from this research was the gap in the level of internalisation of organisational culture by respondents. Hence, the authors suggest improvements to organisational culture through principles of good governance would in turn support anti-fraud systems (Ginting and Panggabean, 2019). This research highlights the link between organisational culture and fraud prevention within a university environment.

Research by Tierney and Sabharwal (2017) provides significant insight into the challenges faced by higher education institutions in India and the need to acknowledge the existence and extent of systemic corruption within higher education institutions. The research was undertaken at a private college with a specific focus on the administration of the institution at an institutional and faculty level. The research findings showed that fraud and corruption existed in many forms and at differing levels across the institution. For instance, from obtaining and maintaining licences to operate, student recruitment and admissions and student attendance fraud and corruption such as paying for degrees which is referred to as “non-attending students” which included collusions amongst academics, management and students (Tierney and Sabharwal, 2017, p.36).

Irregularities relating to staff appointments such as ‘ghost-employees’ and the practice of staff having to pay management on a monthly basis to secure their appointment were further instances of fraud and corruption instances cited (Tierney and Sabharwal, 2017). The research findings highlighted the level of corruption within the institutional culture (Tierney and Sabharwal, 2017). According to Tierney and Sabharwal (2017) a culture change based on shared values by all employees is a process within which leaders have a central role. For instance through socialising initiatives such as inductions, workshops, daily interactions that highlight ethical conduct in support of anti-fraud and corruption was suggested to achieve change of the culture within higher education institutions. Tierney and Sabharwal (2017) suggest that anti-fraud culture may be achieved through socialising initiatives, based on an awareness of fraud so as to prevent occupational fraud in the higher education sector. Furthermore, the authors highlight the central role of leadership in creating anti-fraud culture. The afore-mentioned research provides a comprehensive overview of the existence, nature and extent as well as the significance of anti-fraud culture.

### **2.15 South African Higher Education**

The recognition of fraud by South African researchers has been acknowledged through academic literature that highlights the pervasiveness of fraud across higher education institutions globally (Baijnath and Singh, 2019, Remenyi and Singh, 2016, Waghid and Davids, 2019). The research by these authors focuses on academic fraud, such as cheating by students

during examinations or research fraud and plagiarism so as to encourage an awareness and prevention thereof.

The secrecy surrounding fraud and cheating within universities makes knowledge and understanding of the extent thereof challenging (Remenyi and Singh, 2016). The authors acknowledge the existence of fraud with regard to examinations but focus specifically on fraud perpetrated with regard to dissertations or theses completed at an undergraduate or postgraduate level. The challenges faced by universities in preventing and detecting fraud such as plagiarism and ghost writing are highlighted as areas of concern across universities (Remenyi and Singh, 2016). The prevention and detection of fraud at universities require creative ways of promoting learning, encouraging open discussions relating to plagiarism and ghost writing as well ensuring appropriate punitive responses (Remenyi and Singh, 2016).

Fraud and corruption, of which unethical behaviour is closely associated with, specifically within higher education institutions has the potential to undermine the progress that South Africa has made with regard to socio-economic development (Moeti and Mokubyane, 2016). Moreover, higher education institutions are central to addressing the historic challenges of apartheid, inequality and social injustices in South Africa. However gaining admission to university is highly competitive and expensive (Moeti and Mokubyane, 2016).

Government funding of higher education in both developed and developing markets, accounts for a significant amount of government's budget allocation (Moeti and Mokubyane, 2016). This is a clear indication of the importance of higher education in any country so as to promote socio-economic development. Therefore, corruption and fraud within the higher education sector cannot be ignored if a country intends to progress. In addition, the prevalence of occupational fraud at universities and the risk of which increases with low probability of detection and consequence management (Moeti and Mokubyane, 2016) .

The research by Moeti and Mokubyane (2016) focused on the existence and causes of corruption and unethical conduct within the context of South African higher education institutions and specifically on the behaviour and perceptions by academics. Measures to mitigate fraud and corruption and promote quality higher education, which is directly related to national progress, was also suggested.

Noteworthy findings by Moeti and Mokubiyane (2016), were that:

- (i) 94.9% of respondents indicated that corruption is most prevalent during examination periods and the release of student marks.
- (ii) 80.5% indicated that certain academic staff accepted bribes.
- (iii) 62% of respondents indicated that certain academics failed to comply with anti-corruption policies.
- (iv) 60.5% of respondents attributed lack of adequate supervision of academic staff by human resources as contributing to corruption and unethical conduct whilst 31.8% were uncertain.
- (v) 93% of respondents attributed occupational fraud by academics to a sense of self-enrichment.
- (vi) 85.15% of respondents were of the opinion that certain academic staff engaged in nepotism when dealing with students.

The afore-mentioned findings offer insight to the existence and seriousness of occupational fraud within higher education institutions in South Africa.

According to Moeti and Mokubiyane (2016) , occupational fraud risk management strategies, should include, amongst others,

- (i) Tailored anti-corruption training and workshops.
- (ii) Programmes designed to equip staff with skills relating to integrity and transparency.
- (iii) Promoting an environment that has a zero tolerance to fraud supported by the commitment of senior management and government.
- (iv) Protecting whistle-blowers.
- (v) Anti-corruption legislation and policies applicable to universities.

The South African government has also recognised that fraud and corruption poses a huge challenge to the sector (Khubeka, 2020). The risk of occupational fraud and the need to protect the integrity of higher education institutions due to its broader contribution to the development of the country has also been noted by government (Pandor, 2018). Wessels and Sadler (2015) highlight the importance of higher education risk management frameworks, which includes

fraud prevention strategies, so as to enhance a higher education institutions' mission, strategic goals and objectives. The article by Wessels and Sadler (2015) focused specifically on risk management with regard to an open distance learning institution.

Fraud and corruption in the South African higher education sector has been widely reported in the media (Mlambo, 2015, Njilo, 2019, Rall, 2017). These recent allegations of fraud and corruption at various South African universities, such as Durban University of Technology, University of Witwatersrand and UKZN highlight the widespread nature of fraud and corruption within the sector. Hence, support the need for occupational fraud risk management within the sector as all three of the above-cited instances of alleged fraud and corruption highlighted employee involvement in the fraud.

From the above literature, fraud prevention within the higher education sector is an area that cannot be overlooked when considering the achievement of an institution's strategic goals as well as with regard to socio economic development of the country.

## **2.16 Gaps for further research**

The existence and seriousness of fraud within the higher education sector has been acknowledged as an area of increasing international concern (Chapman and Lindner, 2016). From the literature perused during the period 2015 to 2020, it remains a sector in which research is still evolving. Researchers such as Overman et al. (2016) and Richardson and Healy (2019), have highlighted the tendency in the sector to focus more on fraud relating to research or student misconduct thereby adopting a more traditional approach to examining fraud within the field of academia. Hence, there has been limited focus on occupational fraud committed by staff, specifically professional or administrative staff. Furthermore, occupational fraud committed by professional or administrative staff as well as the prevention thereof has been an area that has received limited focus. Research undertaken internationally has however progressed to more innovative measures such as creating organisational culture as an institutional response to fraud prevention (Richardson and Healy, 2019, Tierney and Sabharwal, 2017).

Based on the literature perused during the period 2015 to 2020 using the online journal cites, such as Sabinet, Google Scholar and Emerald Insight, among others, there is limited research



relating to occupational fraud in the context of the South African higher education sector. The available research has focused on traditional forms of fraud involving academics and students and applying fraud risk management strategies to prevent such fraud or research fraud and plagiarism, which adversely impact the integrity of the higher education sector (Moeti and Mokubane, 2016, Waghid and Davids, 2019). Hence, there remains a paucity of academic literature on occupational fraud within the South African higher education sector relating to the professional support sector within higher education thereby indicating an area of limited focus specifically on determining how fraud awareness may support an anti-fraud culture so as to prevent occupational fraud.

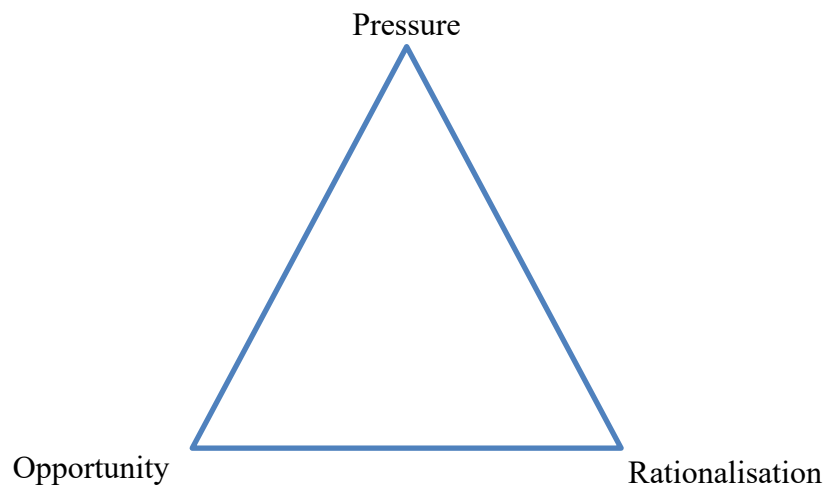
## **2.17 Theoretical Frameworks**

This study will be underpinned by two relevant and applicable frameworks being Cressey's fraud triangle theory (1953) as well as Schein's organisational culture model (1985) (Machado and Gartner, 2018, Schein, 1985).

### **2.17.1 Fraud Triangle Theory**

The fraud triangle theory is a seminal study in criminology that originated as a hypothesis put forth by Cressey (1953 cited in Machado and Gartner, 2018, pp.63-64). The results of the research was published in 1973 and remains a widely used model to explain occupational fraud (Sujeewa and Dharmaratne, 2018). Hence, some authors make reference to 1953 or 1973 when applying the fraud triangle model. In addition, the fraud triangle theory (1953) is a widely accepted theory used to explain incentives and deterrents relating to acts of fraud so as to develop fraud prevention models.

This three step (triangular) process has been used by many researchers to explain trust violations based on an individual's position of trust (Abdullahi and Mansor, 2018, Gartner and Machado, 2018, Kumar et al., 2018). The three elements of the fraud triangle are evidenced in Figure 2.1.



**Figure 2.1: Fraud triangle**

Adapted from (Gartner and Machado, 2018)

According to the fraud triangle theory by Cressey (1953 cited in Gartner and Machado, 2018, pp.63-64):

“Trusted persons become trust violators when they conceive of themselves as having a financial problem that is non-shareable financial and are aware this problem can be secretly resolved by violation of the position of financial trust, and are able to apply their own conduct in that situation verbalizations which enable them to adjust their conceptions of themselves as users of the entrusted funds or property.”

The pressure or motive maybe due to various factors, such as work or personal pressure, such as unrealistic targets or living beyond one’s means. The opportunity presents itself once a person is in a position of trust, aware of weaknesses in the control environment and has the technical knowledge to commit the fraud. Rationalisation refers to the individual’s justification through attitude and thought process that the fraudulent act is warranted. Moreover, for fraud to occur, all three elements must be present. If one of the three elements is not present then fraudulent action will not be committed (Gartner and Machado, 2018). Furthermore, within

each element there are many different potential red flags that may be visible in the context of fraudulent activity. Research findings by Gartner and Machado (2018) conducted in the context of the Brazilian banking sector support Cressey's fraud triangle theory (1953). The findings confirmed that breaking financial trust is based on the simultaneous presence of all three elements of the fraud triangle (Machado and Gartner, 2018).

Research findings by Abdullahi and Mansor (2018) also showed a positive relationship between the fraud triangle theory as put forth by Cressey in 1953 and public sector fraud in Nigeria. Cressey's (1953) model of the fraud triangle was even expanded on to propose the fraud diamond theory put forth by Wolfe and Hermonson (2004 cited in Sujeewa and Dharmaratne, 2018 , p.54), which adds a fourth element of "capability" to the model. Capability is described as one's position or role within an organisation as well the personal skills and ability to commit the fraud. Rustiarini et al. (2019) describe capability is a modification of the opportunity construct.

Findings from the study by Riney (2018) indicate that business excellence models together with the fraud triangle theory are measures to prevent and detect fraud. This offers a proactive approach to fraud prevention. The article highlights an organisation as a social system comprised of culture and institutional processes. It is suggested that reviewing the social system reveals weaknesses leading to opportunities to commit fraud. Hence, according to Riney (2018), business excellence models, which are informed by organisational culture, provide a flexible framework to prevent fraud by establishing responsibilities such as governance, ethics and leadership. Riney (2018) further maintain that business excellence models together with an understanding of the fraud triangle theory provide for a tool by leaders to prevent and detect fraud. Further research also posits that corporate culture influences all elements of the fraud triangle (Ocansey and Ganu, 2017)

### **2.17.3 Organisational Culture Model**

According to Schein's organisational culture model (1985) an understanding of culture is required prior to understanding an organisation. Moreover, organisational culture is described through the three major levels of cultural analysis as evidenced in Figure 2.2.

### 1. Artifacts

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- Visible and feelable structures and processes
- Observed behaviour - difficult to decipher

### 2. Espoused Values

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- Ideals, goals, aspirations
- Ideologies
- Rationalisations - may or may not be congruent with behavior and other artifacts

### 3. Basic Underlying Assumptions

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- Unconscious, taken-for-granted beliefs and values - determine behaviour, perception and thought and feeling

**Figure 2.2: Levels of organisational culture (Schein, 1985)**

Adapted from (Schein and Schein, 2017)

According to Schein and Schein (2017), organisational culture can be analysed at three main levels: ‘(1) visible artifacts, (2) espoused beliefs, values, and behavioural norms, and (3) taken-for-granted basic underlying assumptions’ all of which are interrelated. All three levels together make up organisational culture with the ‘basic underlying assumptions’ being the foundation or core of organisational culture, the ‘espoused values’ are not directly observable but lead to the justifications of employee behaviour and influences the level of ‘artifacts’, being the visible employee behaviours and structures within an organisation that are often hard to explain.

Furthermore, an understanding of all three levels together leads to understanding of the pattern and behaviours so as to successfully overcome any internal and external challenges or bring about change to organisational culture. According to Schein and Schein (2017), organisations develop substantial history which influences its present culture. Hence, organisational change requires an understanding of an organisations past. Successful organisational change that occurs at the level of ‘espoused values’, leads to shared employee behaviour and values that influences the level of unconscious values and beliefs (basic underlying assumptions) as well as the visible behaviours within an organisation.

Research provides support for applying Schein's 1985 model of organisational culture to fraud prevention (Harjoto, 2017, Wicaksono and Urumsah, 2017). Wicaksono and Urumsah (2017) applied Schein's organisational culture model (1985) to understand factors that influence occupational fraud within the Indonesian context. The findings suggest that organisational culture, as a system, guide employees to behave ethically as well as support organisations achieve its goals. Furthermore, organisational culture was the best approach to prevent fraud (Wicaksono and Urumsah, 2017). Research by Harjoto (2017) focused on the relationship between corporate ethical culture and the likelihood of fraud. The findings show that positive corporate culture is crucial in preventing corporate fraud (Harjoto, 2017). In addition, the research by Ginting and Panggabean (2019) also applied Schein's model of organisational culture (1985) to support fraud detection.

Researchers have previously applied the organisational culture model to South African higher education institutions (Njenga, 2018, Wiseman, Ngirande and Setati, 2017). However, from a review of academic literature using databases such as Emerald Insight, EBSCOhost and Google Scholar (2015-2020), this study appears to be the first that will be applying the organisational culture model (Schein, 1985) from the angle of fraud prevention to a South African higher education institution. Hence, it is hoped that this study will bridge the knowledge gap from the angle of fraud prevention by applying the organisational culture model (Schein, 1985) to a South African higher education institution.

Workplace culture informs the way individuals interact with each other and respond to externalities. However, often a change in business practices within the context of a given culture maybe needed and not necessarily a change in culture (Schein, 2010). Hence, Schein's organisational culture model (1985) together with Cressey's fraud triangle model (1953) have been drawn on to present an interesting angle to examine the applicability of the models from a fraud awareness and prevention perspective.

Drawing on the fraud triangle theory by Cressey (1953 cited in Machado and Gartner, 2018, pp.63-64) and organisational culture model (Schein, 1985), the researcher has identified the gap

in relation to the role of fraud awareness in preventing occupational fraud through an anti-fraud culture.

The research by Hauser (2019) highlights the importance of employee anti-corruption training so as to promote corporate culture that discourages employee justification of corruption. In addition, relevant legislation and guidelines to support and improve anti-fraud strategies and appropriate management response to whistle-blower reports is needed to enhance corporate organisational culture and promote employee commitment and satisfaction (Nwoke, 2019). Furthermore, Nwoke (2019) highlight the importance of training and awareness for all stakeholders so as to promote organisational culture that prevents fraud. Research by Kumar et al. (2018) maintain that organisational culture directly influences employee rationalisation of occupational fraud.

The afore-mentioned research provides further support to apply both the fraud triangle theory by Cressey (1953 cited in Machado and Gartner, 2018, pp.63-64) and Schein's organisational culture model (1985) to the current study.

## **2.18 Summary**

Globally occupational fraud is receiving increasing focus as the cost of which is far reaching to organisations as well as socio-economic development. Occupational fraud within the South African higher education sector, specifically the support sector, has received far less attention and this is demonstrated through the paucity of literature on the subject. From the current literature review, the adverse effects of fraud within the higher education sector, especially for developing countries have been highlighted. The current literature review shows that there is a need to examine the role of fraud awareness within the support or professional services in the higher education sector to promote anti-fraud culture so as to mitigate occupational fraud. The research methodology applied to the current study is detailed in chapter three.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter includes a detailed description of the research methodology applied to the current study. This study focuses on determining the role of fraud awareness within the department at the UKZN as a means to promote an anti-fraud culture and prevent occupational fraud. This chapter provides a description of the research methodology applied to the current study and sets out the methodical structure. The aim of the study is recapped on, followed by the research paradigm and research design and methods used by the researcher. The study setting and population as well as the rationale for using the census approach are discussed. In addition, the researcher describes the construction of the research instrument, being a questionnaire, and the data analysis thereof. The latter part of the chapter describes the reliability and validity of the study and considerations of research bias. Finally, ethical considerations are discussed and the chapter is concluded with key considerations and a summary of the research methodology followed in undertaking the research.

#### **3.2 Aim of the study**

This study aims to determine the role of fraud awareness within the Student Academic Administration department (the department) at UKZN so as to promote anti-fraud culture that supports the prevention of occupational fraud within the department. As described in chapter one, the objectives of the study were to:

1. Establish the existing occupational fraud risks within the department.
2. Determine the level of employee awareness relating to existing occupational fraud risks.
3. Find ways of promoting fraud awareness to prevent occupational fraud within the department.
4. Determine how increased fraud awareness can play a role in preventing occupational fraud and build an anti-fraud culture within the department.

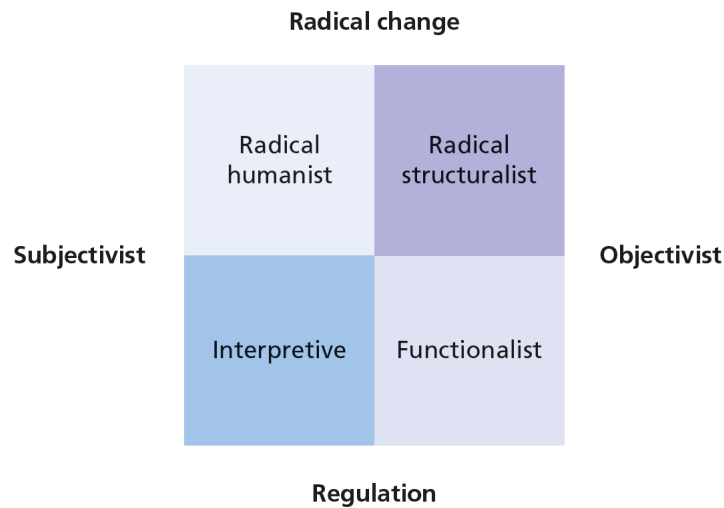
### **3.3 Research paradigm**

As highlighted above a research methodology directs the trajectory of the study. The research method and techniques applied to research are related to the research paradigm or framework adopted by the researcher (Saunders, Lewis and Thornhill, 2016). Research involves the system of beliefs and assumptions about the development of knowledge and this is referred to as the research philosophy adopted by the researcher (Saunders et al., 2016). Furthermore, these include the researcher's epistemological, ontological and axiological assumptions. The significance of a consistent set of assumptions is that it results in a credible research philosophy, which underpins a research study.

A positivist research philosophy puts forth that objective facts offer the best scientific evidence and is likely to result in the use of quantitative research methods (Saunders et al., 2016). Hence, the resultant research findings are likely to be objective and generalisable. Epistemologically a researcher would focus on determining observable and quantifiable facts and consistencies, as it is only phenomena that can be observed and measured that results in credible data. The researcher also adopts a value-free perspective to the research (Saunders et al., 2016). The interpretivist philosophy offers the possibility of creating new and a deeper understanding of a context as reality is a social construct that is perceived as subjective. Hence, as a means of inquiry, it depends on individual perspectives based on, amongst others, cultural background and circumstances (Saunders et al., 2016). Furthermore, an interpretivist approach to research requires that the researcher frame questions according to individuals' understandings during interviews and also requires the researcher's interpretation of responses.

In addition, Burrell and Morgan (1979 cited in Saunders et al., 2016, pp. 132-134) highlight a further dimension so as to differentiate between research philosophies which is depicted in Figure 3.1.





**Figure 3.1: Four paradigms for organisational analysis**

Source: Saunders et al. (2016)

Saunders et al. (2016) posit that most management and business research aims to suggest how organisational matters may be improved within an existing paradigm of how things are presently undertaken as opposed to radically challenging the current stance or position. Similarly Kothari (2009) maintain that applied research aims to obtain knowledge about a specific issue within an organisation so as contribute to the improvement thereof. Thus leading to problem solving.

Saunders et al. (2016) further put forth four social research paradigms to understand management and business research, being the functionalist, interpretive, radical structuralist and radical humanist paradigms. Each paradigm offers a differing interpretation of the social and organisational world. Moreover, the research paradigm applied determines the objectivism–subjectivism range of the research (Saunders et al., 2016).

Researchers that adopt an objectivist ontological approach make a concerted effort to avoid researcher bias during the research process which is in contrast to a subjectivist ontological approach (Creswell and Creswell, 2018, Saunders et al., 2016).

The functionalist paradigm positioned within the regulation and objective rational dimensions focuses on explanations and developing sets of recommendations within current structures (Saunders et al., 2016). Therefore, a key assumption of this paradigm is that organisations are rational entities within which there are rational explanations that offer solutions to rational problems. Furthermore, research undertaken from within the functionalist paradigm is likely to be based on a positivist philosophy. Hence, according to Saunders et al. (2016), this type of research is described as positivist-functionalist.

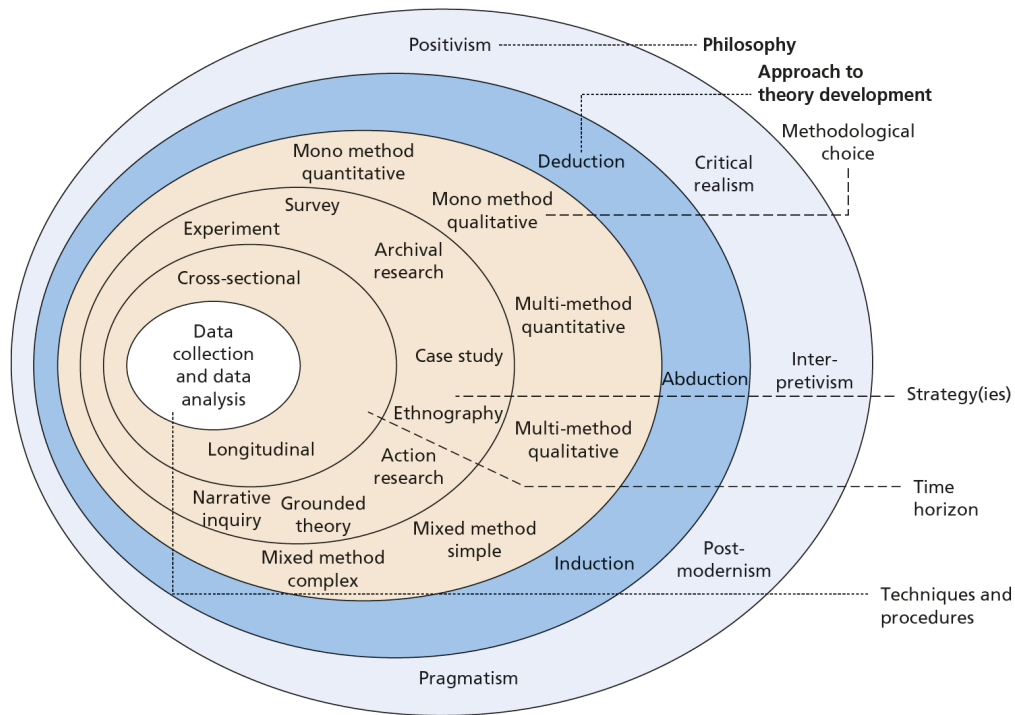
After having considered the above, the researcher's position for the current study falls within the regulatory perspective and the ontological approach adopted is one of objectivism. Hence, the research paradigm of the current study can be referred to as positivist-functionalist. The positivist viewpoint has been selected due to its emphasis on its more structured methodology so as to facilitate replication and support more consistent business decisions (Saunders et al., 2016). The researcher views the positivist approach as suitable given the aim of the research and the context thereof. The positivist philosophy helps to generate knowledge that is objective and provides for a more plausible method of making more informed management and business decisions, as compared to an interpretivism philosophy. In addition, given the focus and context of the current research, the researcher views the social reality within the department as being external to and independent of individuals. This is because the current study is attempting to determine the role of fraud awareness to promote a common anti-fraud culture, based on shared professional standards and values by employees so as to prevent occupational fraud within the department.

Given that the researcher has adopted a positivist or a positivist-functionalist paradigm, a quantitative approach will be more suitable to data collection (Saunders et al., 2016).

### **3.4 Research design and methods**

Research design considers the research objectives and the availability of time and resources to the research. The research design has influence on the reliability of the study and it can be described as the foundation of the research (Kothari, 2009). "The research design is the

conceptual structure within which research is conducted; it constitutes the blueprint for the collection, measurement and analysis of data.” (Kothari, 2009, p.31). According to Jonker and Pennink (2010) sound research design goes beyond only considering the research methods. Instead it links the ‘building blocks’ of the research theory, question and context and methodology to form a research design which underpins the entire study. Furthermore, Creswell and Creswell (2018) maintain that the research plan involves the bringing together of the research philosophy, design, and specific research method. Therefore, central to the research plan is the research design and method to answer the research question. According to Saunders et al. (2016) the research design is the plan that guides how the research question(s) will be answered. The ‘research onion’ as illustrated in Figure 3.2 offers a holistic illustration of a research plan (Saunders et al., 2016).



**Figure 3.2: The research onion**

Source: Saunders et al. (2016)

The concept of the ‘research onion’ put forth by Saunders et al. (2016) and illustrated in Figure 3.2 has been used to inform the current research design. The current study aims to determine whether increased fraud awareness may promote anti-fraud culture within a department at UKZN. The relationship between the variables being fraud awareness and anti-fraud culture will be examined using objective theories. An objective and measurable research instrument, administered via an online self-completed questionnaire, has been used to collect the primary data. This also facilitated quantifying the primary data obtained. This approach to the primary data collection added to the validity and reliability of the study. Thus providing an objective and sound basis relating to the data analysis process and resultant research findings. Hence offering reliable findings to hopefully inform management decisions regarding occupational fraud risk management within the department.

The two key research designs are based on quantitative and qualitative methods (Kothari, 2009, Saunders et al., 2016). A quantitative study has been described as “an approach for testing objective theories by examining the relationship among variables. These variables, in turn, can be measured, typically on instruments, so that numbered data can be analysed using statistical procedures.” (Creswell, 2013, p.32). In contrast, “a qualitative study is an approach for exploring and understanding the meaning individuals or groups ascribe to a social or human problem. The process of research involves emerging questions and procedures, data typically collected in the participant’s setting, data analysis inductively building from particulars to general themes, and the researcher making interpretations of the meaning of the data.” (Creswell, 2013, p.32).

### **Quantitative approach**

Both methods were evaluated and a quantitative research design has been selected for this study so as to ensure that the research findings are reliable and valid.

According to Saunders et al. (2016) a survey strategy allows for the collection of data that can be analysed quantitatively using descriptive and inferential statistics. Moreover, surveys using questionnaires are widely used as it allows for the collection of standardised data in an economical way and allows for easy comparison (Saunders et al., 2016). This in turn facilitated

objective research findings that were able to be generalised to the entire department based on the present context.

Two commonly used designs in quantitative research are surveys and experiments (Creswell and Creswell, 2018). According to Creswell and Creswell (2018, pp.49-50) “Survey research provides a quantitative or numeric description of trends, attitudes, or opinions of by studying a sample of that population.”. Furthermore, it includes cross-sectional and longitudinal studies using questionnaires or structured interviews for data collection so as to make generalisations from a sample to a population Fowler (2008 cited in Creswell and Creswell, 2018 p.50). Survey designs assist researchers to answer three types of questions as described by Creswell and Creswell (2018) as being:

- (a) Descriptive questions.
- (b) Questions about the relationships between variables.
- (c) Questions about predictive relationships between variables over time.

The research design of the current study has been guided by the above highlighted literature on research design by (Creswell and Creswell, 2018, Saunders et al., 2016).

In addition, given the current context within which this study was conducted, being the recent COVID-19 pandemic and the specific requirements relating to social distancing, a quantitative study was best suited to the current research in terms of the primary data collection and analysis.

Furthermore, the study was conducted with limited resources and within a specific timeframe. A quantitative study supported data collection across all employee levels within the department and across UKZN campuses. The collected data was then analysed in an efficient and reliable manner. In addition, data was able to be collected from the entire target population at their convenience. The use of a questionnaire as the research instrument allowed for the quantitative description of data that was obtained at a given point in time (cross-sectional survey design) from the target population.

The researcher has examined the current literature review to identify accepted concepts and current findings by other researchers to formulate the research aim and objectives. In addition, the research method and techniques have been applied accordingly to ensure reliability of the current research findings.

### **3.5 Study setting**

Based on the current literature review, the reality of fraud has been acknowledged as a global concern in both the private and public sector. South Africa, being an emerging economy, is no exception and the adverse consequences of fraud in emerging economies are far greater. In addition, fraud has also permeated the higher education sector and much of the research on fraud at universities appears to still be evolving. From the literature reviewed for the period 2015 to 2020, there appears to be a general paucity of research undertaken from the angle of occupational fraud prevention through anti-fraud culture within the South African higher education sector, specifically within KwaZulu-Natal.

#### **Location**

Building from the study setting, the study will be conducted at a large public Higher Education Institution, known as the UKZN. Based on the current literature review much of the focus appears to be on academic fraud such as plagiarism, research misconduct and cheating with limited focus on occupational fraud from the context of professional services departments, such as student administration departments. The current research was therefore undertaken within the Student Academic Administration department at UKZN. The Student Academic Administration department at UKZN was selected as the study setting due to the potential of high fraud risks, as highlighted in chapter one, that exist within the department.

### **3.6 Study population and census approach**

The collection and analysis of data from an entire population is referred to as a census (Saunders et al., 2016). This is possible when the entire population is of a manageable size and the resources and time available are adequate. However, sampling is an effective alternative when it is impractical to survey the entire population or there are budget and time constraints that do

not allow for surveying the entire population (Saunders et al., 2016). Moreover, sampling is only effective when the sample is representative of the entire population.

The study followed a census approach whereby an entire ‘population’ of respondents was targeted within a specific space and timeframe. All 29 employees within the department were selected as the target census population given the manageable size of the target population and the adequate resources and time to perform a census approach.

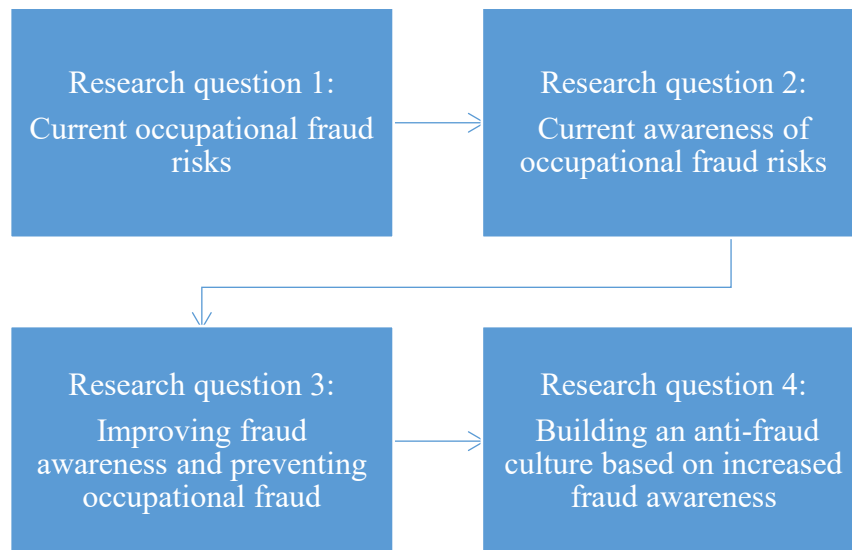
### **3.7 Construction of the research instrument**

This study used a questionnaire as the research instrument to collect the primary data. A key consideration is that the order and flow of the questions contained in the questionnaire should be logical to respondents (Bordens and Abbott, 2018, Saunders et al., 2016). In addition an advantage of online survey tools is that it presents various options to ensure that the visual presentation of the research instrument is simple and appealing to respondents (Saunders et al., 2016). The wording of each question should also be simple and well defined prior to commencement of data collection and the instrument should not be too long (Saunders et al., 2016). The commonly held view is that longer instruments reduce response rates as compared to shorter instruments (Bordens and Abbott, 2018, Saunders et al., 2016). This is because long questionnaires are likely to overburden or confuse respondents (Bordens and Abbott, 2018).

The instrument used in the current research was preceded by a cover letter and informed consent by each respondent which, amongst others, introduced the researcher, research aim and assurance of confidentiality and voluntarily participation. This was to build rapport and encourage participation as well as honest responses. The instrument consisted of section A and B which dealt with demographic and research questions, respectively. There were 6 and 14 questions in section A and B, respectively. Hence, the instrument consisted of 20 questions. Questions included in section B were structured to elicit responses based on concepts and themes emanating from the current literature review as well as the theoretical models of the study so as to answer the research objectives and questions. In addition, the questions focused on the constructs of the theoretical models so that the models could be applied via the instrument. The research instrument contained clear instructions that were closely aligned to each question or

statement. Thus ensuring a research instrument that was clear and facilitated ease of responses. The questionnaire was designed to include structured questions that were relevant to the study aim so as to encourage response rates. However, the instrument did allow for additional information to be provided by respondents at certain questions.

The questions and flow of the research instrument was constructed to obtain information as illustrated in Figure 3.3.



**Figure 3.3: Construction of research instrument**

### **3.8 Data collection**

#### **Administration of questionnaire**

The questionnaire was loaded onto an online platform known as Google Forms®. The distribution was administered via UKZN’s online notice system which supported advances in computer technology and access to email by respondents. A hyperlink to the online questionnaire was emailed via UKZN’s online notice system for the target population to access. Reminder notices were placed on UKZN’s online notice system for the target population to complete the questionnaire within the required period. This facilitated effective data collection and reaching of the entire target population within the timeframes of the current study. Furthermore, an online approach to primary data collection using technology and online



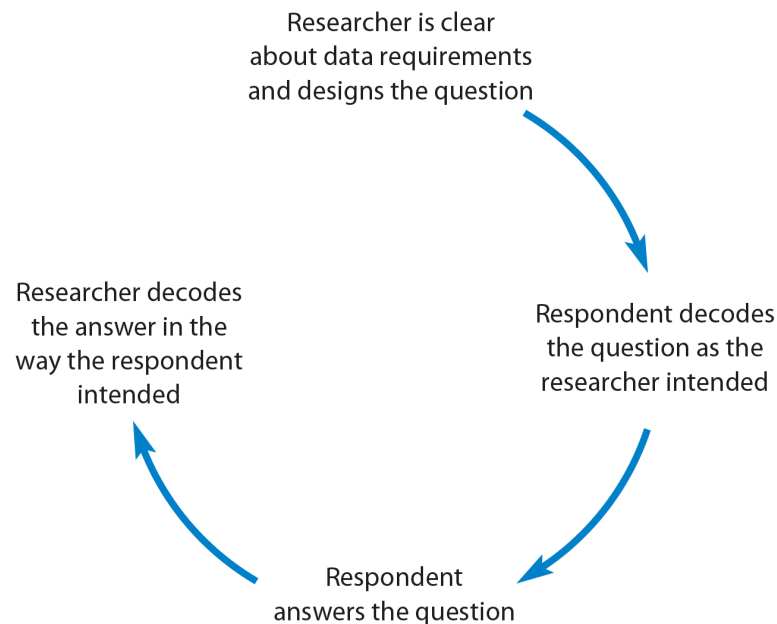
platforms, complied with the current regulations relating to social distancing due to the COVID-19 pandemic. The data collection commenced on 29 April 2020 and ended on 6 June 2020.

### **3.9 Reliability and validity of the study**

According to Saunders et al. (2016) reliability is a key characteristic of research however ‘good-quality’ research requires reliability and validity. Moreover, reliability refers to the extent to which data collection technique(s) result in consistent findings. This means that consistent conclusions would be reached by other researchers. Also that there is transparency in how findings were arrived at from the raw data thereby ensuring reliability of a study (Saunders et al., 2016). The authors further maintain that validity refers to the extent that data collection method(s) accurately measure what they were intended to measure and extent to which research findings actually relate to what they claim to relate to. The importance of reliability and validity in research has also been highlighted by other authors such as Bajpai (2018) and Bordens and Abbott (2018).

The current study considered reliability and validity of data by careful consideration of the secondary data used, such as type, content, individual(s) or organisations responsible for the publications, and period of journal articles included in the current literature review. In addition, the design of the research instrument, collection of data and analysis thereof also included measures to ensure reliability and validity. For instance, if respondents indicated that they were not employed within the department the design of the instrument did not allow them to proceed further. The use of a structured methodology (quantitative research undertaken through a research instrument) which was consistently administered to the entire target population added to reliability of the current study as it makes replication of this study possible. The use of a structured questionnaire reduced the possibility of interpretation bias by the researcher and added to the reliability of the study. Furthermore, the instrument was designed to include options if respondents were not aware of or able to provide a response. Thus adding to reliability of the actual data provided as this mitigated the possibility of respondents providing an uninformed response. The use of a self-completed instrument further added to the reliability of data as respondents would not have felt pressured or influenced to provide a socially desirable response.

Figure 3.4 illustrates the phases applied by the researcher in ensuring reliability and validity of the research and instrument as well as the data collected and analysed (developed from Foddy, 1994 cited in Saunders et al., 2016, p. 450).



**Figure 3.4: Stages that must occur if a question is to be valid and reliable**

Source: Saunders et al. (2016)

### **Pilot Testing**

According to Saunders et al. (2016) pilot testing of the instrument should not be overlooked and allows for the researcher to refine the instrument to reduce challenges that respondents may experience with answering questions thus limiting problems with recording the data. Moreover, a pilot test of the instrument allows, to a certain extent, an assessment of the questions' validity and the possible reliability of the data that will be collected both for individual questions as well as scales consisting of a number of questions (Saunders et al., 2016). The importance of pilot testing to improve, amongst others, questions, scales, format of the research instrument and primary data collected has also been highlighted by Creswell (2013).

The instrument was pilot tested so as to ensure a good response rate and mitigate limitations, such as unclear questions, associated with the instrument, data collection and analysis thereof. A pilot test of the instrument was administered with individuals available to the researcher at the time of the research to test for content and face validity of the instrument, ease of access to and use of the instrument as well as other suggestions regarding the instrument thereby adding to reliability and validity. Subsequent to considering feedback from the pilot test, the instrument was administered to the target population.

Careful consideration of the literature review to the current research findings and discussions with professionals helped to ensure internal validity and content validity, respectively. The researcher considered alternate form questions and measures of internal consistency, such as cronbach alpha, to further add to reliability of this study. Furthermore, the questions were clear and concise and directly related to the study aim and the constructs of the theoretical models forming part of this study. Thus adding to the reliability and validity of the study. The questionnaires were forwarded via a hyperlink to the official email addresses of the target population using UKZN's online notice system which also added to the reliability of the data collected.

### **3.10 Bias**

Adopting a deductive approach and as a result applying widely accepted theoretical models and academic literature to the current study was a bias the researcher had to be mindful of. This was mitigated in the design of the research instrument through for instance the objective phrasing of questions, scale used and allowing for alternative responses by respondents. Hence, minimising researcher bias and allowing for objective research findings. All individuals from the target population did not participate in the current study. Hence, the effect of response bias was reported on such as the number of non-respondents was disclosed and the possibility that their responses may have changed the current research findings. Furthermore, the measures to ensure reliability and validity also helped to guard against researcher bias.

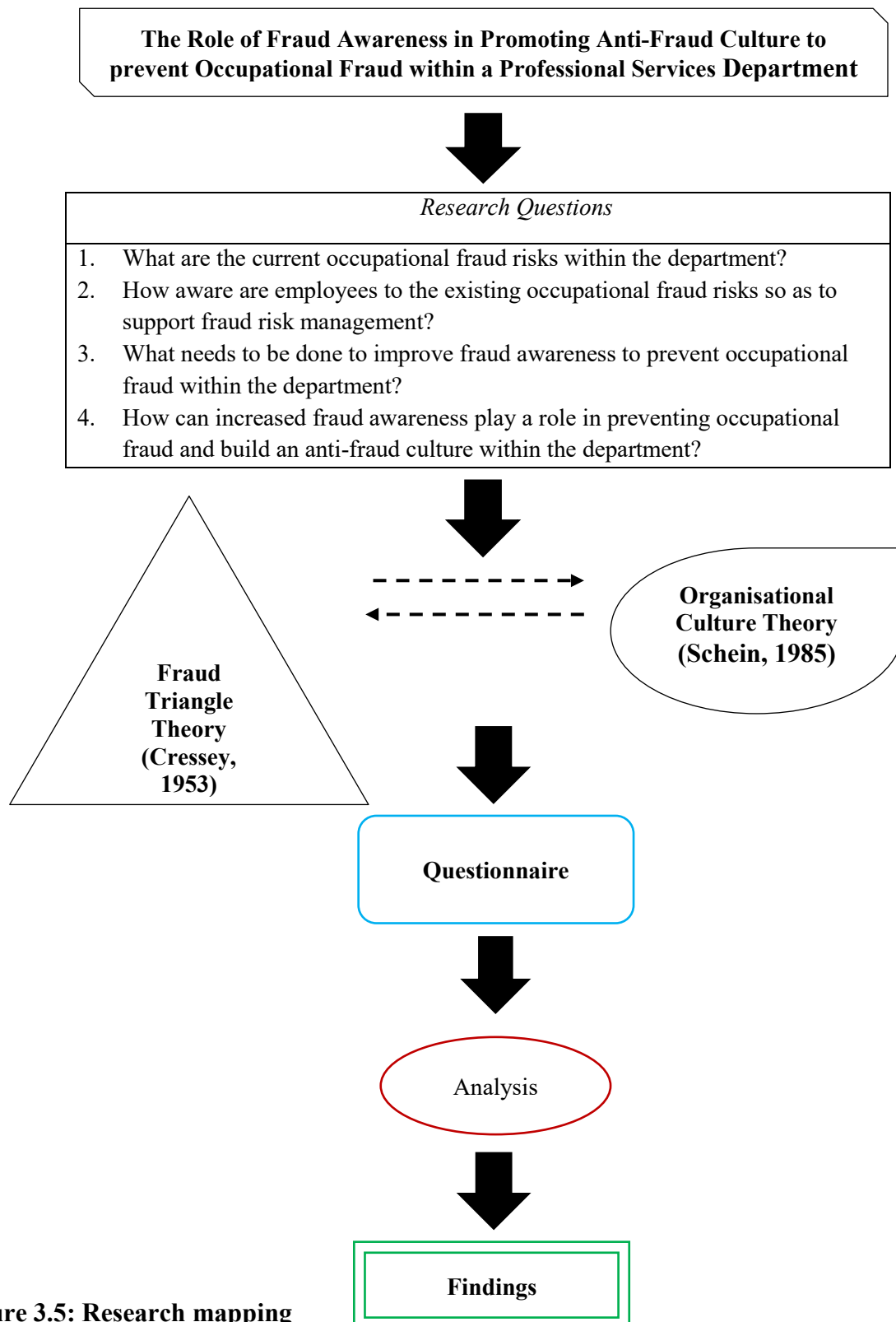
### **3.11 Data analysis**

A quantitative study was conducted using descriptive frequency analysis which supported the collection and analysis of data. The data was downloaded from Google Forms® into Microsoft Excel and forwarded to a statistician to perform a reliability testing. Chronbach's alpha reliability testing for reliability and consistency of data was performed.

Statistical analysis was undertaken using Microsoft Excel. The use of Microsoft Excel to conduct the frequency analysis was suitable given the target population size of 29. Frequency analysis was used to illustrate and analyse the number of occurrences based on the specific response being analysed. For instance, respondents' understanding of fraud was analysed based on the number of responses to each mutually exclusive category to determine whether or not respondents understood the actions that constitute fraud. The results have been visually illustrated using tables as well as pie, bar and column graphs.

### 3.12 Research mapping

The research map below illustrates the research process of the current study.



**Figure 3.5: Research mapping of the study**

The research map in Figure 3.5 illustrates the research process followed to address the research questions as well as the two theoretical frameworks applied to the current study.

### **3.13 Ethical considerations**

Prior to commencing with the data collection, a gatekeeper's letter was requested from UKZN which is the institution where the research was undertaken. Once the gatekeeper's approval to undertake the research at UKZN was obtained, an application for ethical clearance was submitted to UKZN's Research Ethics Committee. In addition, supporting documentation such as the gatekeepers consent letter and the proposed research questionnaire was submitted to the University Research Ethics Committee to ensure that the proposed research and intended questions were not of a sensitive or unethical nature. After approximately one month full ethical clearance was obtained (HSSREC/00001261/2020).

The University's research code of ethics was adhered to throughout the research, for instance requirements relating to handling, maintaining and storage of the data. Data collection was only undertaken subsequent to full ethical approval was granted.

To demonstrate compliance with research ethics, a cover letter, noting the purpose of the research, confirmation of anonymity and confidentiality of individual responses and informed consent was included as part of the research instrument. A hyperlink to the research instrument and the gatekeepers consent letter was placed on UKZN's online notice system for the target population to access.

Respondents were requested to provide informed consent and no responses were sourced without the informed consent from respondents. Respondents were free to clarify any concerns that they may have had before participation with either the researcher, researcher's supervisors or UKZN's Research office. All data was kept confidential and anonymous and no identifying details were required from respondents. Furthermore, the researcher was mindful of requirements relating to researcher ethics and high standards of ethical conduct throughout this study.

### **3.14 Summary**

The current chapter discussed the research methodology, techniques and justification thereof by the researcher. The research design, population and census approach, selection of research instrument and construction thereof and collection of data. The concept of data analysis and technique used was highlighted as chapter four further describes the data analysis and results. The considerations relating to reliability and validity of the study, types of bias encountered and mitigation thereof as well as the consideration of ethics as a constant thread throughout the current study were discussed in the latter part of this chapter. Chapter four follows on from chapter three with a detailed presentation and discussion of the data analysis and descriptive results as well as its association to the literature review findings from chapter two.

## **CHAPTER FOUR**

### **PRESENTATION OF RESULTS AND DISCUSSION**

#### **4.1 Introduction**

This chapter provides an overview of the current research findings by presenting the results using descriptive analysis. The aim of the chapter is to provide a detailed analysis and discussion of the overall responses to the questions included in the questionnaire in relation to the main research objectives. The questionnaire consisted of 20 questions (two sub-sections) that were constructed based on the research objectives and theoretical frameworks applied to the current study. The results are primarily presented in the form of graphs, tables and charts for ease of reference and presentation. The chapter concludes by highlighting the application of the theoretical frameworks used in the current study.

#### **4.2 Recap of Research Questions and Objectives**

The research objectives of the study was to:

1. Establish the existing occupational fraud risks within the department.
2. Determine the level of employee awareness relating to existing occupational fraud risks.
3. Find ways of promoting fraud awareness to prevent occupational fraud within the department.
4. Determine how increased fraud awareness can play a role in preventing occupational fraud and build an anti-fraud culture within the department.

The questions that the study wished to answer included:

1. What are the current occupational fraud risks within the department?
2. How aware are employees to the existing occupational fraud risks so as to support fraud risk management?
3. What needs to be done to improve fraud awareness to prevent occupational fraud within the department?
4. How can increased fraud awareness play a role in preventing occupational fraud and build an anti-fraud culture within the department?



### 4.3 Description of the census

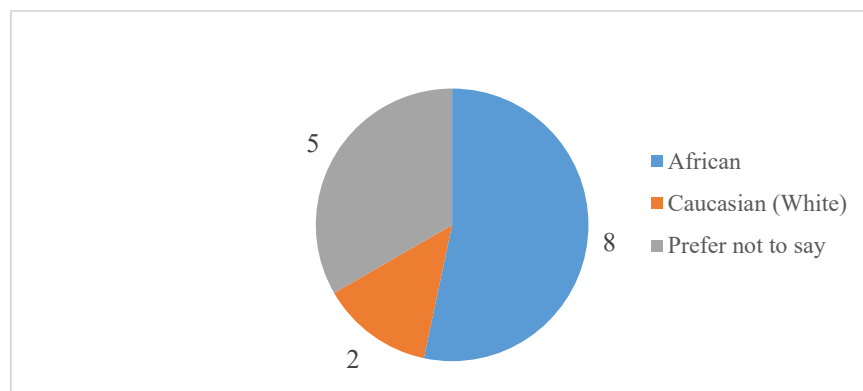
The questionnaire was directed to a total population of 29 employees within the department, being the target population, via UKZN's notice system for the target population to access. Fifteen responses were received amounting to approximately a 52% response rate (of the target population) subsequent to which the survey was closed.

### 4.4 Demographic characteristics

This section summarises the demographic characteristics of the respondents and is illustrated with the aid of graphs and tables. The demographic variables of the current study as illustrated in Table 4.1 and Figures 4.1 and 4.2 below differs significantly from the study undertaken by Moeti and Mokubyane (2016) amongst academic staff at three South African universities where the gender of respondents was more or less equally distributed. In addition, approximately 75% of respondents had over 10 years of service and all respondents had a post-graduate qualification.

#### 4.4.1 Race

Figure 4.1 depicts the race composition of the respondents.



**Figure 4.1: Race composition of respondents**

The majority of respondents were African (8) whilst a significant number (5) of respondents preferred not to indicate their race. The minority of respondents (2) were Caucasian. This statistic indicates that possibly one out of every two respondents were cautious with regard to

providing identifiable characteristics when providing information relating to occupational fraud prevention in the department.

#### 4.4.2 Demographic profile in terms of gender and age category

Table 4.1 summarises the demographic profile of respondents based on gender and age category.

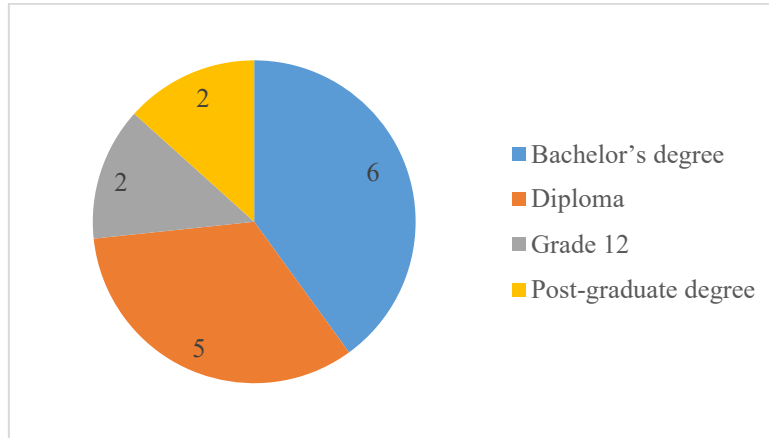
**Table 4.1: Gender and age profile**

<b>Demographic profile</b>	<b>Frequency</b>
<b>Gender</b>	
Female	7
Male	3
Prefer not to say	5
<b>Total</b>	<b>15</b>
<b>Age category (years)</b>	
18 – 24	0
25 – 34	6
35 – 44	5
Over 45	4
<b>Total</b>	<b>15</b>

The majority of the stated respondents were female (7). The minority of respondents were male and a significant number of respondents (5) preferred not to provide their gender. This statistic can also indicate as per previous section that that one out of every two respondents were cautious with regard to identifiable characteristics. The majority of respondents were over the age of 35. This can imply that they are experienced and have been in the working environment for several years.

### 4.4.3 Level of education

Figure 4.2 illustrates the education level of the respondents.

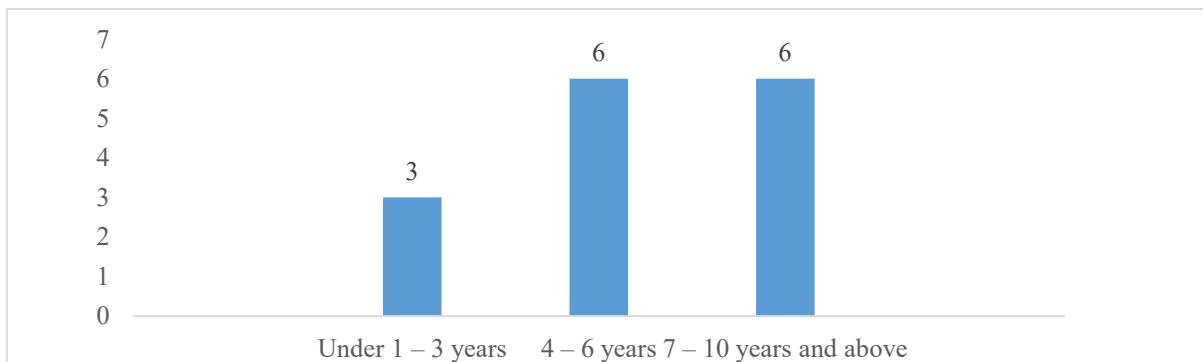


### 4.4.4 Figure 4.2: Education level

The majority of respondents (13) have a qualification post-grade 12 with two respondents having post-graduate qualifications. This indicates a high level of education and knowledge within the department based on the respondents' level of education.

### 4.4.5 Period of employment

Figure 4.3 shows respondents' period of employment within the department.

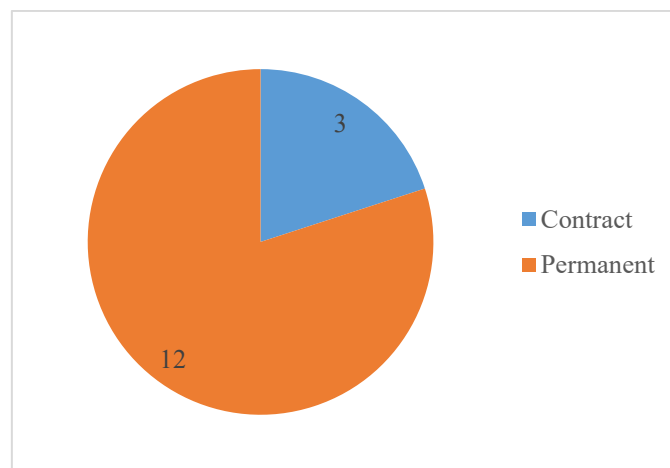


**Figure 4.3: Number of years employed within the department**

The majority of respondents (80%) were employed within the department for a period of four years and beyond. This is a useful statistic as it indicates that the majority of respondents have been employed within the department for a relatively long period and would have a fair understanding of the operational environment and culture within the department.

#### 4.4.6 Employment status

Figure 4.4 shows the employment status of respondents within the department.



**Figure 4.4: Overview of employment status**

The majority of respondents (80%) indicated that they were permanently employed within the department. This indicates that the results of the current study were based more on the perception of permanent staff as compared to contract staff within the department.

#### 4.5 Reliability analysis

A reliability analysis of the research instrument was performed using Cronbach alpha reliability testing. Cronbach alpha is a measure of the consistency of a research instrument (Creswell and Creswell, 2018). According to Creswell and Creswell (2018) the research instruments' internal consistency is important because the instrument scale items should be measuring the same underlying construct to be correlated with each other and therefore form a reliable scale. Internal

consistency is quantified using the Cronbach's alpha ( $\alpha$ ) value. The value of which ranges between zero and one, with optimal values of internal consistency ranging between 0.7 and 0.9 (Creswell and Creswell, 2018). Ursachi, Horodnic and Zait (2015) posit that a generally accepted rule is that an  $\alpha$  value of 0.6 to 0.7 indicates an acceptable level of reliability.

Reliability analysis was performed on all scaled response questions using the Cronbach alpha test. All 15 responses relating to the scaled questions were seen as valid and reliable using the Cronbach alpha testing. The results of which are summarised in Table 4.2.

**Table 4.2: Cronbach alpha reliability scoring**

<b>Section</b>	<b>Cronbach's Alpha</b>	<b>No of Items</b>
B1	0.881	7
B2	0.846	4
B4	0.708	2
B6	0.692	5
B7	0.744	4
B8	0.699	7
B9	0.693	6
B11	0.897	5
B12	0.816	5
B13	0.942	7
B14	0.932	7

Most of the sections were ranked as reliable (0.7 and above). There were three sections (B6, B8 and B9) that were slightly below the 0.7 mark. However, this can be seen as normal for a newly constructed research instrument where a score of 0.6 or above can be regarded as acceptable. Furthermore, the response rate of 52% was based on 15 responses from a small target population (29 employees) due to the specific focus of the current research. The current research instrument is a newly constructed instrument hence the researcher has used a reliability score of 0.6 as an acceptable level of reliability of the research instrument. Overall the research instrument can be regarded as reliable and valid ( $\alpha=0.6$ ) to assess the constructs based on which the questionnaire was developed.

#### **4.6 Descriptive frequency analysis**

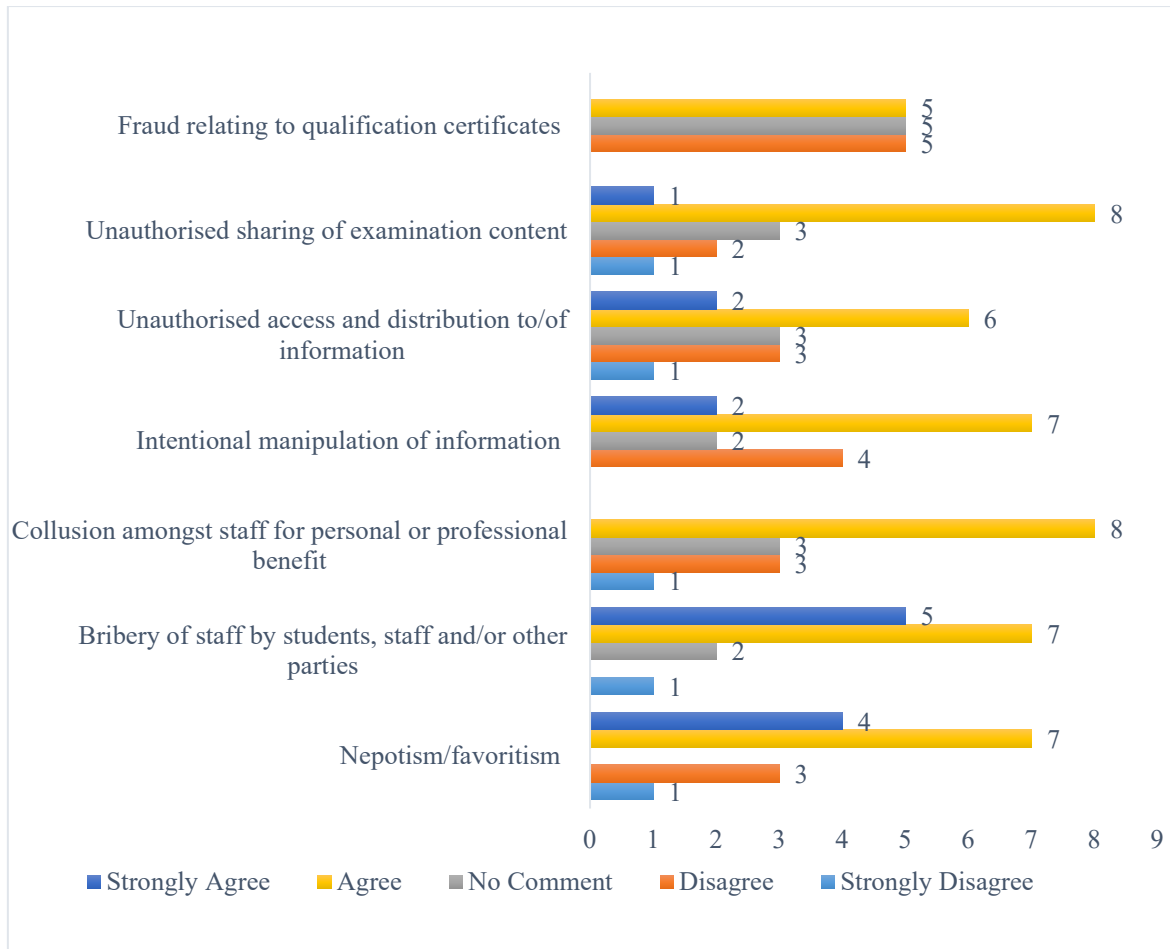
The data has been analysed using descriptive frequency analysis so as to summarise the data collected in a meaningful manner. The frequency analysis will be presented through graphs and tables in relation to the four research objectives. This will allow for a detailed discussion of the results relating to each research objective.

#### **4.7 Objective one: To establish the existing occupational fraud risks within the department**

The current study reveals that bribery of staff by students, staff and/or third parties was the main type of occupational fraud risk that can possibly exist within the department. In addition, except for fraud relating to qualification certificates, the majority of respondents were in agreement (strongly agreed and agreed) that each type of occupational fraud risk was likely within the department. Respondents were of the opinion that the applications and information office had the highest potential for occupational fraud risk. These findings are presented and discussed in detail under section 4.7.1 and 4.7.2.

##### **4.7.1 Main types of occupational fraud risks that may exist in the department**

The main types of occupational fraud risks that respondents indicated the department may experience are summarised in Figure 4.5.



**Figure 4.5: Ranking of main occupational fraud risks**

The majority of respondents (12) were in agreement (strongly agreed and agreed) that bribery of staff by students, staff and/or third parties was the main type of occupational fraud risk that exists within the department. Corruption was found to be the most common fraud scheme in every global region, including Sub-Saharan Africa (ACFE, 2020). However, the current findings relating to bribery of staff by students differs from the findings by Moeti and Mokubyane (2016). Based on the finding by Moeti and Mokubyane (2016) a significant percentage (57%) of respondents were uncertain whilst 30% of respondents disagreed to strongly disagreed with the statement ‘bribery or buying-off of academic personnel by students’. In contrast, the majority of respondents from the current study were in agreement that the possibility of bribery was an occupational fraud risk within the department.

The next most likely occupational fraud risk was nepotism and favouritism. Eleven respondents (approximately 73%) were of the opinion that nepotism and favouritism posed an occupational fraud risk and one respondent strongly disagreed. Similarly findings by Moeti and Mokubane (2016) found nepotism and favouritism by academics when dealing with students to pose a significantly high academic fraud risk.

The current findings indicate that intentional manipulation of information and unauthorised sharing of examination content were also likely occupational fraud risks. In each instance the majority of respondents (9) were in agreement (strongly agreed and agreed). Disclosing of confidential information such as examination and test papers was also found to be a significant form of corruption in the study by Moeti and Mokubane (2016) with 100% of respondents sharing the same opinion. Tierney and Sabharwal (2017) also highlight the systemic presence of fraud specifically relating to examination and assessments. Similarly, Bajinath and Singh (2019) refer to the global challenge of examination scams with reference to India, Europe and America.

A fair amount of respondents (8) were also in agreement that collusion amongst staff for personal or professional benefit and the unauthorised access and distribution to/of information posed occupational fraud risks within the department. In addition, a noteworthy finding was respondents' opinion regarding the risk of fraud relating to qualification certificates was equally distributed whereby five respondents were in agreement, disagreement or provided no comment. It can be assumed that the five respondents that did not comment were not certain enough to either disagree or agree. It can therefore be assumed that the risk of fraud relating to qualification certificates may well present an occupational fraud risk within the department. The reality and seriousness of fraud due to fraudulent qualifications is a reality that has been widely reported on in the media (Maqhina, 2018, Magubane, 2018). The risk of fraud relating to qualifications has permeated various professions including senior executives and public officials (Thakali, 2016). In addition, allegations of such fraud risks at UKZN due to collusion between employees and students have been reported on in the media (Ndaliso and Masuku, 2017).

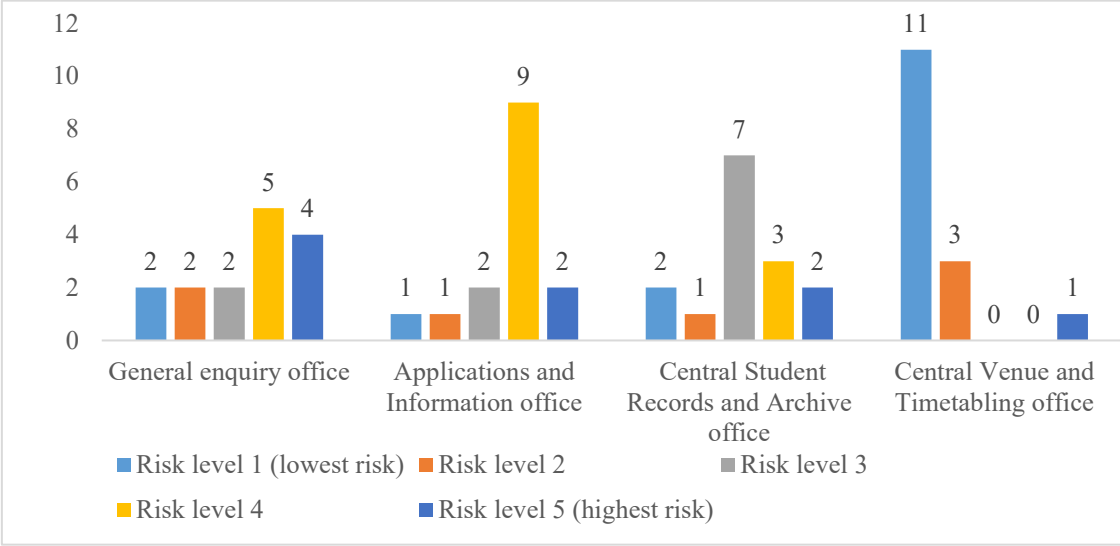


In a number of instances, respondents had no comment with regard to agreeing or disagreeing with the possibility of the specific occupational fraud risk. This indicates that respondents did not want to comment as they may have been unaware or uncertain of the risk. However, this highlights an area of concern relating to fraud awareness and the anti-fraud culture within the department. In particular, there were a relatively high number of respondents that preferred not to comment regarding the risk of fraud relating to qualification certificates (5).

Research supports the presence of the afore-mentioned occupational fraud practices as these, amongst others, were highlighted across employee levels and regions in the higher education sector (Chapman and Lindner, 2016). For instance, using occupational position for personal benefit, employee involvement in selling of student admissions, nepotism and changing of student grades or awarding degrees in return for favours or money. This supports the findings of the current study.

**4.7.2 Prevalence of occupation fraud risk within certain sections in the department**

Respondents were asked to rate the sections within the department on a scale of 1 (least likely) to 5 (most likely) in terms of occupational fraud risk. Figure 4.6 provides an overall summary of the probability of occupational fraud risk relating to each section within the department.



**Figure 4.6: The probability of occupational fraud risk per section within the department**

According to Figure 4.6 the risk of occupational fraud was ranked as the highest (risk level 4 and risk level 5) in the applications and information office, followed by the general enquiry office and the central student records and archive office. The central venue and timetabling office posed the lowest likelihood of occupational fraud risk according to the majority of respondents (11).

Corruption in the admission processes has been highlighted as one of the most prevalent forms of corruption within higher education in both developed and developing countries (Liu and Peng, 2015). The pressure to obtain admission to prominent universities further adds to the challenge of corruption faced by universities in developing countries, specifically to professional programmes, and to subsequently obtain a qualification once admitted to university (Mohamedbhai, 2016). For instance, once admitted to university, students are required to pass assessments and examinations so as to obtain a degree. This can lead to bribery or corrupt relations between students and university employees.

The current findings show that the risk of occupational fraud is pervasive across the department although at different levels. Furthermore, a higher degree of occupational fraud risk appears to exist in sections where there is increased employee administration and oversight of student related functions. For instance, the presence of occupational fraud risk is more likely in the applications and information office, which deals with student admissions, as compared to the central venue and timetabling office. This finding corresponds with the finding that bribery of staff by students, staff and/or third parties was the main type of occupational fraud risk that exists within the department. Tierney and Sabharwal (2017) highlight the inter-connectedness of corruption within a higher education college, which incentivises all stakeholders to not comply with ethically and legally required standards and policies. This in turn undermines the basis of the educational institution, which has an adverse impact on the culture.

#### **4.8 Objective two: To determine the level of employee awareness relating to existing occupational fraud risks**

The concept of fraud was understood by all respondents and there was general awareness of UKZN's REACH<sup>T</sup> institutional values by the majority of respondents. Although awareness of occupational fraud risks was generally encouraged within the department findings indicated that it was not consistently experienced by all respondents. The possibility of occupational fraud risks was highly likely within the department. Furthermore, occupational fraud risk management was not perceived to be part of all respondents' daily function or responsibility. The findings indicate that fraud awareness training and communication was not regularly provided. In addition, awareness of UKZN's Anti-Fraud and Corruption Plan 2018-2021 and related anti-fraud policies was found to be lacking.

The above findings are presented in 4.8.1 to 4.8.4 below and further discussed.

##### **4.8.1 Employee understanding of fraud**

Table 4.3 provides a summary of respondents' understanding of the actions that amount to fraud.

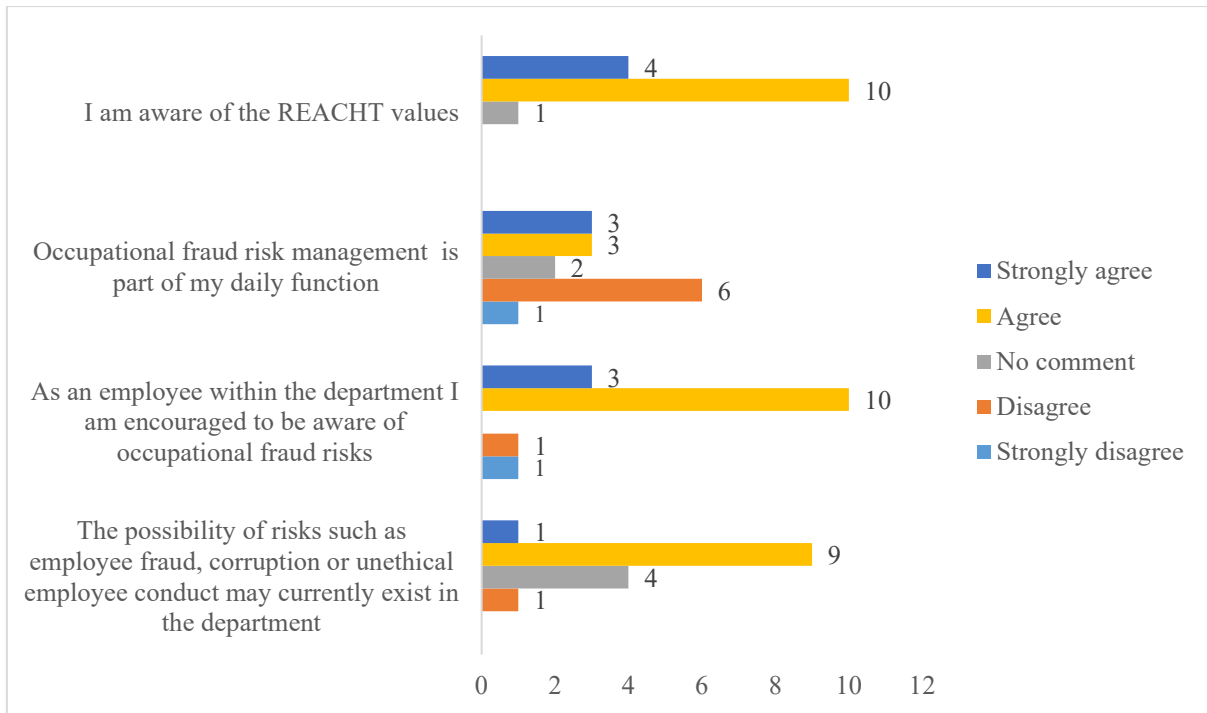
**Table 4.3: Respondents' understanding of fraud**

<b>Response</b>	<b>Frequency</b>
Yes	15
No	0
Uncertain	0
<b>Total</b>	<b>15</b>

All 15 respondents indicated that they understood the actions that amount to fraud. This implies that respondents were aware of the general concept of fraud.

##### **4.8.2 Level of employee awareness to occupational fraud risk probability and management**

Respondents described their response to each related statement.



**Figure 4.7: Level of employee awareness to occupational fraud risk probability and management**

Central to UKZN’s Strategic Plan 2017-2021 are the institution’s REACH<sup>T</sup> values. The REACH<sup>T</sup> values serve to create a value-driven organisational culture that empowers the university to achieve the institutional goals.

Based on the responses, awareness of the REACH<sup>T</sup> values was not an issue within the department. In addition, most respondents (13) were encouraged to be aware of occupational fraud risks. However, occupational fraud risk management was not perceived to be part of the daily function or responsibilities of most respondents (7) with two respondents being uncertain. The majority of respondents (10) agreed that the possibility of occupational fraud risk existed. The remaining respondents (5) either did not comment or strongly disagreed. This indicates that for every two respondents that agreed fraud risks existed within the department one respondent was likely to be reluctant to comment or disagreed.

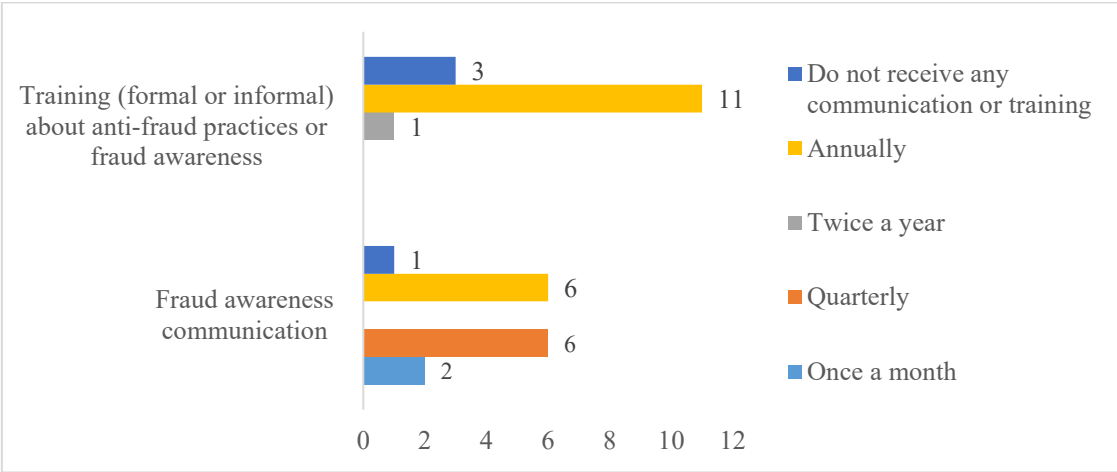
Therefore, whilst results indicate that there was a high level of awareness of UKZN’s REACH<sup>T</sup> values and employee awareness of occupational fraud risks was encouraged, occupational fraud

risk management had not translated to an individual responsibility. There also appeared to be a lack of awareness or reluctance to comment by some respondents on the existence of occupational fraud risks within the department. Research by Van der Wal et al. (2016) found that despite general awareness relating to integrity, employee awareness of the interconnectedness of internal processes, quality and integrity was found to be lacking. Van der Wal et al. (2016) suggest increased awareness training for employees to be aware or mindful of fraud and corruption risks within their operational environments and processes, such as inappropriate access to systems or procurement anomalies.

According to Chapman and Lindner (2016) fraud prevention, specifically at universities, may require the modification of structures and administrative procedures aimed at flattening structures to allow for increased transparency, access to information and oversight of institutional practices. However, the starting point to ensuring the integrity of higher education institutions is understanding fraud risks and the nature of fraudulent and corrupt practices.

**4.8.3 Frequency of fraud awareness training and communication**

Respondents were asked to indicate the frequency of fraud awareness training and communication within the department.



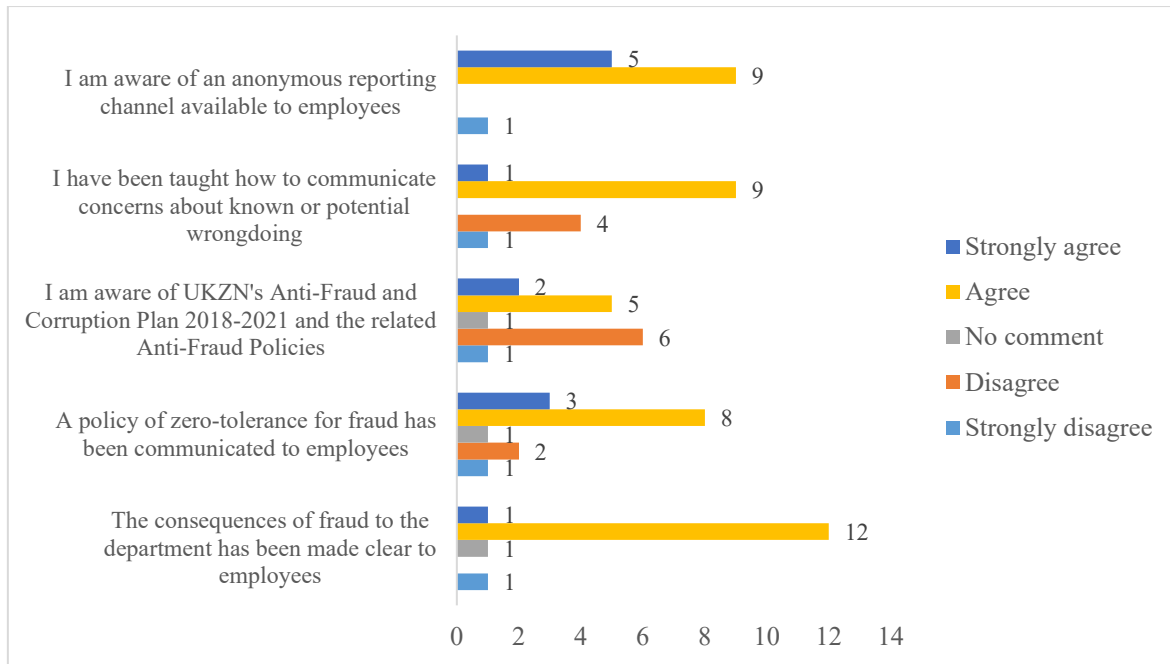
**Figure 4.8: Frequency of anti-fraud communication and training**

Figure 4.8 shows that fraud awareness training was an annual initiative as confirmed by majority (11) of the respondents. In addition, fraud awareness communication occurred either annually or quarterly according to most respondents. The above findings indicate that whilst fraud awareness training and communication does exist within the department, such training and communication was not conducted regularly and/or consistently. Research findings by Van der Wal et al. (2016) highlight the inconsistently delivered training programmes across public agencies. It suggests that if employee training is once-off and is an untargeted exercise it is highly unlikely to have any long lasting effect (Menzel 1997; Van Montfort et al. 2013 cited in Van der Wal et al., 2016 ,p 15).

Peltier-Rivest (2018b) highlight the importance of regular anti-fraud training and communication as part of compliance initiatives as it leads to increased awareness of fraud prevention and acceptance of organisational policies. In addition, regular training helps to reduce the rationalisation that employees may use to justify fraudulent actions. The training and communication content and message should be tailored to the specific stakeholder (Peltier-Rivest, 2018b). Similarly research by Hauser (2019) suggest that regular anti-fraud employee training is an effective way to prevent fraud. The value of anti-fraud training and awareness initiatives as part of focused anti-fraud measures has also been acknowledged by the private sector to prevent fraud in the Southern African region (Mykhalchenko and Wiegatz, 2019).

#### **4.8.4 Level of employee awareness of anti-fraud measures**

These statistics reflect respondents' awareness of current anti-fraud measures in the department.



**Figure 4.9: Level of employee fraud awareness to support anti-fraud culture**

The majority of respondents were in agreement relating to an awareness of UKZN’s anonymous reporting facility (14), had been taught how to communicate concerns about fraud (10), aware of a zero-tolerance policy for fraud (11) and aware of the consequences of fraud to the department (13). Although all respondents indicated that they were aware of UKZN’s anonymous reporting facility, five respondents indicated that they had not been taught how to communicate concerns of wrongdoing. The statistics shows that, although there is a general level of awareness of the anti-fraud measures within the department, the number of respondents that strongly agreed with each statement reflected in Figure 4.9 was relatively low. It can imply that respondents were not strongly convinced of the awareness measures. Hence, indicating that there is room for improvement to increase fraud awareness with the aim of preventing occupational fraud risks.

Employers have a responsibility to provide training to all employees to ensure that they are familiar with the organisation’s whistle-blowing protocols and arrangements so that employees are properly orientated on what to do or the processes to follow in reporting wrongdoing (Nwoke, 2019). This should be aligned to the relevant whistle-blowing legislation and

supported by appropriate organisational policies and culture that supports the reporting of wrongdoing or fraud within an organisation. Findings by the ACFE (2020) note that 50% of occupational fraud is reported by employees. This highlights the importance of employees being taught how to communicate and report suspected fraud or wrongdoing within an organisation. In addition, employee fraud awareness training on hotlines and reporting of fraud increased the likelihood of fraud detection through tip-offs as compared to organisations with no training ACFE (2020). Moreover, Peltier-Rivest (2018b) assert that regular communication about an organisation's compliance programme and implementation is important in preventing fraud and creating an atmosphere of trust. Such can include platforms for anonymous reporting mechanisms.

Furthermore, respondents' awareness of UKZN's Anti-Fraud and Corruption Plan 2018-2021 and related policies presents mixed opinions as an equal number of respondents were aware as well as not aware whilst one respondent did not comment. Hence, it can be assumed that awareness of UKZN's Anti-Fraud and Corruption Plan 2018-2021 and related anti-fraud policies is lacking for the majority of respondents (8).

The UKZN's Anti-Fraud and Corruption Plan 2018-2021 is a fundamental document that supports UKZN to achieve its vision and strategic goals set out in the university's Strategic Plan 2017-2021. All employees including management should be aware of the Anti-Fraud and Corruption Plan 2018-2021 and related policies so as to align their operational environments accordingly. Van der Wal et al. (2016) highlight the importance of institutionalising and implementing policies aimed at preventing fraud and corruption together with awareness as part of the anti-fraud programme. Research by Peltier-Rivest (2018b) highlight the strategic importance of regular anti-fraud training sessions as well as transparent communications by management.

The majority of respondents were not aware of UKZN's Anti-Fraud and Corruption Plan 2018-2021 and related anti-fraud policies. This indicates possible lack of alignment amongst the department's operations, employee actions and departmental culture through good governance which has been identified as an enabler to support the strategic goals of the university as set out in the UKZN Strategic Plan 2017-2021. This lack of alignment may present a risk to good



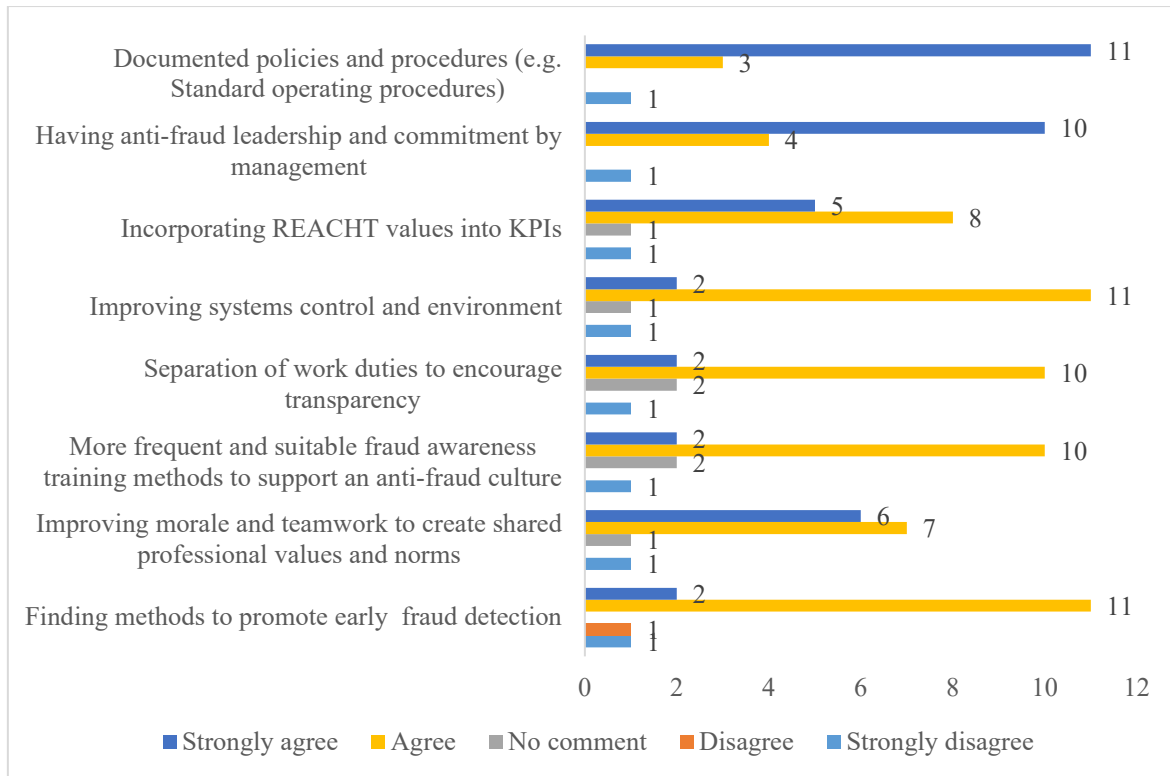
governance and the anti-fraud culture within the department so as to support operational plans. Furthermore, it has the potential to adversely impact the achievement of UKZN's vision, strategic goals and institutional culture. Research shows that integrity related policies are often challenging to implement across large public sector organisations due to the number of departments (Van der Wal et al., 2016). The implementation of integrity related policies therefore becomes a challenge. Van der Wal et al. (2016) suggest that increased awareness of the inter-connectedness of integrity, quality and internal processes is key to prevent fraud and corruption. Strong corporate culture was found to influence performance through improved execution, reduction of agency costs, empowerment of employees' consistent decision making in uncertain or challenging times (Graham, Harvey, Popadak and Rajgopal, 2015 cited in Ocansey and Ganu, 2017, p 104).

#### **4.9 Objective three: To find ways of promoting fraud awareness to prevent occupational fraud within the department**

Findings indicated that increased fraud awareness through fraud prevention initiatives was likely to prevent occupational fraud and promote an anti-fraud culture. Section 4.9.1 present the detailed findings and discussion.

##### **4.9.1 Initiatives aimed at improving fraud awareness to prevent occupational fraud**

This section describes respondents' opinions regarding ways to improve fraud awareness so as to prevent occupational fraud.



**Figure 4.10: Occupational fraud prevention strategies**

Figure 4.10 indicates that the majority of respondents were in agreement with each of the initiatives to improve fraud awareness so as to prevent occupational fraud. This finding indicates that the majority of respondents acknowledge the value of increased fraud awareness so as to reduce occupational fraud risks within the department.

The majority of respondents (14) were in agreement (strongly agreed and agreed), with more respondents being in strong agreement, that having documented policies and anti-fraud leadership and commitment by management were the two main ways to improve fraud awareness in the department. In addition, Figure 4.10 indicates that respondents strongly agreed that documented policies and processes would support occupational fraud prevention. This highlights the need for documented policies and processes as well as leadership and management support to improve fraud awareness within the department to prevent occupational fraud. The current findings are supported by other studies. Omar et al. (2016a) maintain that policies within the work environment are important to direct employee actions. Suh et al. (2018) highlight the importance of the ongoing presence of ethical leadership to promote an ethical

culture that prevents occupational fraud risks. Similarly, Burke and Sanney (2018) refer to the importance of ‘tone at the top’ in the context of educational institutions which also serves to decrease the individual rationalisation of fraudulent practices.

Improving morale and teamwork to create shared professional values and norms and incorporating REACH<sup>T</sup> values into key performance indicators were the next most likely ways that respondents strongly agreed would improve fraud awareness within the department. This finding shows that improved morale and teamwork was perceived to be important and is perhaps required in the department to create shared professional values aimed at preventing occupational fraud risks. Findings by Rispel et al. (2016) indicate that poor governance and corruption are mutually related and impact negatively on the morale of health care providers. These findings highlight the relationship between good morale and fraud prevention. Furthermore, formally incorporating the REACH<sup>T</sup> values into key performance indicators was likely to improve fraud awareness and promote fraud prevention within the department. Bendermacher et al. (2017) describe quality culture as organisational culture that includes shared values and commitment to quality. Moreover, quality culture requires both ‘hard’ (such as processes and quality management) and ‘soft’ (such as values, beliefs and commitment) aspects.

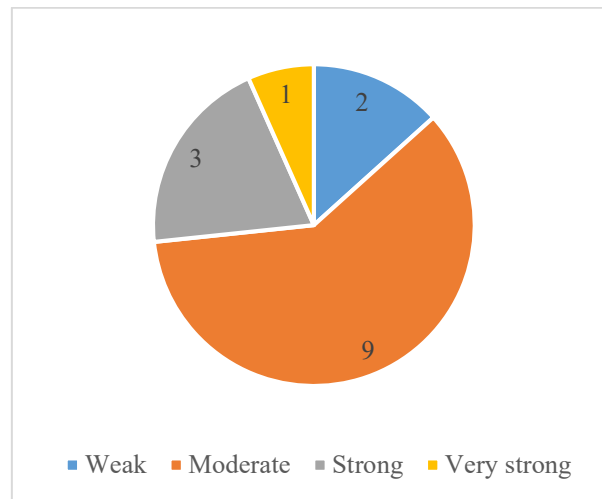
The findings indicate that more frequent and suitable fraud awareness training can improve fraud awareness to support an anti-fraud culture thereby preventing occupational fraud. This is a noteworthy finding as it highlights the possible lack of fraud awareness within the department. Similarly research findings by N’Guilla Sow et al. (2018) show that fraud awareness training was found to be one of least used fraud prevention measures. The research further highlighted the importance of effective and efficient fraud prevention measures such as fraud awareness training.

#### 4.10 Objective four: To determine how increased fraud awareness can play a role in preventing occupational fraud and build an anti-fraud culture within the department

The current study indicates that there is a moderate anti-fraud culture within the department. Increased fraud awareness is likely to improve the anti-fraud culture by strategic initiatives aimed at the three levels of culture within the department put forth in Schein's organisational culture model (1985), being artifacts, espoused values and underlying assumptions.

##### 4.10.1 Current strength of Anti-fraud culture at the department

Figure 4.11 below depicts respondents' perception of the anti-fraud culture within the department



**Figure 4.11 Current strength of Anti-fraud culture at the department**

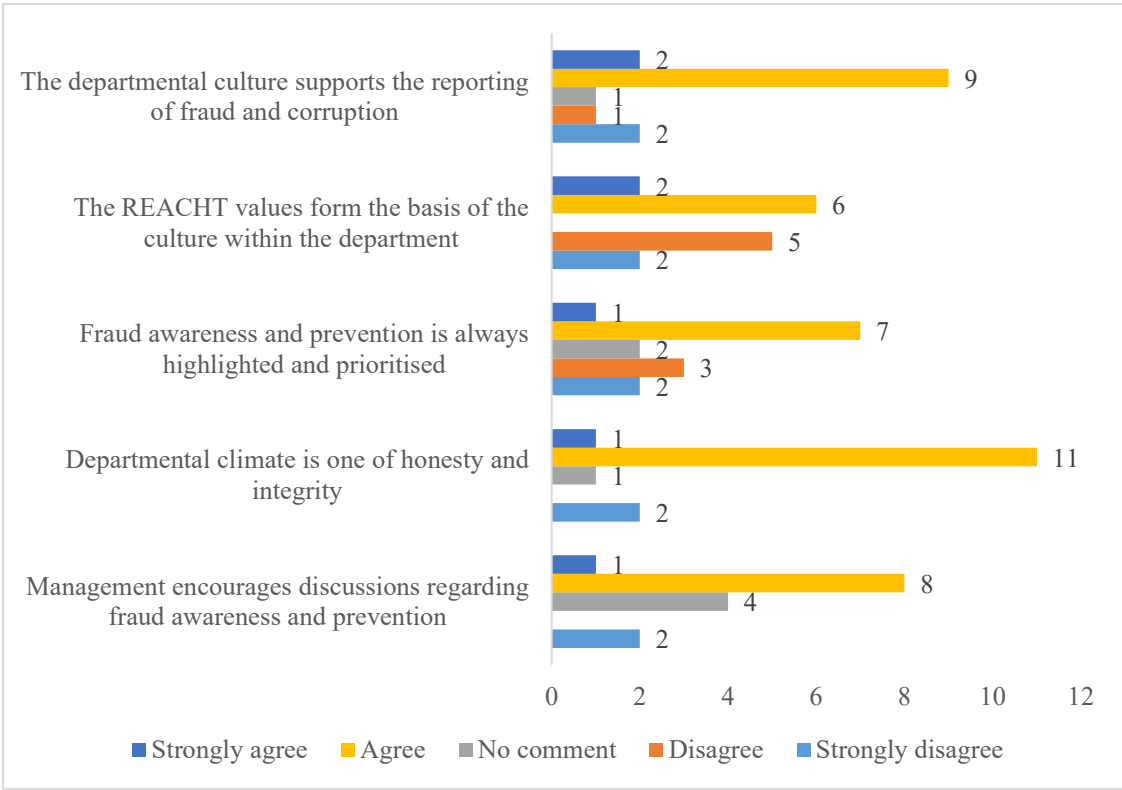
The majority of respondents (9) indicated that the anti-fraud culture within the department was at a moderate level. Perceptions of the remaining six respondents varied amongst very strong to weak. Figure 4.11 indicates that there is room for improvement regarding the anti-fraud culture within the department as only four respondents perceived the culture to range between very strong and strong.

According to Ocansey and Ganu (2017) corporate culture is critical in managing fraud risks. Peltier-Rivest (2018b) highlight the example of the Siemens 2008 corruption scandal following

which it made significant changes to strengthen its internal culture, structure and procedures. For instance, improved anti-corruption processes, comprehensive staff training, increased staff capacity to support the anti-fraud strategy as well as leadership commitment were some of the changes made. This shows the value of alignment between culture and anti-fraud controls.

**4.10.2 Current underlying departmental culture in relation to fraud awareness and prevention**

Figure 4.12 summarises respondents’ opinions and beliefs regarding the current departmental culture relating to fraud awareness and prevention. This is aligned to the Schein (1985) organisational culture model construct of ‘basic underlying assumptions’.



**Figure 4.12: Current beliefs of departmental anti-fraud culture**

The taken for granted underlying assumptions have been described as the ‘Cultural DNA: being the beliefs, values and desired behaviours’ that make a group successful (Schein and Schein,

2017). The underlying assumptions create stability as it serves as the source of subsequent ways of doing things and expanding on the culture (Schein and Schein, 2017).

Based on Figure 4.12, honesty and integrity and a culture that supports the reporting of fraud and corruption were the two most common underlying assumptions that supported an anti-fraud culture within the department. Burke and Sanney (2018), highlight the importance of the ‘tone at the top’ or the need for an ethical climate that is created by leadership so that values of integrity and honesty filter to all employees and the organisation. Similarly, Van der Wal et al. (2016) posit that leadership and management engagement and commitment is central to fraud prevention strategies that focus on values and compliance. Research findings by N’Guilla Sow et al. (2018) highlight that in addition to anti-fraud controls, a culture of honesty and integrity is central to fraud prevention. This requires ‘top management’ commitment to identifying acceptable ethical behaviours and communication to all employees (Sengur, 2012 cited in N’Guilla Sow et al., 2018,p 503).

Nine respondents indicated that management encouraged discussions regarding fraud awareness and prevention. Four respondents did not provide a comment whilst two respondents strongly disagreed. This statistic indicates that there is a need for improved management discussion of fraud awareness and prevention to ensure consistent values, beliefs and behaviours by all employees in the department. Research findings by N’Guilla Sow et al. (2018) indicate that in terms of fraud prevention effectiveness, amongst other measures, increased management attention on fraud risk was perceived by employees as the most effective measures. Similarly, Bussmann and Niemeczek (2019) highlight the role of management to encourage ‘trustful and frank’ discussions to promote integrity and prevent corruption and that employees perceive these values as supporting in their careers.

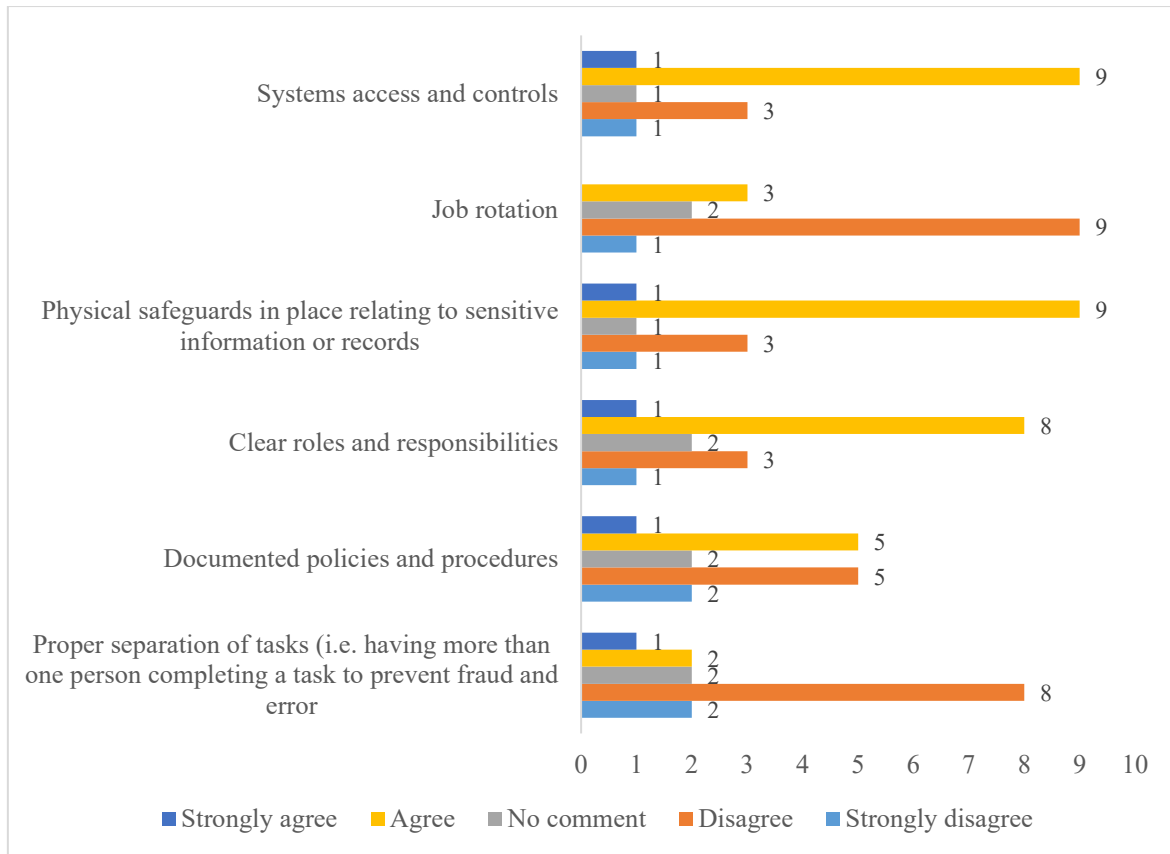
Responses relating to whether fraud awareness and prevention was always highlighted and prioritised and the REACH<sup>T</sup> values formed the basis of the culture within the department were almost equally distributed between respondents that agreed and disagreed. A noteworthy finding was that eight respondents were in agreement that the REACH<sup>T</sup> values formed the basis of the culture however seven respondents were in disagreement. In addition, five respondents

disagreed that fraud awareness and prevention was always highlighted and prioritised and two respondents did not comment. This finding shows an inconsistent approach to the prioritisation of fraud awareness and prevention and that the culture within the department was experienced differently by respondents. However, research indicates that the stronger the culture, the more deeply held the value system, the higher the employee commitment and the more willing employees are to conform to behavioural controls imposed by the organisation (Schein, 1996 cited in Jurkiewicz and Giacalone, 2016, p 3). Hence, it can be assumed that stronger anti-fraud culture would increase the prioritisation of fraud awareness and prevention within the department.

Figure 4.12 indicates that there is a need to improve the anti-fraud culture through consistent focus on all values, beliefs and behaviours to improve the underlying assumptions so as to improve the anti-fraud culture within the department.

#### **4.10.3 The presence of anti-fraud controls**

This aspect examined the existing controls to prevent fraud. These according to Schein (1985) can be seen as ‘artifacts’. Schein (2010) asserts that in analysing and understanding culture, it is important to note that artifacts are easy to observe but hard to decipher.



**Figure 4.13: Current anti-fraud measures in place**

Physical safe guards relating to sensitive information and system access and control were the two most common anti-fraud controls that the majority of respondents indicated were present in the department. However, in each instance the remaining five respondents either were in disagreement or did not comment. Nine respondents were in agreement that there were clear roles and responsibilities within the department. The remaining six respondents either did not agree or did not provide any comment. These statistics indicate that although anti-fraud controls existed it appears that these controls do not consistently exist across the department as there was mixed opinion provided by respondents. Hence, the anti-fraud controls are lacking and is an area that requires improvement within the department so as to reduce the opportunities for occupational fraud risks. For instance if there is uncertainty or disagreement by six respondents regarding the presence of clear roles and responsibilities it is possible that such employees may unintentionally or intentionally engage in or be party to fraud practices within the department.



In light of this, a poor control environment due to absence of physical controls or clear employee roles and responsibilities, can create opportunities for potential occupational fraud.

Research by Chapman and Lindner (2016) highlight the presence of opportunities due to the nature and extent of activities within the university context for occupational fraud. Furthermore, research by Yekini et al. (2018) provides support that effective preventative measures requires, amongst other, internal controls and employee theft control measures. Furthermore, the absence of such controls encouraged employee fraud and theft.

Based on Figure 4.13 proper separation of duties and job rotation were the least present anti-fraud controls within the department. In each instance ten respondents disagreed whilst two respondents did not comment. There was mixed opinion regarding the presence of documented policies and procedures with seven respondents disagreeing and two respondents did not provide any comment. The afore-mentioned findings indicate that the inconsistent or lack of anti-fraud controls may create opportunities for occupational fraud risks thereby facilitating such risk with the department. If employees perceive the control environment to be weak and are aware that there are limited separation of duties or counter checks in place it is likely that such scenarios promote fraud risks as well as encourage negligence. In addition, the findings highlight the need for either documented policies and procedures across all functions within the department or increased awareness and communication regarding the existing policies and procedures so that all employees are aware of the existence thereof and are able to prevent occupational fraud risks.

The importance of anti-fraud controls are supported by other research. Abdullahi and Mansor (2018) highlight the importance of the control environment and regular job rotation to ensure the absence of ‘opportunity’ for fraud risks. Research by Omar et al. (2016a) suggest measures such as, segregation of duties, policies that are communicated and accessible to employees, clear job descriptions and gentle reminders to discourage fraud by employees as important in creating an environment that prevents fraud. Furthermore findings put forth by the ACFE (2020) indicate that organisations with anti-fraud controls experience a lower median duration of fraud as compared to organisations without anti-fraud controls. This highlights the importance of anti-

fraud controls not only in preventing fraud risks but also reducing the period of the fraud due to an environment that supports the detection of fraud.

#### 4.10.4 Increased fraud awareness can play a role in preventing occupational fraud and building an anti-fraud culture

Respondents were asked to select the option that best described the ways in which increased fraud awareness may play a role in preventing occupational fraud and building an anti-fraud culture within the department. This related to the Schein (1985) organisational culture model construct of ‘espoused values’. According to Schein (2010) organisational strategies or goals can be described as espoused values or beliefs and there may be no way of testing espoused values except through consensus. Figure 4.14 summarises the responses.

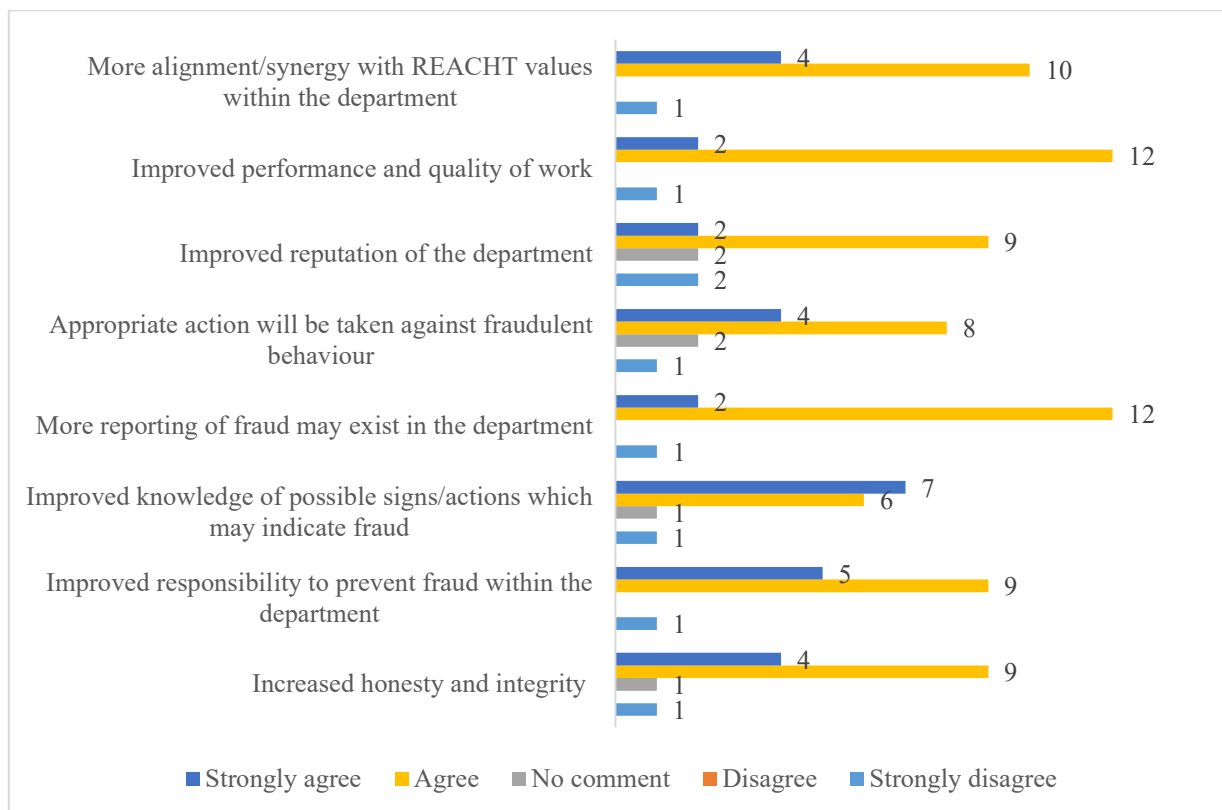


Figure 4.14: The value of increased fraud awareness and anti-fraud culture

The majority of respondents indicated that increased fraud awareness can play a role in preventing occupational fraud and building an anti-fraud culture as they agreed to strongly agreed with each of the statements depicted in Figure 4.14. This finding indicates that increased employee knowledge and awareness of fraud risks has the potential to reduce occupational fraud risks. Hence, increasing fraud awareness aimed at the espoused value level of the culture within the department would promote an anti-fraud culture.

Peltier-Rivest (2018b) highlight the importance of regular employee fraud awareness training so as to increase fraud prevention awareness. Similarly research findings by Zuberi and Mzenzi (2019) suggest that creating an awareness of fraud, such as who commits it as well as why and how it occurs, is likely to encourage an understanding of the magnitude of fraud and related risks thereby supporting fraud prevention measures by individuals and organisations. Based on the overall responses of the majority of respondents, it can be assumed that increased awareness of fraud forms the basis of preventing occupational fraud and promoting an anti-fraud culture within the department. For instance, seven respondents strongly agreed that increased fraud awareness would lead to improved knowledge of possible actions or signs that may indicator fraud.

Based on the majority of responses, fraud awareness was perceived to be important to prevent occupational fraud as well as to promote an anti-fraud culture. For instance increased alignment of the REACH<sup>T</sup> values, improved responsibility to prevent fraud and improved performance and quality of work were the most common ways indicated by the majority of respondents to prevent occupational fraud and promote an anti-fraud culture within the department.

The importance of organisational culture to reduce the risk of fraud is highlighted by Ocansey and Ganu (2017), specifically culture that is able to integrate an organisation's core values and motivate employees to prevent fraud risks. In addition, employees should be empowered to express their suspicions of wrongdoing and understand their central role in minimising fraud risks (Ocansey and Ganu, 2017). Ocansey and Ganu (2017) maintain that employee behaviour should be guided by 'shared commitment to ethical culture' rather than obedience to authority. Hence, culture can have a positive or negative impact on occupational fraud risk management.

Research findings by Hauser (2019) note the importance of employee training and the creation of corporate culture in preventing occupational fraud.

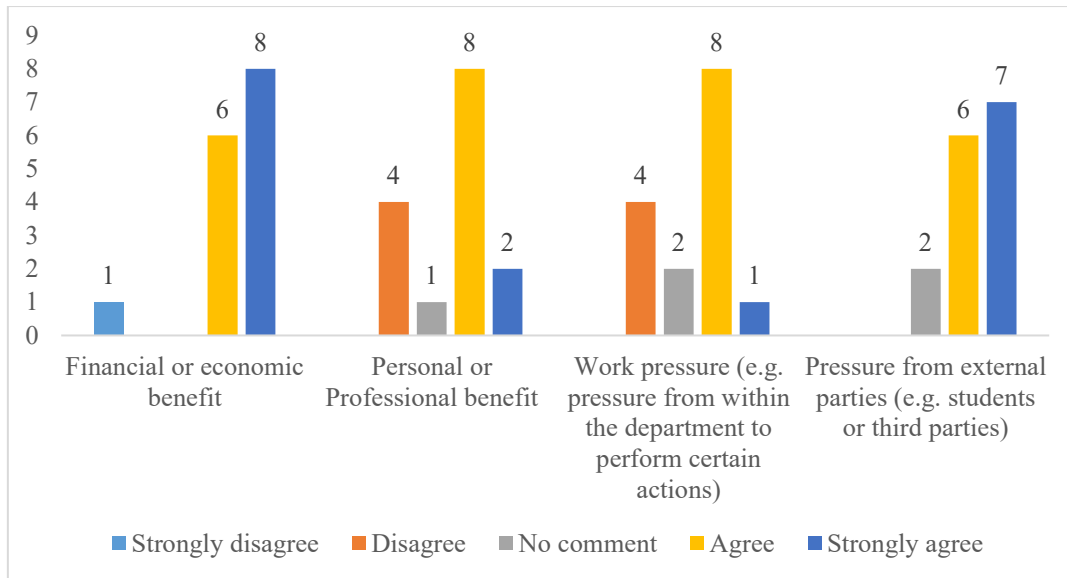
#### **4.11 Results in relation to the fraud triangle theory**

Findings, presented and further discussed in sections 4.11.1 to 4.11.3, provide support for factors that serve to motivate employees to engage in fraudulent practices, the presence of opportunities within the department that would encourage occupational fraud risks as well as factors that employees may use to rationalise occupational fraud. Hence, it can be assumed that increased fraud awareness and an anti-fraud culture within the department may serve to reduce all three elements of the framework put forth in Cressey's fraud triangle theory (1953) thereby preventing occupational fraud risks.

Burke and Sanney (2018) argue that if motivation or pressure and opportunities are both significant and personal integrity is low (being the ability to rationalise fraudulent practices), then fraud is more likely to occur, and the converse is also true. Moreover, organisations need to consider the value of a combined approach based on formal and informal approaches to preventing occupational fraud (Harjoto, 2017, Van der Wal et al., 2016).

##### **4.11.1 Factors that may motivate employees to commit occupational fraud**

Figure 4.15 illustrates respondents' perceptions regarding factors that may motivate an employee to commit fraud. The element of motivation or pressure as put forth in the fraud triangle theory (1953) can be explained due to internal or external factors and can be influenced by financial or non-financial factors (Sabli et al., 2016). Pressure or motivation can be categorised into occupational, economic or social pressure or motivation depending on the situational condition (Rustiarini et al., 2019).



**Figure 4.15: Motivating factors for committing fraud**

The current findings indicate that individual benefit (financial, personal or professional) and occupational related pressure are common motivating factors. Azam (2018) put forth that individual greed and work related pressure are the most common form of pressure or motivations experienced by individuals. The pressure or motivation has been described as the situation which results from the individual or other parties that creates the pressure or motivation or to commit fraud (Sabli et al., 2016). According to Hess and Cottrell (2016) intense financial pressures in one’s personal life, such as the risk of bankruptcy or the desire to support another person are cited as possible reasons that motivate individuals to consider engaging in fraudulent practices. Similarly, Burke and Sanney (2018) cite debt, unforeseen financial challenges due to recession or unaffordable lifestyle as examples of financial pressures. The changing institutional conditions and economic factors are highlighted as contributing factors to the pressure faced by stakeholders (employees and students) within universities (Chapman and Lindner, 2016). For instance, as universities become more profit focused excessive competition may undercut collaboration and cause a shift in focus in pursuit of personal gain, which may motivate employees to cross the line.

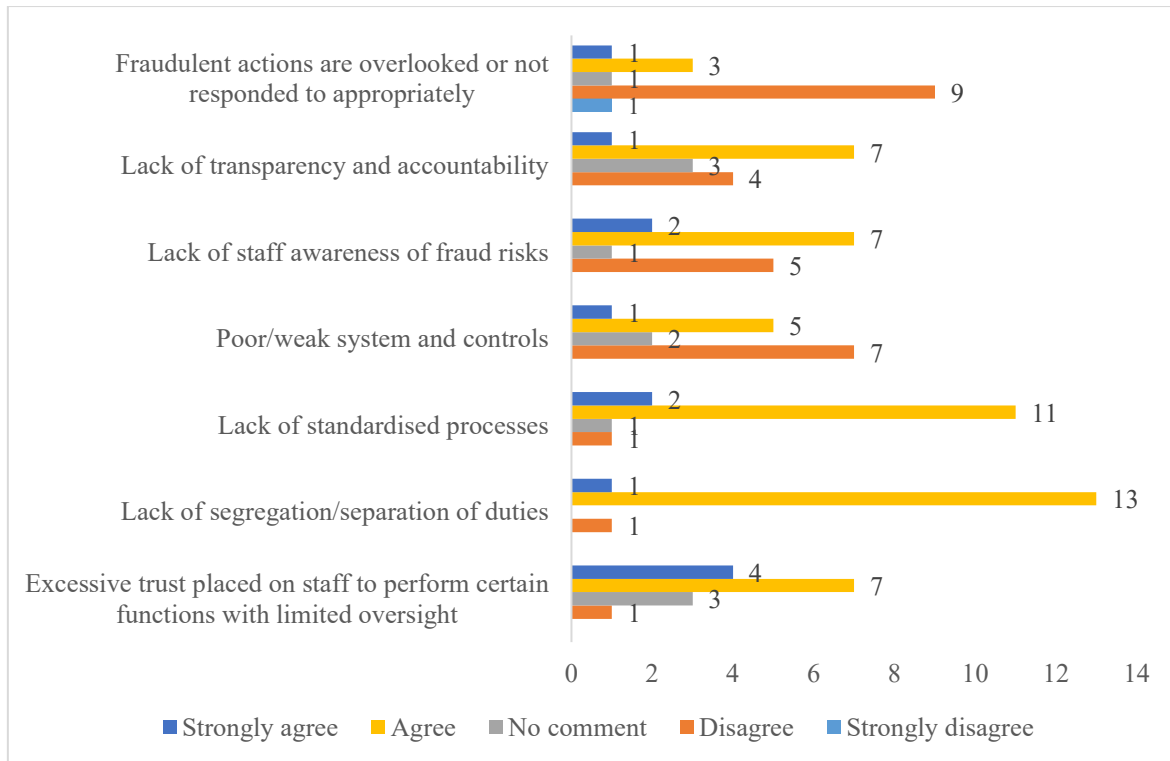
Based on responses, financial or economic benefit and pressure from students or third parties are possibly the most likely factors that would motivate employees to consider engaging in

fraud. Personal or professional benefit was found to be the third possible motivating factor with work pressure being the least likely motivating factor according to Figure 4.15. The majority of respondents were in agreement (strongly agreed and agreed) regarding all motivating factors that would serve to motivate an employee to engage in fraud. This is a noteworthy finding as motivating factors are often not immediately visible. It can be assumed, from Figure 4.15 that the majority of employees were in agreement that motivating factors or pressures do encourage employees to consider engaging in fraudulent practices. This indicates that the anti-fraud culture and controls within the department should be aimed at reducing such motivating factors and thereby preventing occupational fraud risks.

Except for financial or economic benefit as a motivating factor, all other motivating factors seem to have a small number of respondents that did not provide any comment. This could further indicate that there was uncertainty and lack of awareness or a reluctance to comment relating to certain motivating factors that may lead to occupational fraud.

#### **4.11.2 Circumstances that may create opportunities for occupational fraud risk**

The second element in the framework put forth in Cressey's fraud triangle theory (1953) is perceived opportunity. Opportunity has been described as the ability to commit and conceal fraud within which culture and the control environment are important to consider (Johansson and Carey, 2016). Fraud prevention activities are aimed at reducing the opportunities for the occurrence of fraud and this requires an understanding of the possible opportunities that facilitate occupational fraud risks. Figure 4.16 depicts the circumstances that may create opportunities for occupational fraud risk within the department.



**Figure 4.16: Potential opportunities for individual to commit occupational fraud**

A situation where an employee is responsible for completing an entire transaction is likely to present risk either intentionally or unintentionally to an organisation. Segregation of duties is based on shared responsibility in the workplace. Similarly, the absence of standard operating procedures or a documented process outlining how a task should be undertaken with clear roles and responsibilities as well as limited counter checks included in the process are also likely to present opportunities for occupational fraud risks.

Figure 4.16 indicates that the three most likely opportunities (strongly agree and agree) for occupational fraud risk within the department are firstly lack of segregation of duties (14), lack of standardised processes (13) and thirdly excessive trust placed on staff to perform certain functions with limited oversight (11). These statistics indicate that the opportunity for occupational fraud risk is high within the department and that fraud prevention initiatives should be aimed at reducing the opportunities in the operational environment for occupational fraud risk. Furthermore, reduction in staff numbers for whatsoever reason can lead to the consolidation of job roles. Hence, one employee is given too much control over critical

processes, which creates an opportunity for fraud risks (Bajjnath and Singh, 2019). This is directly related to poor governance and higher risk (*ibid*).

Similarly, Burke and Sanney (2018) maintain that opportunities for fraud arise when individuals are given authority and their work is not reviewed or if too much responsibility is given to one employee and there is an absence of separation of duties. Research by Olesen et al. (2018) identified, amongst others, placing too much trust on team members as an organisational factor that contributed to research fraud in the context of Malaysian universities.

Based on the current findings, it can be assumed that should an occupational fraud occur in the department it will not be immediately detected due to for instance the combination of lack of separation of duties and excessive trust placed on staff to perform certain functions with limited oversight. Research findings by Azam (2018) highlight the importance of segregation of duties in the workplace. In addition, the findings show that an absence of segregation of duties facilitated the fraud for almost two years before it was detected. Furthermore in attempting to achieve efficiencies, administrative decisions in some universities are increasingly being consolidated amongst fewer decision makers (Chapman and Lindner, 2016). The majority of respondents in the current study indicated that lack of transparency and accountability was an opportunity for occupational fraud risk as compared to four respondents who disagreed. This finding highlights the opportunity for occupational fraud risks due to limited oversight and lack of transparency within the department.

Nine respondents constitutes a significant proportion of the sample, being 60%, that indicated that lack of staff awareness of fraud risks possibly creates an opportunity for occupational fraud. Omar et al. (2016a) suggest several key measures such as fraud awareness training of management and employees, segregation of duties, the use of technology and creating an environment which prevents the opportunity for occupational fraud risks. In addition, Remenyi and Singh (2016) highlight the approach taken by the New Zealand government relating to the prevention and detection of academic fraud central to which is creating awareness amongst stakeholders of the potential problems of academic fraud risks.



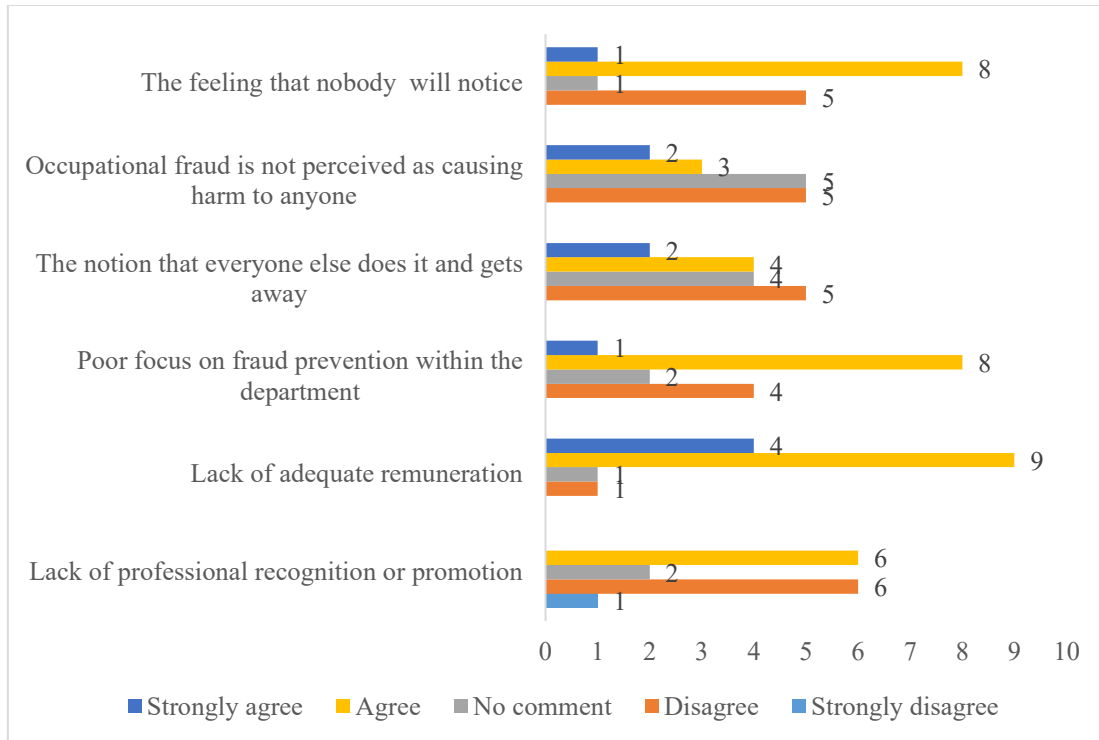
There was an almost equal distribution of responses that were in agreement and disagreement as to whether poor or weak systems and controls creating an opportunity for occupational fraud risk. It can be assumed that systems and controls within the department are not consistently applied. Hence, the perception of opportunity for occupational fraud risk due to the current systems and controls differed. Research by Baijnath and Singh (2019) relating to higher education institutions highlight that integrity breaches are often supported by non-existent or weak systems and a poor control environment due to resource challenges. Figure 4.16 also indicates a lack of strong disagreement that fraudulent actions are not overlooked and are responded to timeously within the department. This finding suggests that there is room for improvement to consistently and timeously respond to occupational fraud should it be detected. Management has a key role to play in promoting workplace ethics and culture that does not sanction or support wrongdoing (D'Cruz, 2016).

It is important to note that according to research findings by Abdullahi and Mansor (2018), the presence of opportunity to commit fraud within organisations enhances an individual's desire to commit fraud. Most fraud prevention measures by organisations are focused on reducing the opportunities that may lead to fraud compared to the motivation and rationalisation elements. This is because the latter two elements are individual factors and harder to identify (Prabowo, 2016). However, reducing opportunities for fraud should extend beyond the control environment but include anti-fraud culture that guides employee behaviour. Harjoto (2017) assert that positive corporate ethical culture is essential to curb corporate fraud through strengthening the values of executives and employees. The research by Harjoto (2017) provides an alternative perspective to preventing fraud by focusing on ethical culture to prevent corporate fraud. This highlights the importance of organisations being aware of and preventing possible opportunities that may lead to occupational fraud risks but also encourages a focus on the current anti-fraud culture.

#### **4.11.3 Rationalisation of why individuals may consider engaging in occupational fraud**

Rationalisation is the third element put forth in the fraud triangle theory (1953). Rationalisation has been described as the perception of individuals' towards fraudulent actions in line with their

own code of ethics (Sabli et al., 2016). Figure 4.17 illustrates respondents' opinions regarding the rationalisation as to why an employee may consider engaging in fraud.



**Figure 4.17: Individual rationalisation of occupational fraud**

The majority of respondents (13) indicated that lack of adequate remuneration was the main rationalisation. This finding suggests that employees may find it easier to rationalise fraudulent practices should a financial pressure be experienced and if an opportunity exists. Hence, this can present a risk to the department. Furthermore, individual rationalisations are largely an individual process and not immediately visible. Van der Wal et al. (2016) argue that in addition to formal approaches to fraud prevention, implicit and indirect informal approaches such as, fair remuneration and acknowledgment of ‘good’ behaviour are important. This suggests that effective fraud prevention strategies should be based on appropriate elements of compliance and value based approaches that are institutionalised and implemented. A clear statement of ethical behaviour, an honest work environment and the need to maintain positive employee morale, through for instance a good salary, were recognised as three key factors that affect the anti-fraud

culture within an organisation (Button and Brooks, 2009 cited in Suh et al., 2018, p 48). These factors in turn require organisational investment.

Poor focus on fraud prevention within the department and the perception that nobody would notice were the next most likely rationalisations with nine respondents indicating levels of agreement in each instance. These findings highlight the need for increased fraud awareness as well as shared anti-fraud culture within the department. It can be assumed that increased fraud awareness and a sense of shared professional values and culture will deter individuals to commit fraud even if the pressure or opportunity exists. Research findings show that rationalisation of fraudulent behaviour was largely due to lack of individual personal integrity (Sorunke, 2016).

Responses to lack of professional recognition or promotion and the notion that everyone else does it and gets away were seen as possible rationalisations by employees when engaging in occupational fraud and these were almost equally distributed between levels of agreement and disagreement by respondents. Furthermore, the finding relating to respondents' opinion that employees engage in fraud with no consequence indicates a need for more transparent communication for instance relating to consequence management. Individuals rationalise their fraudulent actions through common justifications such as being underpaid or that everyone else is doing it (Burke and Sanney, 2018). Research by Peltier-Rivest (2018b) highlight the strategic importance of regular anti-fraud training sessions as well as transparent communications by management. In addition, in each instance a number of respondents did not comment. It can be assumed that there was a reluctance to comment alternatively that respondents were not certain.

There was a mixed response by respondents regarding the possible rationalisation by employees that occupational fraud was not perceived as causing harm to anyone. An equal number of respondents (5) were in agreement, disagreement as well as had no comment. This statistic shows a lack of awareness of the consequences of occupational fraud to the department as well as UKZN. For instance, the consequences such as reputational damage, lower staff morale and

financial loss due to occupational fraud. It is therefore clear that increased awareness of occupational fraud and the consequence thereof is needed in the department.

Across all options, there were respondents that had indicated ‘no comment.’ However there were a relatively high number of ‘no comment’ responses especially to the statements of occupational fraud not being perceived as causing harm to anyone and the notion that everyone else does it and gets away. Burke and Sanney (2018) maintain that if ethical behaviour is valued across an institution, starting with leadership, then the rationalisation of unethical behaviour should be more difficult for everyone. Furthermore Omar et al. (2016a) suggest that organisational efforts, such as increased fraud awareness, creates an environment that discourages fraud from occurring.

Lastly, Figure 4.17 also indicates that, except for the possible rationalisation of fraud due to lack of professional recognition or promotion, not a single respondent strongly disagreed with any of the remaining possible rationalisations. This is a noteworthy finding as it suggests that there could be a possibility that individuals can have a rationalisation for occupational fraud within the department. This finding suggests that anti-fraud culture within the department should be aimed at discouraging the possibility of individual rationalisations of fraudulent practices. A strong ethical culture creates an expectation to behave in accordance with organisational values (Ocansey and Ganu, 2017). This limits the tendency by an employee to rationalise fraudulent actions.

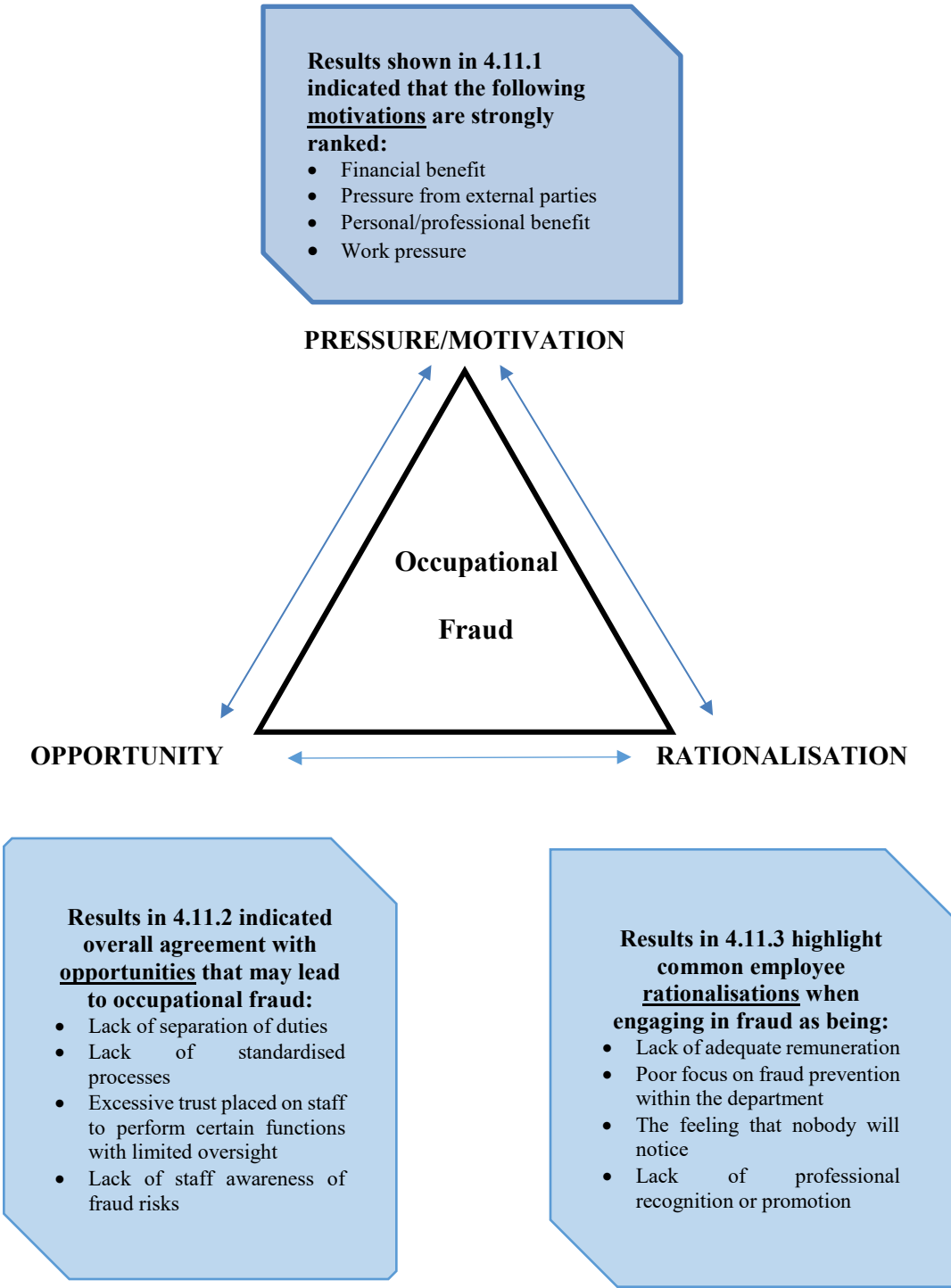
#### **4.12 Application of theoretical frameworks to the study findings**

This section provides the application of the theoretical frameworks via the key findings of the current study. Both frameworks were found to be applicable to the study setting and are shown descriptively and narratively below.

##### **4.12.1 Application of the fraud triangle framework (1953)**

Figure 4.18 illustrates that Cressey’s fraud triangle framework (1953) can be applied to explain and prevent occupational fraud risks within the department. As mentioned in preceding section,

the main assumption of Cressey’s fraud triangle theory (1953) is that for fraud to occur all three elements of the fraud triangle framework (1953) should be present.



**Figure 4.18: Application of Cressey’s Fraud Triangle framework (1953) to the current study results**

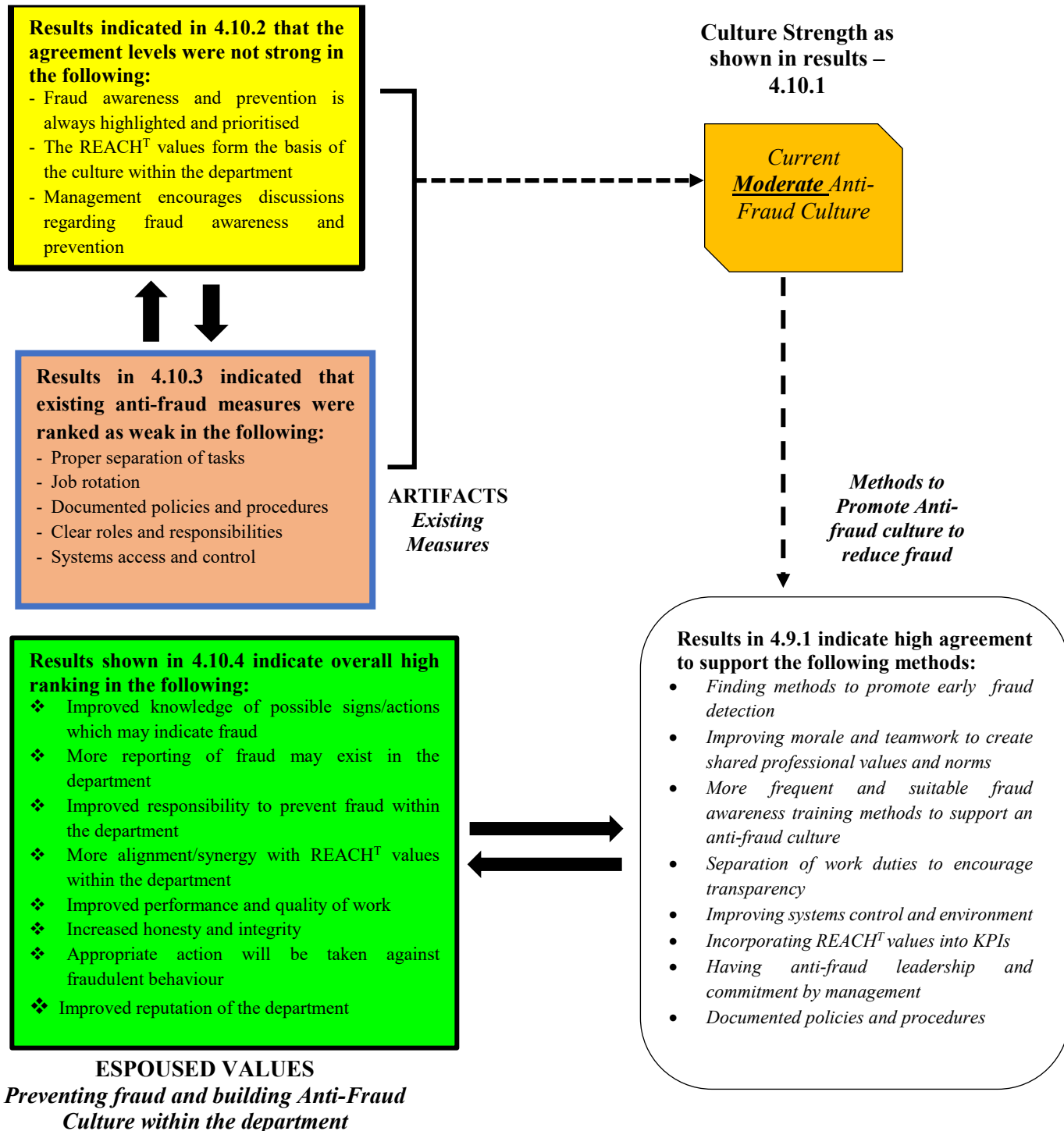
Based on the findings from the current study it can therefore be implied that the motivation, rationalisation and opportunities for occupational fraud risk are present within the department. Opportunities can include, lack of separation of tasks or lack of standardised processes to inform employee actions. Motivational factors can include financial benefit or personal pressure. In addition, the rationalisation aspect may entail lack of professional acknowledgement or the perception that fraudulent actions are overlooked.

The awareness and understanding of the most common motivations, opportunities and rationalisations for fraud, as illustrated in Figure 4.18, would possibly prevent occupational fraud risks and build an anti-fraud culture by informing fraud prevention strategies within the department. For instance, fraud prevention measures aimed at reducing the motivating factors, opportunities that support fraud risks and rationalisations of fraudulent practices would possibly reduce occupational fraud risks within the department.

#### **4.12.2 Application of the organisational culture model (1985)**

Figure 4.19 draws on Schein's organisational culture model (1985) to provide insight to the current anti-fraud culture within the department.

**BASIC UNDERLYING ASSUMPTIONS**  
*Current beliefs relating to Fraud awareness in the department*



**Figure 4.19: Application of Schein’s Model (1985) to the study results**

The basic underlying assumptions (current beliefs relating to fraud awareness and prevention) and artifacts (existing anti-fraud measures) contribute to the current moderate anti-fraud culture. In addition, the methods to achieve the espoused values of anti-fraud culture so as to influence and promote anti-fraud culture within the department are highlighted.

Therefore, the application of the framework can imply that a current 'moderate' culture relating to fraud prevention does exist in the department. This is due to the lack of fraud awareness and prevention prioritisation (and other factors listed under basic underlying assumptions). This is further compounded by the current anti-fraud controls that are not entirely strong such as the proper separation of tasks, job rotation and documented policies and procedures and other listed factors under artifacts in Figure 4.19. However, the introduction and promotion of appropriate methods such as early fraud detection, regular and suitable fraud awareness training, separation of work duties, improvement of systems and controls and other interventions listed in Figure 4.19, can transform and build the anti-fraud culture within the department. This can in turn promote the espoused values of the department (through the factors listed in Figure 4.19) and thereby mitigate fraud and build an Anti-Fraud culture holistically.

### **4.13 Conclusion**

This chapter provided a presentation and detailed discussion of the research findings in relation to the research objectives and theoretical frameworks used in the study. Occupational fraud was found to be a potentially high risk at the department. Furthermore, the risk of occupational fraud was found to exist across all sections of the department however at different levels. Findings show that although there is general awareness of fraud risks within the department the awareness has not translated into the daily functions of respondents. In addition, fraud awareness communication was not consistently and regularly provided. Furthermore increased fraud awareness is likely to improve the current anti-fraud culture thereby preventing occupational fraud. The findings also show that factors relating to pressure, opportunity and rationalisation exist within the department. Chapter five will provide recommendations based on the findings discussed in this chapter so as to improve fraud awareness and prevent occupational fraud to promote an anti-fraud culture within the department.



## **CHAPTER FIVE**

### **RECOMMENDATIONS AND CONCLUSIONS**

#### **5.1 Introduction**

The previous chapter provided a detailed presentation and discussion of the current research findings in relation to the research objectives and theoretical frameworks applied to the study as well as noted findings from other relevant studies. This chapter sets out the key findings in relation to the research questions thereby highlighting the results of the study. In addition, the chapter aims to show that the research problem and objectives have been addressed. The chapter concludes with providing recommendations, outlining the limitations of the study and directions for further research.

#### **5.2 Problem statement, Research objectives and questions of the study**

This section provides a recap of the problem statement and research objectives and questions from chapter one to show that the aim of the study has been achieved by addressing the research objectives and questions.

##### **5.2.1 Problem statement overview**

Occupational fraud risks are pervasive across various sectors within the public and private sector. Research studies, as depicted in the literature review, have shown that occupational fraud risks are a reality within the higher education sector and the impact of which has serious consequences for society as a whole. Hence occupational fraud risk within the higher education sector is an increasing global concern. However, there appears to be a paucity of academic literature in the South African context relating to the role of employee awareness of occupational fraud as a basis for promoting organisational culture to prevent occupational fraud within the higher education sector. The current study aimed to bridge this gap by determining the role of fraud awareness within the department at UKZN to promote an anti-fraud culture that supports the prevention of occupational fraud within the department.

### **5.2.2 Research objectives**

The research objectives of the study were to:

1. Establish the existing occupational fraud risks within the department.
2. Determine the level of employee awareness relating to existing occupational fraud risks.
3. Find ways of promoting fraud awareness to prevent occupational fraud within the department.
4. Determine how increased fraud awareness can play a role in preventing occupational fraud and build an anti-fraud culture within the department.

### **5.2.3 Research questions**

The questions that the study answered included:

1. What are the current occupational fraud risks within the department?
2. How aware are employees to the existing occupational fraud risks so as to support fraud risk management?
3. What needs to be done to improve fraud awareness to prevent occupational fraud within the department?
4. How can increased fraud awareness play a role in preventing occupational fraud and build an anti-fraud culture within the department?

## **5.3 Determining if the research questions have been answered**

This section highlights the key findings of the current study in relation to the research questions.

### **5.3.1 Current occupational fraud risks within the department**

The highest ranking occupational fraud risks (from high to low) as illustrated in Figure 4.5 were found to be:

- Bribery of staff by students, staff and/or other parties
- Nepotism/favouritism
- Intentional manipulation of information
- Unauthorised sharing of examination content
- Unauthorised access and distribution to/of information
- Collusion amongst staff for personal or professional benefit
- Fraud relating to qualification certificates.

The findings under section 4.7 further indicate that the probability of occupational fraud risk differed amongst the various sections within the department. Figure 4.6 provides an overall summary of the probability of occupational fraud risk per section within the department.

### **5.3.2 Employee awareness of existing occupational fraud risks so as to support fraud risk management**

It was shown in section 4.8 that although employees are generally aware of occupational fraud risks there is room for improvement so as to support fraud risk management as illustrated through Figures 4.7 and 4.8. For instance findings indicate that occupational fraud risk management had not translated to an individual responsibility and that fraud awareness training and communication was found to be inconsistent within the department.

### **5.3.3 Initiatives to improve fraud awareness to prevent occupational fraud within the department**

The overall findings indicate that there is a need for initiatives aimed at improving fraud awareness within the department through occupational fraud prevention strategies as illustrated in Figure 4.10. The aim of which would be to prevent occupational fraud risks. Certain of the key initiatives required include documented policies and procedures, anti-fraud leadership and commitment by management and more frequent and suitable fraud awareness training.

### **5.3.4 Improving fraud awareness to play a role in preventing occupational fraud and build an anti-fraud culture within the department**

The value of increased fraud awareness and anti-fraud culture within the department was illustrated in Figure 4.14. Some key findings show that increased fraud awareness can result in improved employee knowledge of possible actions that indicate fraud, as well as improved employee responsibility to prevent fraud. This could in turn reduce occupational fraud risks and promote an anti-fraud culture. Hence increased fraud awareness can promote an anti-fraud culture within the department.

## **5.4 Findings in relation to models / frameworks**

The study findings provide support for the application of both Cressey's fraud triangle framework (1953) and Schein's organisational culture model (1985) as illustrated descriptively through Figures 4.18 and 4.19, respectively. Findings indicate that fraud prevention measures aimed at reducing the presence of the three elements put forth in the fraud triangle framework (1953) can possibly reduce occupational fraud risks within the department. Furthermore, the application of Schein's organisational culture model (1985) can imply that a current 'moderate' anti-fraud culture exists in the department due to the lack of fraud awareness and prevention prioritisation measures. However, the introduction anti-fraud measures as shown in section 4.9 can contribute to mitigating fraud and building an anti-fraud culture within the department and thereby promoting the espoused values of the department.

## **5.5 Did the study fulfil the intended objectives**

The section shows that the objectives of this study have been fulfilled.

### **5.5.1 Objective one: Establish the existing occupational fraud risks within the department**

The study has found that occupational fraud risks do exist within the department. Section 4.7 presents and discusses the main types of occupational fraud risks (Figure 4.5) that exist within the department. Furthermore, the sections within the department that present the highest occupational fraud risk are illustrated through Figure 4.6.

### **5.5.2 Objective two: Determine the level of employee awareness relating to existing occupational fraud risks**

The study shows inconsistent levels of employee awareness relating to occupational fraud risks. Figure 4.7 indicates that occupational risk management was not perceived by all employees to be part of their daily responsibility. Figure 4.8 further shows that anti-fraud communication and training has been inconsistent within the department.

### **5.5.3 Objective three: Find ways of promoting fraud awareness to prevent occupational fraud within the department.**

The study puts forth initiatives required to promote fraud awareness and prevent occupational fraud within the department. These initiatives are illustrated through Figure 4.10.

### **5.5.4 Objective four: Determine how increased fraud awareness can play a role in preventing occupational fraud and build an anti-fraud culture within the department**

The study confirms the existence of a moderate anti-fraud culture within the department and section 4.10 discussed the current anti-fraud culture at the three levels of culture according to Schein's organisational culture model (1985). Figure 4.13 illustrates how increased fraud awareness can play a role in preventing occupational fraud and building an anti-fraud culture within the department.

## **5.6 Recommendations made by this study**

The study puts forth the following recommendations to address the aim of the study.

### **5.6.1 Increased fraud awareness to prevent occupational fraud**

Fraud awareness was found to be inconsistent within the department. Hence, increased fraud awareness measures should include the following:

- Upon appointment, employees should be issued with an induction pack including all departmental standard operating procedures as well as UKZN's anti-fraud related policies. This should occur annually for all employees within the department aimed at re-iterating the importance of fraud awareness and promoting anti-fraud culture within the department.
- Management of each section should agree an annual plan to host a bi-annual fraud awareness campaign, with the support of UKZN's Forensic Services, with consideration of the current findings relating to the elements of Cressey's fraud triangle framework (1953).
- In addition, collaboration with forensic services around additional fraud prevention and detection measures should be discussed, specifically in high fraud risk sections within the department. This would serve to increase fraud awareness within the department as well as deter the perceptions of opportunities for fraud or that fraud maybe overlooked within the department.
- Informal measures to promote fraud prevention should also be considered. For instance, respected or influential employees within the department should be encouraged to promote awareness of occupational fraud risks thereby encouraging other employees to be aware of such risks and understand the importance as well as their role in the prevention of occupational fraud risks within the department. Thus supporting teamwork and promoting an anti-fraud culture within the department.

### **5.6.2 Management commitment to occupational fraud prevention**

Management commitment to processes and through behaviour such as regular discussions with staff aimed at preventing occupational fraud risks thereby demonstrating anti-fraud leadership is central in preventing occupational fraud risks. Leadership style becomes critical as management should encourage open dialogue, respect for differing professional perspectives, acknowledgment of employee efforts and flexibility guided by an anti-fraud culture based on good governance and the REACH<sup>T</sup> values. Management commitment to occupational fraud prevention would help to align departmental and individual values. Furthermore, this can serve

to hinder employees from rationalising fraudulent practices even if faced with pressure or opportunity to engage in fraud.

### **5.6.3 Employee involvement in fraud prevention to improve involvement and accountability for fraud prevention**

Strategic measures to improve staff ownership and accountability for occupational fraud prevention should be introduced to encourage shared commitment to anti-fraud culture and REACH<sup>T</sup> values by all employees. Introducing suggestion boxes within the department where employees can submit suggestions relating to occupational fraud prevention measures. These suggestions can then be tabled and the way forward agreed on to prevent occupational fraud risks.

### **5.6.4 Developing an appropriate anti-fraud oversight process within the department**

Employees should be encouraged to report allegations of fraud and corruption either through management or UKZN's tip-off facility. The promotion of UKZN's tip-off facility, whereby employees may remain anonymous, would encourage the reporting of allegations of fraud and support an anti-fraud culture. The implementation of formal random checks by managers or section heads of transactions or processes in high fraud risk areas should be introduced and the results thereof discussed at management meetings to strengthen existing processes. Furthermore rotation of section heads or managers would promote transparency, increase awareness of fraud risks, team work and promote anti-fraud culture.

### **5.6.5 Increased fraud awareness to improve and promote anti-fraud culture**

Formal and informal initiatives should be introduced within the department aimed at increasing fraud awareness with the aim of improving anti-fraud culture at all three levels of culture being artifacts, espoused values and basic underlying assumptions (Schein, 1985). For instance initiatives should include, amongst others:

- Incorporating fraud prevention into the department's strategic plans.

- Having standard operating procedures in place to guide all transactions and processes.
- Introducing separation of tasks to encourage transparency and teamwork to achieve departmental goals.
- Reviewing systems access and physical controls to identify areas for improved controls.
- Incorporating the REACH<sup>T</sup> values into all employee KPIs.
- Promoting a departmental culture and positive work environment where employees feel confident to share concerns or seek clarity regarding uncertainties from colleagues or managers.

## **5.7 Limitations**

The main caveats relating to the current study are noted below.

### **5.7.1 COVID-19 pandemic**

The current study was conducted during the unforeseen context of the COVID-19 pandemic, national lockdown and prolonged state of disaster in South Africa. The implication of this was that UKZN took immediate measures to comply with government regulations to curb the spread of the virus by closing campuses, implemented remote working and limiting access to campuses. This is likely to have adversely affected data collection whereby the entire target population may not have had timeous or immediate access to UKZN's notice system where the link to the survey was placed or experienced a shift in priorities with working remotely in the context of a global pandemic. Hence, the results and recommendations have been based on a limited response rate in relation to the department. The option to revise the data collection method and possibly improve the response rate of the targeted population was also not an option whilst undertaking research within a limited timeframe during the COVID-19 pandemic.

### **5.7.2 Limited time and resources**

The current study was undertaken with limited time and resources and focused on the targeted population of approximately 29 employees within the department. Hence the study provides only a snap shot of current employee perceptions relating to the role of fraud awareness in promoting anti-fraud culture to prevent occupational fraud at a specific point in time.



### **5.7.3 Population and Sampling**

The current study was limited to a relatively small professional services department at UKZN. A census approach was followed whereby all employees within the department were selected as the target census population. Hence, the findings are limited to a specific department at UKZN and cannot be generalised to other departments at UKZN or the broader university. Furthermore, findings are based on a response rate of approximately 52% of the target population. This means that there may have been different study findings had the entire population responded to the survey.

### **5.7.4 Individual perceptions at a given point in time**

The study findings are based on individual perceptions and human emotions at a specific point in time within the department as such these perceptions can/may influence the overall findings of the study.

## **5.8 Directions for future researchers**

The current study highlights the following areas for future research:

- A longitudinal study to analyse any changes in the anti-fraud culture within the department whereby the current study can be used as a point of reference.
- Comparative studies between departments at UKZN to determine the value of increased fraud awareness and anti-fraud culture.
- Expanding the current study to all employees at UKZN. This would provide holistic insight to the institutional anti-fraud culture as well as occupational fraud prevention at the university.
- A country-wide study relating to the role of fraud awareness and institutional culture to prevent occupational fraud within the higher education sector.
- A similar study based on a mixed methods research design to provide a more in-depth analysis.

## **5.9 Conclusion**

This chapter concludes the current study by providing an overview of the study and the main findings relating to the research questions and objectives. The study showed that occupational fraud risks does exist within the department and highlighted the need for initiatives aimed at improving fraud awareness. Moreover, it was shown that increased fraud awareness could prevent occupational fraud and promote an anti-fraud culture within the department. The study highlighted measures to prevent occupational fraud risks and improve the current ‘moderate’ anti-fraud culture thereby providing support for the value of increased fraud awareness within the department. The study concluded by providing recommendations based on key findings, noting the main limitations of the study as well as providing directions for future research. The value of the current study is that it shows the relevance of previous studies discussed in the literature review to the current research as well as the applicability of two theoretical models to a professional services department at UKZN. Hence, the current study contributes to research relating to occupational fraud prevention within the South African higher education sector. Furthermore, the current study can be expanded to UKZN holistically as well as to the broader higher education sector in South Africa.

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# APPENDICES

## Appendix 1: Ethical clearance



20 April 2020

Miss Priya Singh (9801806)  
Graduate School of Business & Leadership  
Westville Campus

Dear Miss Singh,

**Protocol reference number:** HSSREC/00001261/2020

**Project title:** The Role of Fraud Awareness in Promoting Anti-Fraud Culture to Prevent Occupational Fraud within a Professional Services Department at a Higher Education Institution

**Degree:** Masters

### Approval Notification – Expedited Application

This letter serves to notify you that your application received on 14 April 2020 in connection with the above, was reviewed by the Humanities and Social Sciences Research Ethics Committee (HSSREC) and the protocol has been granted **FULL APPROVAL**

**Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number. PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.**

This approval is valid until 20 April 2021.

To ensure uninterrupted approval of this study beyond the approval expiry date, a progress report must be submitted to the Research Office on the appropriate form 2 - 3 months before the expiry date. A close-out report to be submitted when study is finished.

**All research conducted during the COVID-19 period must adhere to the national and UKZN guidelines.**

HSSREC is registered with the South African National Research Ethics Council (REC-040414-040).

Yours sincerely,



-----  
Professor Dipane J Hlalele (Chair)

/ms

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Humanities & Social Sciences Research Ethics Committee  
UKZN Research Ethics Office Westville Campus, Govan Mbeki Building  
Postal Address: Private Bag X54001, Durban 4000  
Tel: +27 31 260 8350 / 4557 / 3587  
Website: <http://research.ukzn.ac.za/Research-Ethics/>

Founding Campuses: ■ Edgewood ■ Howard College ■ Medical School ■ Pietermaritzburg ■ Westville

**INSPIRING GREATNESS**



## Appendix 2: Gatekeepers consent



9 March 2020

Ms Priya Singh (SN 9801806)  
Graduate School of Business and Leadership  
College of Law and Management Studies  
Westville Campus  
UKZN  
Email: [SinghP6@ukzn.ac.za](mailto:SinghP6@ukzn.ac.za)

Dear Ms Singh

### RE: PERMISSION TO CONDUCT RESEARCH

Gatekeeper's permission is hereby granted for you to conduct research at the University of KwaZulu-Natal (UKZN), towards your postgraduate studies, provided Ethical clearance has been obtained. We note the title of your research project is:

*"The Role of Fraud Awareness in Promoting Anti-Fraud Culture to Prevent Occupational Fraud within a Professional Services Department at a Higher Education Institution."*

It is noted that you will be constituting your sample as follows:

- With a request for responses on the website. The questionnaire must be placed on the notice system <http://notices.ukzn.ac.za>. A copy of this letter (Gatekeeper's approval) must be simultaneously sent to ([govenderlog@ukzn.ac.za](mailto:govenderlog@ukzn.ac.za)) or ([ramkissoonb@ukzn.ac.za](mailto:ramkissoonb@ukzn.ac.za)).

Please ensure that the following appears on your questionnaire/attached to your notice:

- Ethical clearance number;
- Research title and details of the research, the researcher and the supervisor;
- Consent form is attached to the notice/questionnaire and to be signed by user before he/she fills in questionnaire;
- gatekeepers approval by the Registrar.

You are not authorized to contact staff and students using 'Microsoft Outlook' address book. Identity numbers and email addresses of individuals are not a matter of public record and are protected according to Section 14 of the South African Constitution, as well as the Protection of Public Information Act. For the release of such information over to yourself for research purposes, the University of KwaZulu-Natal will need express consent from the relevant data subjects. Data collected must be treated with due confidentiality and anonymity.

**DR KE CLELAND  
REGISTRAR (ACTING)**

#### Office of the Registrar

Postal Address: Private Bag X54001, Durban, South Africa

Telephone: +27 (0) 31 260 8005/2206 Facsimile: +27 (0) 31 260 7824/2204 Email: [registrar@ukzn.ac.za](mailto:registrar@ukzn.ac.za)

Website: [www.ukzn.ac.za](http://www.ukzn.ac.za)



Founding Campuses: Edgewood Howard College Medical School Pietermaritzburg Westville

### **Appendix 3: Informed consent letter**

<b>Informed consent letter</b>
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University of KwaZulu-Natal  
Graduate School of Business and Leadership  
Tel: 031 260 1615

Good day Colleague

My name is Priya Singh and I am a staff member and student at UKZN. I am employed within the Institutional, Planning and Governance Division and a Masters student registered at the Graduate School of Business and Leadership. My contact details are 031 260 7883 and singhp6@ukzn.ac.za. The study is being supervised by Dr S Suknunan (Supervisor) - (031 260 7057) (email: Suknunan@ukzn.ac.za) and Dr TN Mtetwa (Co-supervisor) (031 2607484) (email: Mtetwan@ukzn.ac.za).

You are being invited to consider participating in a study that involves research relating to employee perspectives of whether fraud awareness and departmental culture may prevent occupational fraud within a professional services department at a higher education institution. The aim and purpose of this research is to determine the role of fraud awareness within the Student Academic Administration department so as to promote a culture that supports the prevention of occupational fraud within the department. The study is primarily targeted to all permanent and contract employees at the Student Academic Administration department across UKZN.

Your participation will only involve answering an anonymous questionnaire electronically via an easy online link.

The duration of your participation if you choose to participate is expected to be 10 -15 minutes.

The researcher hopes that the study will create the following benefits such as preventing occupational fraud by using fraud awareness and culture within the department to promote anti-fraud culture. Thus promoting strong culture, based on the REACH<sup>T</sup> values, within the department as well as contributing to the institutional vision and values.

This study has been ethically reviewed and approved by the UKZN Humanities and Social Sciences Research Ethics Committee (HSSREC/00001261/2020).

In the event of any problems or concerns/questions you may contact the researcher at (031 260 7883) or the UKZN Humanities & Social Sciences Research Ethics Committee, contact details as follows:

HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION

Research Office, Westville Campus

Govan Mbeki Building

Private Bag X 54001

Durban

4000

KwaZulu-Natal, SOUTH AFRICA

Tel: 27 31 2604557- Fax: 27 31 2604609

Email: [HSSREC@ukzn.ac.za](mailto:HSSREC@ukzn.ac.za)

Your participation is entirely voluntary and will be at your convenience. You are free to decide if you want to take part in the research. You can decide not to participate or withdraw at any time without giving any reason and there are no penalties or adverse consequences for non-participation or withdrawal from the study. Furthermore, non-participation or withdrawal at any time will not affect any of the benefits that you are usually entitled to.

UKZN's research code of ethics will be adhered to throughout the study, for instance requirements relating to handling, maintaining and storage of the data. All research data will be stored confidentially belonging only to the researcher.

## **Respondent Consent**

I have been informed (via the above) about the study entitled “The Role of Fraud Awareness in Promoting Anti-Fraud Culture to Prevent Occupational Fraud within a Professional Services Department at a Higher Education Institution.”

I understand the purpose and procedures of the study.

I have been given an opportunity to answer questions about the study and have had answers to my satisfaction.

I declare that my participation in this study is entirely voluntary and that I may withdraw at any time without affecting any of the benefits that I usually am entitled to.

If I have any further questions/concerns or queries related to the study I understand that I may contact the researcher at (031 – 260 7883/082 884 4138).

If I have any questions or concerns about my rights as a study participant, or if I am concerned about an aspect of the study or the researcher then I may contact:

HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION

Research Office, Westville Campus

Govan Mbeki Building

Private Bag X 54001

Durban

4000

KwaZulu-Natal, SOUTH AFRICA

Tel: 27 31 2604557 - Fax: 27 31 2604609

Email: HSSREC@ukzn.ac.za

I agree to participate in this study:

Yes \_\_\_\_\_

No \_\_\_\_\_

## **Appendix 4: Questionnaire**

University of KwaZulu-Natal  
Graduate School of Business and Leadership  
Tel: 031 260 1615

### **Title: The Role of Fraud Awareness in Promoting Anti-Fraud Culture to Prevent Occupational Fraud within a Professional Services Department at a Higher Education Institution**

Good day

I, Priya Singh, an MBA student at the Graduate School of Business and Leadership of the University of KwaZulu-Natal would like to invite you to participate in a research project entitled ‘The Role of Fraud Awareness in Promoting Anti-Fraud Culture to Prevent Occupational Fraud within a Professional Services Department at a Higher Education Institution.’

UKZN has five campuses in KwaZulu-Natal and aims to establish a value-driven organisational culture that empowers the institution and its people to achieve institutional goals. The Graduate School of Business and Leadership, is a School within UKZN’s College of Law and Management Studies.

The aim of this study is to determine the role of fraud awareness within the Student Academic Administration department (the department) at UKZN so as to promote an anti-fraud culture that supports the prevention of occupational fraud within the department. The purpose of this survey is to obtain information from you and other respondents regarding fraud awareness and the current anti-fraud culture within the department. Your input will be valuable to address the research aim and objectives. It is hoped that findings from the study may be used to prevent occupational fraud through fraud awareness and thus promoting anti-fraud culture within the department. The questionnaire should only take 10 to 15 minutes to complete and there are no right or wrong answers.

The research questions that follow are based on the objectives of the afore-mentioned study being to:

1. Establish the existing occupational fraud risks within the department.
2. Determine the level of employee awareness relating to existing occupational fraud risks.
3. Find ways of promoting fraud awareness to prevent occupational fraud within the department.
4. Determine how increased fraud awareness can play a role in preventing occupational fraud and build an anti-fraud culture within the department.

Are you a staff member with the Student Academic Administration Department at UKZN?

Yes	
No	

### Section A – Demographical questions

Please select the most appropriate option

1. Race:

African	
Indian	
Caucasian (White)	
Coloured	
Other	
Prefer not to say	

2. Gender?

Male	
Female	
Prefer not to say	

3. Age group:

18-24	
25-34	
35-44	
Over 45	

4. Level of education

Grade 12	
Diploma	
Bachelor's degree	
Post-graduate degree	
If other, please specify	

5. How long have you worked within the department?

Under 1 year	
1 – 3 years	
4 – 6 years	
7 – 10 Years	
Above 10 years	

6. Employment status within the department:

Permanent	
Contract	

**Section B – Research Questions**

This section focuses on the actual research questions.

1. What do you think are the main types of occupational fraud risks that the Student Academic Administration department can/may be vulnerable to?

	Strongly Disagree	Disagree	No Comment	Agree	Strongly Agree
Nepotism/favoritism (relationships with staff or students)					
Bribery of staff by students, staff and/or other parties					
Collusion amongst staff for personal or professional benefit					
Intentional manipulation of information					

(Documents, records, systems etc.)					
Unauthorised access and distribution to/of information (e.g. Student information)					
Unauthorised sharing of examination content					
Fraud relating to qualification certificates (e.g. printing or issuing)					

1.1 If you have any other response to question 1 above, please state:

---

2. Based on your opinion and experience, rank the sections within the department in terms of potential occupational fraud risk? (1 – indicating lowest risk and 5 indicating highest risk)

	1	2	3	4	5
General enquiry office					
Applications and Information office					
Central Student Records and Archive office					
Central Venue and Timetabling office					

3. Do you understand what actions constitute fraud?

Yes	
No	
Uncertain	

4. Select the option that best describes your response to the following statements.

	Strongly Disagree	Disagree	No Comment	Agree	Strongly Agree
The possibility of risks such as employee fraud, corruption or unethical employee conduct may					



	Strongly Disagree	Disagree	No Comment	Agree	Strongly Agree
currently exist in the department					
As an employee within the department I am encouraged to be aware of occupational fraud risks					
Occupational fraud risk management is part of my daily function					
I am aware of the REACH <sup>T</sup> values					

5. How often do you receive:

	Once a month	Quarterly	Twice a year	Annually	Do not receive any communication or training
Communication about anti-fraud practices or fraud awareness in your department					
Training (formal or informal) about anti-fraud practices or fraud awareness at your department					

6. To what extent do you agree with the following statements:

	Strongly Disagree	Disagree	No Comment	Agree	Strongly Agree
The consequences of fraud to the department (such as negative publicity, job loss, decreased morale and productivity, financial loss) has					

	Strongly Disagree	Disagree	No Comment	Agree	Strongly Agree
been made clear to employees					
A policy of zero-tolerance for fraud has been communicated to employees					
I am aware of the University's Anti-Fraud and Corruption Plan 2018-2021 and the related Anti-Fraud Policies					
I have been taught how to communicate concerns about known or potential wrongdoing					
I am aware of an anonymous reporting channel, such as a third-party hotline, available to employees					

7. What do you think can/may be the motivating factors for the possibility of occupational fraud risk within the department?

	Strongly Disagree	Disagree	No Comment	Agree	Strongly Agree
Financial or economic benefit					
Personal or Professional benefit					
Work pressure (e.g. pressure from within the department to perform certain actions)					
Pressure from external parties (e.g. students or third parties)					

7.1 If you have any other response to question 7 above, please state:

---

8. What are the opportunities or circumstances for occupational fraud risk that may exist within the department?

	Strongly Disagree	Disagree	No Comment	Agree	Strongly Agree
Excessive trust placed on staff to perform certain functions with limited oversight					
Lack of segregation/separation of duties					
Lack of standardised processes					
Poor/weak system and controls					
Lack of staff awareness of fraud risks					
Lack of transparency and accountability					
Fraudulent actions are overlooked or not responded to appropriately					

8.1 If you have any other response to question 8 above, please state:

---

9. What do you think is the justification for why someone may consider engaging in occupational fraud?

	Strongly Disagree	Disagree	No Comment	Agree	Strongly Agree
Lack of professional recognition or promotion					
Lack of adequate remuneration					
Poor focus on fraud prevention within the department					
The notion that everyone else does it and gets away					

	Strongly Disagree	Disagree	No Comment	Agree	Strongly Agree
Occupational fraud is not perceived as causing harm to anyone					
The feeling that nobody will notice					

9.1 If you have any other response to question 9 above, please state:

---

10. Currently, how would you describe the departmental culture in relation to fraud awareness and prevention?

Weak	
Moderate	
Strong	
Very strong	

11. What is your opinion regarding current departmental culture in relation to fraud awareness and prevention?

	Strongly Disagree	Disagree	No Comment	Agree	Strongly Agree
Management encourages discussions regarding fraud awareness and prevention					
Departmental climate is one of honesty and integrity					
Fraud awareness and prevention is always highlighted and prioritised					
The REACH <sup>T</sup> values form the basis of the culture within the department					
The departmental culture supports the reporting of fraud and corruption					

12. Do the following anti-fraud controls exist within the Student Academic Administration department?

	Strongly Disagree	Disagree	No Comment	Agree	Strongly Agree
Proper separation of tasks (i.e. having more than one person completing a task to prevent fraud and error)					
Documented policies and procedures					
Clear roles and responsibilities					
Physical safeguards in place relating to sensitive information or records					
Job rotation					
Systems access and controls					

12.1 If you have any other response to question 12 above, please state:

---

13. The following can/may be done to improve fraud awareness in order to prevent occupational fraud in the department:

	Strongly Disagree	Disagree	No Comment	Agree	Strongly Agree
Finding methods to promote early fraud detection					
Improving morale and teamwork to create shared professional values and norms					
More frequent and suitable fraud awareness training methods to support an anti-fraud culture					
Separation of work duties to encourage transparency					

	Strongly Disagree	Disagree	No Comment	Agree	Strongly Agree
Improving systems control and environment					
Incorporating REACH <sup>T</sup> values into KPIs					
Having anti-fraud leadership and commitment by management					
Documented policies and procedures (e.g. Standard operating procedures)					

13.1 If you have any other response to question 13 above, please state:

---

14. Increased fraud awareness can/may play a role in preventing occupational fraud and build an anti-fraud culture within the department in the following ways.

	Strongly Disagree	Disagree	No Comment	Agree	Strongly Agree
Increased honesty and integrity					
Improved responsibility to prevent fraud within the department					
Improved knowledge of possible signs/actions which may indicate fraud					
More reporting of fraud may exist in the department					
Appropriate action will be taken against fraudulent behaviour					
Improved reputation of the department					
Improved performance and quality of work					
More alignment/synergy with REACH <sup>T</sup> values within the department					

**THE END**

Thank you for your time and contribution to this study.

## Appendix 5: Turnitin report

### ORIGINALITY REPORT

9%

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STUDENT PAPERS

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