



**The effect of institutional research strategy on the attitudes of accountancy academics towards research engagement: A case study of Higher Education Institutions in KwaZulu-Natal**

Submitted in fulfilment of the requirements of the degree of Doctor of Philosophy in  
Management Sciences (Public Administration) in the Faculty of Management  
Sciences at the Durban University of Technology

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NOVEMBER 2020

Supervisor: **Dr LM Lekhanya (Phd; D-Tech)**

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NOVEMBER 2020

Supervisor:

November 2020

Student:

November 2020

## **DECLARATION**

I, Zwelihle Wiseman Nzuza, declare that this thesis is a representation of my own work in both conception and execution. This thesis represents research work carried out by myself and has not been submitted in any form for another degree at any university or higher learning institution. All information used from published or unpublished work of others has been acknowledged.

The research described in this thesis was supervised by Dr Lawrence Mpele Lekhanya (PhD: Management; UWC, D-Tech: Marketing; DUT)

### **Published paper from this thesis**

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# DEDICATION

## The great commission

16 Then the eleven disciples went away into Galilee, into a mountain where Jesus had appointed them. 17 And when they saw him, they worshipped him: but some doubted. 18 And Jesus came and spake unto them, saying, all power is given unto me in heaven and in earth. 19 Go ye therefore, and teach **all nations**, baptizing them in the name of the Father, and of the Son, and of the Holy Spirit: 20 **Teaching them to observe all things whatsoever I have commanded you**: and, lo, I am with you always, even unto the end of the world. Amen.

Matthew 28 vs 16-20 (KJV) Holy Bible

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## **ABSTRACT**

Accountancy academics are choosing to embrace the accountancy profession rather than undertake research, with poor participation in research activities requiring investigation. IRS is a system by which universities can engage academics with research. This study, therefore, intends to bridge the gap and contribute to the body of knowledge by reviewing the effect of IRS on accountancy academics' attitude towards research engagement and to identify factors affecting IRS operation by accountancy academics, with specific reference to public universities in the province of KwaZulu-Natal, South Africa. The findings will be of particular relevance to historically disadvantaged public universities that view IRS as a form of praxis for instigating an accountancy research culture.

This study was descriptive and cross-sectional in nature, with data gathered from a sample of 82 respondents. Likert-scaled self-administered survey questionnaires and an online survey among relevant staff of the public universities in KwaZulu-Natal were used, namely, Durban University of Technology, Mangosuthu University of Technology, University of KwaZulu-Natal, and University of Zululand. Data were analysed using descriptive and inferential statistics (frequency tables, figures, correlation tables, regression tables, and cross-tabulations) and categorised according to themes. The IBM Statistical Package for Social Sciences (SPSS) version 25.0 was used to determine statistical results.

The results revealed various external and internal factors related to the university that inhibit the IRS operation. In order to move the knowledge frontier forward, a conceptual model of the effect of IRS on the attitudes of accountancy academic staff towards research engagement has been suggested and tested. Nonetheless, the study concludes an existing disparity of research ideas between academics, universities and industry practitioners, with findings providing several recommendations.

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## LIST OF ABBREVIATIONS AND ACRONYMS

Abbreviations	Description
ACCA	Association of Chartered Certified Accountants
AI	Academic identity
AICTE	All India Council for Technical Education
CA	Chartered accountants
CATE	Colleges of Advanced Technical Education
CESM	Classification of education subject matter
CHE	Council on Higher Education
CIMA	Chartered Institute of Management Accountants
DHET	Department of higher education and training
DUT	Durban University of Technology
DVC	Deputy Vice-Chancellor
EXCO	Executive committee
FRC	Faculty Research Committee
FHDC	Faculty Higher Degrees Committee
GAAP	Generally Accepted Accounting Practice
GDP	Gross domestic product
HDC	Higher Degrees Committee
HEIs	Higher education institutions
HESA	Higher Education of South Africa
HoD	Head of Department
IFRS	International Financial Reporting Standards
IRBA	Independent Regulatory Board for Auditors
IREC	Institutional Research Ethics Committee
IRS	Institutional Research Strategy
IT	Information technology
KMO	Kaiser-Meyer-Olkin
KZN	KwaZulu-Natal
MUT	Mangosuthu University of Technology
NDP	National development plan
NMMU	Nelson Mandela Metropolitan University

NQF	National qualification framework
NRF	National research foundation
NWU	Northwest University
PhD	Doctor of Philosophy
PSET	Post-school education and training
RDG	Research Development Grant
RFAs	Research focus areas
RU	Rhodes University
SA	South Africa
SAAA	Southern African Accounting Association
SADC	Southern African Development Community
SAICA	South African Institute of Chartered Accountants
SAIPA	South African Institute of Professional Accountants
SAQA	South African Qualifications Authority
SETAs	Sector Education and Training Authorities
SHDC	Senate Higher Degrees Committee
SITE	Science Innovation Technology and Engineering
SPSS	Statistical package for social sciences
SU	Stellenbosch University
TDG	Teaching Development Grant
UCDG	University capacity development grant
UCT	University of Cape Town
UJ	University of Johannesburg
UK	United Kingdom
UNISA	University of South Africa
UNIVEN	University of Venda
UNIZULU	University of Zululand
UoT	Universities of Technology
UP	University of Pretoria
USA	United States of America
VC	Vice-Chancellor
WITS	University of the Witwatersrand

# **CHAPTER ONE: INTRODUCTION AND OVERVIEW OF THE STUDY**

## **1.1 INTRODUCTION**

The year 1964 marks the beginning of strategy science, even though some consider it to be 1951, when a book on the subject was published by Viljam Niuman (Barnett, 2000: 3). Early researchers did some work on the topic of strategy, such as the famous treatise on the art of war by Sun-Tzu and, as a result, people in management positions from private institutions began to use the term 'strategy' in the first half of the 1970s (McInerney and Barrows, 2011: 1-2). Strategy in the public sector is a fairly new concept, with records beginning from the early 1980s (Cerniauskiene, 2014: 15-16; Barnett, 2000: 3).

Vergert (2010: 6) defines strategy as a composite of opinions, philosophies, visions, and practices, along with goals, knowledge, memories, and perceptions, as well as expectations that offers common direction for specific actions in pursuit of specific conclusions. Cerniauskiene (2014: 20-21) and McInerney and Barrows (2011: 1-2) are of the view that the strategy operation of public universities are shrouded in difficulties. Lange (2017: 33) asserts that the strategies of public universities fail to encourage direct engagement of staff.

Higher Education of South Africa (HESA, 2009: 10) contributes public university strategy issues to the transition from the apartheid regime to democracy, with the new government inheriting inadequate governance systems requiring re-visitation of old policies. The point is, the current public university strategy crisis creates space for new ideas, and for the recovery of important values related to education, human development, and justice, in addition to solidarity, freedom and internationalism (Terblanche, 2014: 66).

Public university strategy is considered for an array of activities, however, the study purpose was to explore the effect of institutional research strategy (IRS) on accountancy academics' attitudes towards research engagement, and investigate challenges affecting IRS operation on accountancy academics. This chapter deals with the background, the problem statement and study aims, and addresses the

objectives, research questions and hypotheses, as well as the study rationale. The chapter further highlights the research scope and methodology, providing a brief overview of the entire research project on a chapter-by-chapter basis.

## **1.2 BACKGROUND INFORMATION TO THE STUDY**

Public universities in South Africa (SA) offer higher education, produce research, and award academic qualifications to graduates in different subjects (Dahir, 2017; Baijnath and Barnes, 2010: 20; Chisholm, 2009: 2; Musiige and Maassen, 2009: 110).

Tripp, Helwig and Yetter (2017: 1), Assie-Lumumba (2006: 26) and Kasozi (2003: xv) suggest many global universities recognised the importance of research in order to improve knowledge after the 14<sup>th</sup> century, however, they only started to publish research journals in the 18<sup>th</sup> century, with South Africa introducing tertiary institutions towards the end of the 19<sup>th</sup> century. Factors such as the eras of humanism, enlightenment, reformation, and revolution moulded the type of research work these universities had to carry out (Bigabwenkya, 2013: 57-58; Pityana, 2003: 3; Winfield and Luyt, 2013: 2; Tripp *et al.*, 2017: 1). Winfield and Luyt (2013: 2) and the Government of SA (Government Gazette 2017: 21-23) concur that SA public universities face many challenges concerning accountancy research, as well as teaching and learning.

Lubbe and Coetzee (2018: 453) and Du Pre (2009: vi) confirm failure by the South African education system to address the fundamental needs of accountancy research. Tripp *et al.* (2017: 6-7) and Musiige and Maassen (2009: 110) emphasise the ability of public universities to promote development of society, through their willingness to review and renew prevailing ideas, policies and practices, based on a commitment to research (Bigabwenkya, 2013: 57). Embrett and Randall (2014), Randall *et al.* (2014: 149) and Rosentreter (2012: 6) maintain that a commitment to research calls for public universities to engage in the pursuit of academic scholarship and intellectual inquiry because this gives the university a unique position as a core knowledge institution.

## **1.3 ACCOUNTING PROFESSION**

An accounting profession refers to specialised study or a vocational field designed to provide scholars with professional knowledge for application in a professional practice (South African Institute of Professional Accountants (SAIPA), 2019; McIntyre, 2017). An aspiring, professional accountant must first undergo a professional evaluation

assessment, which is an exam that assesses the effectiveness of the scholarship and development of the skills that consist of both academic and workplace experiences, as well as the person's ethical behaviour. Upon successful completion of the course, the incumbent is declared competent and must register as a professional member of the accounting body (SAIPA, 2019; McIntyre, 2017).

Academic qualifications are advanced studies in an academic discipline, and their purpose is imparting subject matter knowledge. Theory is thus emphasised by academic programmes, with the main aim that of preparation for professional careers, which may lead to research, after which the title of 'doctor' may be conferred. These courses prepare the student for a life of scholarship in an academic discipline, rather than specific applications of knowledge to professional practices in accounting (Pratham education, 2016; McIntyre, 2017).

This shows that two categories of accountancy academics exist in universities (McIntyre, 2017). The first comprises those who hold academic qualifications from universities and the second category encompasses those who hold both academic and professional qualifications. However, frequent observation shows many academics with an accounting background are not research-oriented, while Cathrynne (2018: 4-30) reports that academics from science and engineering fields believe strongly in research. The question arises whether accounting education and practice do require research. This can be answered through the history of accounting, which played a substantial role in the development of cities and trade, in the concept of wealth and numbers, and in the development of money and banking (Anderson-Gough, Grey and Robinson, 1998; Angus, 2014: 3). The next section discusses about the big four in accounting discipline.

### **1.3.1 The big four in accounting profession**

#### **a. Financial accounting**

Historically, accounting played a major role in the development of cities and trade, concepts of wealth and numbers, and in the development of money and banking systems (Anderson-Gough, Grey and Robinson, 1998; Angus, 2014). Historians such as Keistar (1965) and Chatfield (1977) note that, initially, accounting systems were designed to strengthen debit and credit transactions. There was little need for financial statements because owners had direct knowledge of their

businesses and could therefore, rely on basic bookkeeping procedures for information (Anderson-Gough, Grey and Robinson, 1998). However, the number of corporations rapidly increased post-1820, and managers required cost and production reports, financial statements, and operating ratios, which are more complex than simple recording procedures (Cathrynne, 2018: 4). This resulted in bookkeeping expanding into accounting (Mohamud and Hikmat, 2013). Nonetheless, some scholars still regard accounting as an application rather than a potential field for research (Nowican, 2018; de Villiers and Venter, 2010). Furthermore, as noted earlier, SAICA stated that time devoted to research would be better used to develop new textbooks (de Villiers and Venter, 2010). In contrast, Syed and Veronica (2015) assert that research is important in order to share accounting information at a standardised level that will promote knowledge development, community engagement and innovation. In this regard, accountants from around the world, including academics, practitioners, and professionals collaborated to amalgamate the best of the Generally Accepted Accounting Practice (GAAP) statements into a single global set of GAAP, or the International Financial Reporting Standards (IFRS). This called for much research (Cathrynne, 2018: 4), demonstrating its relevance to this discipline. The current study thus also investigated whether IRS influences the attitudes of accountancy academics' engagement in research.

Hopwood (1987: 206) is of the view that the financial accounting approach adopted by practitioners appears to signify teleology, for example, they claim that financial accounting has some final end to which it is lean towards. This is contended by Napier, 2001, that financial accounting has the possibility of contributing to social progress over its demonstration of rational calculation. If that so, then it has the latent to be progressive, because rationalization is itself liberal. Cristina-Maria (2012: 24) states that developments in financial accounting came about in the first place in response to economic social and political pressures, but, thereafter, acted as an aiding device to assist further changes. Changes in financial accounting knowledge and practice have been strongly influenced by the accounting profession and their institutional forces (Tomkins, 1978: 9). The developments in financial accounting include but not limited to the following:

**Accounting structures** - a plan to establish an International Study Group comprising the Institute of Chartered Accountants of England and Wales (ICAEW), American

Institute of Certified Public Accountants (AICPA) and Canadian Institute of Chartered Accountants (CICA) was allotted in 1966. In 1997, the Accountants International Study Group (AISG), for whom the application was allotted in 1966, was originated. This group was to frequently circulate papers on main topics in accounting. The papers that were issued are understood to have steered the way to the improvement of accounting standards (ICAEW, 2011).

**Accounting standards** – according to Mootze (1970), accounting standards are the aggregates of doctrines, principles, rules, laws, and theories for practicing accounting. The growth of the standards started in June 1973 with the International Accounting Standards Committee (IASC). Around 1973 to 2000 IASC issued a chain of standards entitled International Accounting Standards (IASs). It was around year 2000 when IAS gained full respect by several Stock Exchanges around the glob (ICAEW, 2011). IASC had established 41 IASs. In 2001, IASC was substituted by the International Accounting Standards Board (IASB). At that time, IASB proclaimed a new number sequence for the accounting standards. The IAS will now be known as International Financial Reporting Standards (IFRS). Later on, IASB developed 13 new standards, referred to as the IFRS's and withdrawn 12 of the older standards (IAS's). According to Deloitte Touche Tohmastu Limited (2011), the key goals of IASB are put down as “the development, in the public interest, of a single set of quality, understandable and enforceable global accounting standards that require high quality, transparent and comparable information in financial statements and other financial reporting to help participants in the worlds capital markets and other users in making economic decision”. Consequently, the main task for IASB is to advance IFRS, however this does not mean that they work apart from other societies who are also involved in other areas of the development of IFRS. The other involved societies include the following.

**The IFRS interpretations committee** - In 1997, the Standing Interpretations Committee (SIC) was set up to deliver authoritative direction over interpretations of standards. SIC established 34 interpretations (SIC 1 - SIC 34), however, only 10 of these interpretations endure, the rest have been removed as a result of the harmonization process (IFRS Foundation, 2011). The interpretations are now settled by a sub-committee of the new IASB. From 2001, this sub-committee reffered to itself as the International Financial Reporting Interpretations Committee (IFRSIC), but renamed itself in 2010 to be IFRS Interpretations Committee (IFRSIC). Thereafter,

IFRSIC has developed 20 more interpretations (IFRSIC 1 – IFRSIC 20) of which 4 of them have been withdrawn (IFRSIC 3, 8, 9 and 11), leaving only 16 interpretations standing (Soweden-Service, 2012: 7 and ICAEW, 2011).

**Exposure drafts (ED) and letter of intent (LOI)** - A common procedure of emerging the exposure draft is that as soon as it has been checked and ratified by a minimum of 9 of the 15 members of the IASB and the views of those members of the IASB who did not support the exposure draft have been deliberated and the decisions are being made by the rest of the IASB members, then the exposure draft can be allotted. If there is any remark acknowledged after the draft approval, such remark will be exposed to thorough examination before the draft is re-issued (Cathrynne, 2012: 7). The practice of ED and LOI is to allow various professional associations and users of financial statements around the globe to first analyze the accounting implication and implement a uniform position (Mootze, 1970). This exercise, inspires uniformity, comparability and convertibility of financial statements in different currencies across national boundaries (Adeniyi, 2004).

**The monitoring board** - IFRS (2011) exposes that the Monitoring Board is a newly designed body from 2009 with its aims and duties (as defined in its charter) being ensuring that the trustees of the IFRS Foundation remain to discharge their duties as defined by the IFRS Foundation Constitution, as well as approving the nomination and removal of trustees. Further duties include setting the form and content of financial reporting in their dominion” as well as “having a charge to guard and advice the public interest and to promote the development of high quality IAS”. IFRS (2011) reports that there are three major constituencies of the monitoring board, which are capital markets authorities, such as: the Emerging Market and Technical Committees of the International Organization of Securities Commissions (IOSCO); the European Commission, the Financial Service Agency of Japan (JFSA); and the United State (US) Securities and Exchange Commission (SEC).

**The IFRS advisory council** - The IFRS Advisory Council was established soon after the IASB and IFRSIC. The council is assigned to advise the IASB on several matters. The IFRS Advisory Council is noted with its central objectives including to provide IASB with broad counsels on related decisions and priorities relating to the IASB’s work, seeking insight on the views of businesses and individuals that will be users of

the proposed standards and seeking other advises that may be needed by the IASB and the IFRS Foundation Trustees (Deloitte Touche Tohmastu Limited, 2011).

**Accounting training, workshop and seminars** - Workshops and seminars are being organized in different regions by accounting bodies including governmental and non-governmental organizations. The objective is to inform and educate users on how to prepare trustworthy financial statements, especially on transparency and public accountability. Nwoko (1988) states that the institutions of higher learning they also have a role to play in the process of ensuring consistency in the treatment of accounting. Nwoko (1988) did observe that continuous training and development have made great impact on public cost consciousness and accountability.

#### **b. Management accounting**

The initial management accounting systems were integrated by North American cotton textile factories that were established after 1812. They used cost accounts to determine the cost of production (Johnson and Kaplan, 1987: 21; Chatfield, 1977). Fleischman and Parker (1995: 164) reveal that one of the first publications on cost was written in 1887 by Emile Garcke who was an electrical engineer and John Manger Fells, the accountant. Their publication was entitled ““Factory accounts”. These two authors were later recognised as the originators of marginal costing. Another scholar appeared in 1889 and this was Friederich von Wieser who first formulated the concept of opportunity cost in a paper entitled “On the relation of cost to value” issued in 1929. According to Chenhall and Langfield- Smith (1998), the first management accounting revolution that became known as the “modern” management accounting period, started in the late 1950s and ended in the early 1980s. This era was characterized by new research as a result of which academics provided new decision-making tools for managers. Moreover, this age was extremely rooted in the Ford Foundation’s initiative to restructure management accounting education in the United States (Freedman, 1992).

Before 1820, the term management accounting was not known, but the term which was used to define processes for the computation of costs and for financial control was “cost accounting”. This simply means that a great contribution in management accounting has largely been made by financial accounting and cost accounting (Hoskin and Macve, 1988). During the 18th and 19th centuries, the industrial revolution

presented new challenges to accountants (Johnson and Kaplan, 1987: 7). At this time, business processes became more complicated and data was needed to simplify those operations. Manufacturing activities increased, and according to Chatfield (1977: 101), accountants were expected to offer information to control expenditure and to price cost objects. The International Federation of Accountants (IFAC) (2002: 8) reports that the first management accounting revolution which is also known as the “classical period” has ended in the late 1950s.

Afterwards, the study of financial management with a view to evaluate the viability of investments also gained position in the field of management accounting. In around 1950s, two mainstreams formed the basics of modern financial management. The first one called corporate finance was pushed forward by Modigliani and Miller in 1958. The other, which pays attention on portfolio and risk and return studies, was presented by Markowitz in 1952, and has cohorts in authors such as Tobin (1958) and Sharpe (1964), but its position was not accepted until the 1970s.

The third management accounting uprising took place between 1980 and 1999. At this time, management accounting educators and researchers discovered that the effect of mathematical modeling on the establishment of management accounting did not serve the purpose of business managers at the workplace (Chenhall and Langfield-Smith, 1998). In 1987, leading management accounting researchers like Johnson and Kaplan called for three considerations in management accounting: (1) extending management accounting into nonfinancial areas, (2) a better understanding of contemporary problems and the information needs of managers, (3) and innovative practices (Fleischman and Parker, 1995: 165).

The global need for management accounting has required that the field be professionalized. This started in the late 18<sup>th</sup> centuries from the United Kingdom (UK). During the second half of the 19<sup>th</sup> century, British accountants became resolute to obtain professional status and in 1853 the Edinburgh Society and the Glasgow Institute of Accountants were established. Subsequently, a number of professional accounting bodies were formed on the model of the Scottish institutes (Puxty, 1993). It can therefore be concluded that management accounting is highly influenced by the UK. A centre of the Institute of Cost and Works Accountants (ICWA), the forerunner of CIMA was established in South Africa in Cape Town in 1953 (Chenhall and

Langfield-Smith, 1998), and another centre was opened in Johannesburg, South Africa in the early 1960s. The Johannesburg centre of CIMA soon required a full-time CIMA official. Today there is only one CIMA center in Johannesburg, boasting many practicing members.

### **c. Auditing and taxation**

The study of taxation and auditing reveals intriguing historical connections within the Holy Bible. Meyers (2012:1) highlights that ancient Egyptian pharaohs appointed tax collectors, known as scribes, who imposed taxes like the cooking oil tax. Rigorous auditing ensured compliance with the oil tax and identified any alternative oil usage. Similarly, during the rule of Emperor Wang Mang in China around 10 BC, a 10% tax was imposed on skilled labor earnings, while earlier taxation in China involved head taxes and property taxes (Meyers, 2012:1). These historical accounts underscore the presence of taxation practices in ancient civilizations.

In the context of South Africa, historical evidence demonstrates the implementation of direct taxation in various regions that were governed under Muslim systems (Dunkley, 2000:1). As the Boers expanded into the northern and eastern areas, the initiation of land ownership by Sir John Cradock in 1813 provided the legal framework for land taxation in South Africa (Dunkley, 2000:1). This period witnessed the introduction and enforcement of several tax measures affecting the local population, including the 1913 Land Act, the Immigration Act, Value Added Tax (VAT), Act No. 89, which replaced the General Sales Tax (GST) Act, and the introduction of capital gains tax through the Eighth Schedule of the Taxation Laws Amendment Act of 2001, effective from 1 October 2001 (Meyers, 2012: 1-2; History of South Africa, 2009: 1).

The term "audit" originates from the Latin word "audire," meaning "to hear." Auditors aim to provide assurance and enhance confidence for individuals or groups in society who have a legitimate interest in the conduct of others (Meyers, 2012: 1-2). The roots of auditing are intertwined with taxation in ancient civilizations such as China, Egypt, and Greece (Teck-Heang & Ali, 2008: 1-6).

In the case of South Africa, there is less information about auditing history but literature could be traced back with the development of accounting by the British society in 1886 after the discovery gold on the Witwatersrand. SAICA history (2015) reports that, in

1951, the Public Accountants and Auditors Act was announced and it brought into place the regulation of accountants and auditors in public practice. This was following the 1950's handed over by the Institutes of Accountants and Auditors which allowing all theoretical teachings and examinations to be established by the universities, but the profession retained the right to set the qualifying examination (Huxham and Haupt, 2006: 658).

The elementary line is that the communal shifts within South Africa over the period of freedom had to reflect the hopes of the population at large including their economic and social views towards taxation and auditing methods (Myers, 2012: 3). As a consequence of the fast-tracking changes in the country, the auditing and taxation professions observed substantial and rapid change since 1990s. This evolution on the increased accountability to identify, assess and report more explicitly has called for auditors and tax collectors to find new methods that build on a business (Teck-Heang and Ali, 2008: 2-6). These major developments confirm that auditing and taxation are the growing fields and they require deserving research. Also, when SAICA took over the task of setting the Part 1 of the Qualifying Examination (QE I) from the PAAB (the predecessor of the independent regulatory board for auditors (IRBA) in 1999, while the PAAB took over the role for setting auditing standards, it has been recognized that auditing is improving. To mention a few, the recent provisional changes in auditing include changes to the IRBA's obligation in respect of providing for the registration and regulation of candidate auditors by the IRBA and to update references to the Companies Act, 2008, in the Act (IRBA, 2016: iii).

Drawing upon the aforementioned context, it is imperative for academic staff within public university accountancy departments to transcend historical boundaries and elevate their research endeavors in order to attain competitive prowess and establish a distinct academic standing. Introducing a research culture among university academic staff, IRS emerges as a strategic approach to cultivate this advantage. Consequently, this study aims to investigate the impact of IRS on the research engagement attitudes of accountancy academic staff, while concurrently examining operational-level challenges that hinder the effective implementation of IRS within public universities in KwaZulu-Natal.

#### **1.4 APARTHEID LEGACY IN SOUTH AFRICAN HIGHER EDUCATION**

Unfortunately, the SA higher education system has been affected by injustices brought

about by the apartheid regime, and its consequences continue to cripple the current education system (du Pre, 2009: vi). It is argued by Terblanche (2014: 66) and Ravhudzulo and Runhare (2014: 4) that previous educational objectives served the needs of capitalism and promoted the apartheid policy of Bantu Education. Smith (1996, as cited by Terblanche 2014: 66) explained the basis of the South African apartheid education system was applied according to race at all levels of education, including lower and secondary schools.

Thus, many universities in SA still lack fundamental IRS resources, and the apartheid legacy could be one of the reasons why SA has contributed little if any research in the world of accountancy (Goldman, 2011: 38). Between 1921 and 1952, the SA government established separate Colleges of Advanced Technical Education (CATEs). In 1967, it was decided that these CATEs must be re-designated as Technikons and recognised as post-secondary public universities, or Higher Education Institutions (HEIs) offering career-oriented certificates. Their core academic goals were, however, not achieved (Rosentreter, 2012: 45). This means that during the 1960s universities had no strong emphasis on the IRS because there was an assumption that accountancy programmes did not need to be research-based, as they were designed to meet vocational needs. Table 1.1 lists the universities in existence prior to 1994.

**Table 1-1: SA universities between 1990 and 1994**

<b>Responsible authority</b>	<b>Number of Universities</b>	<b>Number of Technikons</b>	<b>Total Institutions</b>
House of Assembly	11	8	19
House of Representatives	1	1	1
House of Delegates	1	1	1
Department of Education and Training	4	2	6
Republic of Transkei	1	1	2
Republic of Bophuthatswana	1	1	2
Republic of Venda	1	0	1
Republic of Ciskei	1	1	2
<b>Total</b>	<b>21</b>	<b>15</b>	<b>36</b>

Source: Bouchard and McGue (2002: 39)

The 21 universities were divided into four white English speaking; six white Afrikaans speaking; eight African; and one university for Coloureds, with another for Indians. Besides these universities, 15 Technikons existed, of which eight were for whites only, five for Africans, one for Coloureds and one for Indians (Groenewald and Thulukanam,

2005: 86). According to Smith (1996, as cited by Terblanche 2014: 66), the University Act of 1950 enabled universities in SA to be developed based on race.

The Council on Higher Education (CHE) (2004: 62) states that SA higher education participation rates were skewed by race long before 1993, with black South Africans constituting roughly 77 percent of the population in 1993, Africans made up just nine percent of enrolments in the universities, while Coloured, Indians and white South Africans respectively made up 13, 35, and 43 percent. These statistics consider that current requirement of policies such as IRS was previously not a priority, with colleges ideologically designed and, as a result, important IRS initiatives and foundations were neglected. Many authors (Akinfolarin and Babatunde, 2014: 158; Renard, 2015: 17; King, 2017) agree that, in essence, universities should be for all who wish to acquire and share knowledge through teaching and learning and research.

### 1.5 SOUTH AFRICAN PUBLIC UNIVERSITIES POST 1994

Since 1994, education has been the main priority of SA's democratic government (Jayaram, 2003: 85). Du Pre (2010: 4-5) explains that the SA government developed 30 public universities of higher education after the mergers of various educational institutions. Among these are 11 traditional universities, eight comprehensive universities and six Universities of Technology (UoTs). The South African Universities Report (2015) provides a list of public universities in SA (Table 1.2) which is set out as follows:

**Table 1-2: SA public universities from 1994 to date**

<b>Universities of Technology (UoT)</b>	<b>Comprehensive universities</b>	<b>Traditional universities</b>
Cape Peninsula University of Technology (CPUT)	University of Johannesburg (UJ)	North-West University (NWU)
Central University of Technology (CUT)	Nelson Mandela Metropolitan University (NMMU)	Rhodes University (UR)
Durban University of Technology (DUT)	University of SA (UNISA)	University of Cape Town (UCT)
Mangosuthu University of Technology (MUT)	University of Venda (UV)	University of the Free State (UFS)
Tshwane University of Technology (TUT)	University of Zululand (UNIZULU)	University of KwaZulu-Natal (UKZN)
Vaal University of Technology (VUT)	Walter Sisulu University (WSU)	University of Limpopo (UL)
	Sol Plaatje University (SPU)	University of Pretoria (UP)
	Mpumalanga University (MP)	University of Stellenbosch (US)
		University of the Western Cape (UWC)

		University of the Witwatersrand (UW)
		University of Fort Hare (UFT)

Source: Developed by the researcher

### 1.5.1 Traditional universities

Veronika, Inese, Baiba and Tatjana (2016: 76) and The Department of Higher Education and Training (DHET, 2012) explain that the term ‘traditional universities’ refers to older established universities that existed prior to the higher education restructuring exercise. They are institutions of higher learning and research, which award academic degrees in a variety of disciplines, which provide both undergraduate and postgraduate education. Perumal (2010: 3-4) points out that traditional universities offer theoretically-oriented university degrees.

The title ‘traditional university’ is the same as ‘university’, derived from the Latin *universitas magistrorum et scholarium*, roughly meaning “community of teachers and scholars.” The literature cited above clarify traditional universities as research driven institutions; this means IRS in these institutions must be fully operational at all times. However, this is not the case accountancy academics are concerned, as they deliver less research output, in comparison to academics in other fields, such as engineering and health sciences.

### 1.5.2 Comprehensive universities

Comprehensive universities were formed by the merger of Technikons and Universities (DHET, 2012). As a result of the mergers, comprehensive universities offer a combination of theoretically-oriented degrees and vocational diplomas and degrees. This combination indicates that comprehensive universities are, in a sense, two vertical universities put together (Perumal, 2010: 3). These universities are expected to manage the challenge of balancing a vertical mandate, with some academics being research-oriented and others not, which may lead to IRS obstacles, with specific reference to accountancy academics.

### 1.5.3 Universities of Technology (UoT)

The South African process of UoT development began in January 2004, when the Minister of Education reformed higher education and Technikons were redesigned into UoTs (SA Universities Report, 2015; DHET, 2012). UoTs are branded as being research informed, rather than research driven, with their primary focus on strategic

and applied research that can be translated into professional practice. UoTs are known for their high technical values, including industry focus, practice-based teaching and learning, and real-world research (DUT, 2017a: 3). By definition, UoTs were historically not expected to produce any research as their focus was that of offering vocational education (DUT, 2016: 1). The transition from the previous idea of UoTs to current economic needs of research, requires major strategic decisions in formulating, implementing and operating IRS, with these problems seemingly influencing accountancy academics' research engagement.

#### **1.5.4 Characteristics of SA public universities**

For the purposes of this study, the term 'public institutions of higher education' refers to public universities, and is used consistently throughout this thesis. The definition that classifies SA public universities is provided by the Council of Higher Education (CHE, 2016), which states that public universities are to provide education on a full-, part-time, or distance basis. They are, in principle, established and largely funded by the government through the DHET. As stipulated in Act 39 of 2008, section 1, they have been merged, established and declared as public universities. The CHE (2016) explains the purposes of public institutions of higher education, as outlined in the "White paper 3: a programme for higher education transformation", to include the following:

- To meet individual learning needs and aspirations throughout their lives, allowing development of their intellectual aptitudes and abilities.
- To prepare individuals to optimally use their talents and make the most of opportunities for self-fulfilment offered by society.
- Act as significant distributor of prospects in their lives and a medium to achieve equitable opportunity and achievement delivery between South Africans.
- Deal with needs for advancement and provision thereof to the labour market and a society that is not only knowledge-dependent but also knowledge-driven, with erratic competency and expertise levels needed for a modern economy's growth and prosperity.

(CHE, 2016)

## **1.6 PUBLIC UNIVERSITIES IN KWAZULU-NATAL**

There are four public universities in the province of KZN, namely, Durban University of Technology (DUT), Mangosuthu University of Technology (MUT), University of KwaZulu-Natal (UKZN), and University of Zululand UNIZULU (Rosentreter, 2012: 45).

### **1.6.1 UKZN**

UKZN is a traditional, non-profit, public university that is geographically divided into five distinct campuses, which partially correspond to its managerial and academic divisions. The Westville campus is the main home of the accountancy and management disciplines (Ngibe, 2015: 11). UKZN is accredited by SAICA to offer academic programmes in accountancy that lead to the professional qualification as a Chartered Accountant (CA). SAICA accreditation ensures quality assurance processes to regulate academic programmes that lead to the qualification as a CA. UKZN is a historically white institution established in 2004 from the merger between the University of Durban-Westville and the University of Natal (UKZN, 2018). This suggests that SAICA accreditation controls accountancy academics. This includes the manner in which accountancy is perceived as a discipline.

### **1.6.2 UNIZULU**

UNIZULU is also a non-profit public university and is located north of the Tugela River. It follows SA's National Plan for Higher Education, directed at eradicating inequity and expensive duplication of resources. The main campus is situated in the Kwadlangezwa area, south of the town of Empangeni (Ngibe, 2015: 11). UNIZULU is not accredited by SAICA but offers a combination of vocational and general qualifications in accountancy. Historically, UNIZULU was established in 1960 as a so-called 'bush college', however, the institution has advanced to become a complete university equal to any other university in SA (UNIZULU, 2018).

### **1.6.3 DUT**

DUT is a non-profit public university located in the urban setting of the city of Durban. The institution has branch campuses in Pietermaritzburg and Durban. Ritson (Durban) and Indumiso (Pietermaritzburg) are the only two campuses that offer accountancy qualifications. Historically, DUT was formed in 2002 following the merger of Technikon Natal (originally designated for whites) and ML Sultan Technikon (originally designated

for Indians) and was initially known as the Durban Institute of Technology (DIT), renamed as DUT in 2007 (DUT, 2008a: 19; Ngibe, 2015: 11).

#### **1.6.4 MUT**

MUT is situated in the Umlazi Township in Durban. MUT and DUT do not offer SAICA accredited programmes, however, their qualifications are intended to equip individuals with vocational skills and technology (Ngibe, 2015: 11). Historically, MUT is a black institution which started to operate in 1979, although its buildings were only officially opened in September 1981 (MUT, 2018). Moreover, the historical mandates of MUT and DUT were never research but vocational training, which still create disagreements between accountancy academics regarding the importance of research.

It is discouraging that research in the KZN UoTs was not a priority, despite the fact that these universities evolved independently of each other. Moreover, it is noted from the reviewed literature that IRS is an important instrument to instil a research culture in universities, especially among accountancy academics. It is, therefore, imperative that the IRS of any university be operated in a manner that equips academics with the research knowledge and skills necessary to participate in solving global science issues.

### **1.7 SA POST-GRADUATE STUDENT ACCESS AND CHALLENGES TO UNIVERSITY ACCOUNTANCY PROGRAMMES**

More than half the total number of students in SA public universities (54.4 percent) were enrolled in accounting related programmes in 2016, however, few continued with post-graduate studies, such as master's and doctoral degrees (DHET, 2016: 28). A study by Terblanche (2014: 55-63) on measuring the ease of access by postgraduate students to accountancy programmes in SA, found that most students from the universities in KwaZulu-Natal (KZN) still suffer from previous injustices such as poverty, language barriers, unavailability of resources, as well as HIV and AIDS.

In 2013, universities achieved postgraduate participation by 16 percent black Africans, with 14.2 percent Coloured, 47.4 percent Indian, and 54.7 percent White students. Overall participation by SA postgraduates in 2013 was 19.2 percent (CHE, 2013). While postgraduate participation rates for black Africans and Coloureds have increased in recent years, these are still relatively lower than for Whites and Indians (CHE, 2013).

For example, in 2017, educational attainment was shown to be most among Whites, with 38.3 percent having a post-secondary education. Post-secondary attainment among black Africans and Coloureds was below the national average, with 9.1 percent and 8.1 percent, respectively. In addition, females constitute the highest percentage among those who have no education (55.3 percent) compared to males (44.7 percent).

As at 2015, KZN was the second last province in SA, with the lowest (1.6 percent) of post-secondary educational attainment among individuals aged 25 to 64, with Limpopo at eight percent, Western Cape at 13.4 percent, the Eastern Cape at 8.3 percent, and the Northern Cape at 1.5 percent, with the Free State at 4.4 percent, North West at 4.4 percent, Gauteng at 38 percent, and Mpumalanga at six percent (DHET, 2016: 3).

It has also been noted that enrolments at historically white universities still contain a lower proportion of black African students, whereas the historically African institutions remain almost exclusively comprised of black African students (HESA, 2014: 2; Pityana, 2003: 4; Brenton, 2011). These postgraduate student access challenges demonstrate the difficulty of setting the right tone for accountancy research policy operation in public universities, especially in KZN.

In 2010, there were 30 083 postgraduate diploma/honours graduates, 8 618 masters and 1 423 doctoral graduates. Of these graduates, 63.3 percent were black Africans and 59.3 percent were women (CHE, 2012: 20; DHET, 2013: 32). SA produces 28 doctoral graduates per million per year. This means that postgraduate student enrolments and outputs remain low in SA compared to the country's national economic and social development needs; represented by the small increase of 1.8 percent in postgraduate students' graduating between 1995 and 2010 (HESA, 2014: 5). The higher education management information system database extracted in October 2017, reports that the country produced 22.5 percent and 13 percent of master's degrees and doctoral degrees respectively in 2017. Nonetheless, this had no bearing on the country's ability to achieve the DHET target to produce at least 12 000 PhD graduates by 2019 (DHET, 2016: 3).

In contrast, the university of Sao Paulo in Brazil has more than 89 000 students and graduates, producing approximately 2 500 doctorates annually. Portugal graduates nearly 600 doctorates per million, the United Kingdom (UK) approximates 300 per million, the United States of America (USA) about 200 per million, and Australia

produces roughly 270 per million, with Korea nearly 190 per million, while Brazil produces in the region of 50 doctorates per million (HESA, 2014: 6). DHET (2011: 324) and CHE (2012: 10-12) report that SA plans to increase the amount of academic staff qualified at doctoral level in 2030, by 75 percent. The plan includes a target to produce at least 100 doctorates (5 000) per million per year. Inadequate funding for the financial and academic support of postgraduate students is potentially one of the main reasons for the low ratio of doctoral graduation (CHE, 2013: 15).

Having examined the aforementioned literature, poor access by accountancy students to postgraduate programmes appears to be a serious issue in SA and negatively affects the failure of IRS to increase the capacity of researchers needed in the area of accountancy. Therefore, investigating the effect of IRS and the challenges that affect its operation in cultivating positive attitudes of academic staff towards research engagement, is an important task.

## **1.8 PROBLEM STATEMENT**

Authors (Cathrynne, 2018: 4-30; Fraser, Tseng, and Deng, 2018: 862) reveal that research has not received much attention in other disciplines and the little that is available, has been criticised for being composite. Research should be beneficial to society (Markides, 2007: 767). Fraser, Deng, Bruno and Rashid (2020: 129) argue that research is distinctly divided in two, namely applied and theoretical research. Applied research addresses real world issues, whereas theoretical research benefits society in general. As for Fraser et al. (2018: 862), society has expectations that academics will generate practical knowledge that is easy to understand and apply.

Cathrynne (2018: 4-30) and Pouris (2012: 30) are of the view that accounting research suffers from not only these criticisms, but also include its irrationality and failure to address real world issues. Due to this, accounting research remains nominal (Lubbe and Coetzee, 2018: 453). Other disciplines have made considerable progress to address research practice gaps, which includes evidence-based studies in fields such as marketing, education, medicine, and rehabilitation, as well as psychology (Fraser *et al.*, 2018: 863). Due to an obvious disconnect between researchers and professional practitioners in the field of accounting, Fraser (2013: 87) discourages comparison of accountancy with other fields in medicine and science.

Recalling the Enron or WorldCom scandals, it is clear that accounting is a time-tested discipline (Williams, Jenkins, and Ingraham 2006: 785). The 2008 Global Financial Crisis drew even more criticism (Hopwood, 2009b: 799), while Fraser *et al.* (2020: 131) argue that the Global Financial Crisis is a warning about the danger of accounting misapplication, which is a characteristic of past accounting research.

Inanga and Schneider (2005: 227) expose a subjective indication to agree with claims that accounting research is of little or no value to its practice, nor to the advancement of it as an academic discipline. Williams *et al.* (2006: 784) do not believe accounting has made any significant progress since research was initiated in this field. In contrast, Syed and Veronica (2015: 117) are of the view that accounting research is of importance to communication as it changes accounting applications. De Villiers and Venter (2010: 11) share that most accounting academics dedicate their valuable time to textbooks, with this being attributed to students' desire to receive not only a degree that is academic, but also one that is vocational.

For that matter, accounting academics perceive themselves as professionals, not researchers (Unerman and O'Dwyer, 2010; Albrecht and Sack, 2000). This perception is discouraged by van der Schyf (2008: 13), who states that given the importance of the argumentative context of scientific research, one or more theoretical views should be integrated with the logic of professional practice. Nguyen (2015: 34) exposes that research enhances knowledge, interest in and enthusiasm for the subject, leading to competences, which, in turn, help in supervising the research projects of students. Similarly, Jensen (1988: 19-20) shares that research improves teaching with new methodologies and new topics on the subject, and builds academic connections around the world.

Academics who incorporate research into their teaching enhance student confidence in the subject (Lubbe, 2013: 111). There are also financial benefits for those who participate in research from universities (Okamuroa and Nishimurab, 2011: 2). Notwithstanding the research benefits, Basak (2014: 9) finds research productivity still low, in terms of the academic staff ratio.

Arguments encountered in literature, regarding the need for academic research, call for this study to investigate the effect of IRS on the attitude of academics towards research engagement. One would ask; why IRS in particular? According to Johannes,

Philipp, Vicki and Russell (2012: 438), IRS is a policy aimed at directing and shaping research and innovation in a university.

## **1.9 RESEARCH AIM AND OBJECTIVES**

The next section states the aim and secondary objectives of this research.

### **1.9.1 Aim of the study**

The overall aim of the study was to respond to the need for research engagement of accountancy academics by identifying the effect of IRS on their attitudes towards research engagement. The study also identified factors affecting the IRS at an operational level in the public universities in KZN, with specific reference to accountancy academic staff.

### **1.9.2 Secondary objectives**

- To investigate effects of the existing IRS attitude of academics towards research engagement;
- To investigate factors that are affecting IRS at operational level in the public universities in KZN;
- To investigate the accountancy academic staff perceptions on the extent to which internal and external factors affect the IRS at an operational level in the public universities in KZN; and
- To propose a model of the effect of IRS on the attitude of accountancy academic staff towards research engagement

### **1.9.3 Hypotheses**

In order to explore the implication of this study through hypotheses testing, each of the following themes was verified in order to determine the association between the study's main variables, which are: IRS (independent) and academics' attitude towards research engagement (dependent).

The study developed the following hypotheses.

Ha 1.1 IRS allowing for research engagement has a correlation with the attitude of academics towards research engagement.

Ha 1.2 IRS promoting global research recognised by accountancy bodies correlates with the attitude of academics towards research engagement.

- Ha 1.3 IRS advancing accountancy research has a correlation with the attitude of academics towards research engagement.
- Ha 1.4 IRS delivering innovative research to industry shows a relationship with the attitude of academics towards research engagement.
- Ha 1.5 IRS delivering innovative solutions to community has a correlation with the attitude of academics towards research engagement.
- Ha 1.6 IRS building financial strength for the department correlates with the attitude of academics towards research engagement.
- Ha 1.7 IRS promoting high-quality research shows a relationship with the attitude of academics towards research engagement.
- Ha 1.8 IRS exposing accountancy academics to global research level has a correlation with the attitude of academics towards research engagement.
- Ha 1.9 IRS providing continuous improvement to research staff correlates with the attitude of academics towards research engagement.
- Ha 1.10 IRS nurturing postgraduates to be future researchers and innovation leaders has a correlation with the attitude of academics towards research engagement.
- Ha 1.11 IRS attracting talents of researchers shows a relationship with the attitude of academics towards research engagement.
- Ha 1.12 IRS attracting workforce to work for accountancy departments correlates with the attitude of academics towards research engagement.
- Ha 1.13 IRS promoting productive academic activities has a correlation with the attitude of academics towards research engagement.
- Ha 1.14 IRS promoting unified and shared educational experiences shows a relationship with the attitude of academics towards research engagement.
- Ha 1.15 IRS increasing quality and extent of research collaboration has a correlation with the attitude of academics towards research engagement.
- Ha 1.16 IRS enriching individual academics correlates with the attitude of academics towards research engagement.
- Ha 1.17 IRS enabling research training shows a relationship with the attitude of academics towards research engagement.
- Ha 1.18 IRS potential to expose the department to global research infrastructure has a correlation with the attitude of academics towards research engagement.
- Ha 1.19 IRS building research leadership within the department correlates with the

attitude of academics towards research engagement.

### **1.10 PROPOSED CONCEPTUAL MODEL DESCRIPTION**

Institutional models and employees' behaviour models have become prevalent and are significant to investigate employees' attitudes and performance in most organisations. This study intends to propose a conceptual model on the effect of IRS on the attitude of accountancy academics towards research engagement. The adoption of this conceptual model will be used to address research policy matters. The model will cover the following theoretical constructs:

- IRS; and
- Academics' attitude towards research engagement.

The proposed model to be adopted explains the impact of IRS on the attitude of the academic staff towards research engagement. The conceptual model is illustrated by the use of diagrams, with a label showing the hypothetical links of the theoretical constructs (Figure 2.4).

### **1.11 SIGNIFICANCE OF THE STUDY**

The reason for undertaking this study is to contribute to the body of existing knowledge concerning the effect of IRS on the attitudes of accountancy academics towards research engagement with specific reference to KZN public universities. Many studies, such as those conducted by Fraser *et al.* (2020: 131), Syed and Veronica (2015: 117), Nguyen (2015: 34) and Basak (2014: 9), are in support of the need for academic research studies that seek to improve research productivity in line with the academic staff ratio. It is held by Tripp, Helwig and Yetter (2017: 5) that universities cannot survive without research, stating it as part of their responsibilities to search for the unknown, with the aim to equip society with fresh knowledge. Consequently, research has financial benefits for the university (Basak, 2014: 8).

Akinfolarin and Babatunde (2014: 158) put forward that research also plays an important role for international collaborations, allowing universities to partner with colleagues in foreign countries in the development of new knowledge. Likewise, Todtling (2014) maintain that the ranking of international exposure for universities is based on several criteria, including the quality and quantity of academic research, the research ratings of staff and their academic reputation. Therefore, analysis of the

impact of academic research studies is mainly due to the predominance of researching the unknown in modern society and its reported impact on improving peoples' lives. The rationale for the current study is also encouraged by Perkmann *et al.* (2013: 423), who recommended that future research should consider policy implications on academic research engagements.

## **1.12 SCOPE OF THE STUDY**

This section provides a brief discussion on the study delimitations and limitations, as the study was confined to four public universities: DUT, MUT, UKZN, and UNIZULU, all from the province of KZN (Figure 1.1).

### **1.12.1 Delimitations**

The main aim of this study was to identify the effect of existing IRS and contributing challenges affecting it at an operational level in KZN public universities. This study did not consider other SA provinces. Nevertheless, the results can be considered and applied to other public universities that function similarly to those investigated in the province of KZN.

### **1.12.2 Limitations**

The study has its own limitations, which may not have been overcome, including the fact that financial resources were restricted, which affected the research process, along with the researcher only having three years to complete the study. Due to other course commitments, the primary research had to be gathered using census and convenience sampling methods. Furthermore, it was noted that a lack of time and unavailability of accountancy academics to provide responses might have created problems in obtaining a representative sample.

To deal with these issues, a reasonable time was dedicated to data administration. While there were no interviews conducted, respondents were, however, allowed to broadly express their opinions and ideas beyond the Likert-scaled statements. Moreover, this study did not consider proposing a new IRS framework but rather compile a conceptual model for factors that affect IRS operation in KZN public universities.



**Figure 1-1: KwaZulu-Natal map**

Source: Searchable map and satellite view of KZN, SA (2018)

### **1.13 OVERVIEW OF THE RESEARCH METHODOLOGY AND DESIGN**

The survey procedure of this study was centred on the research type, target population, data collection methods, questionnaire and the techniques used to analyse the data.

#### **1.13.1 Design of research**

This study used both quantitative and qualitative techniques, with the primary data, therefore, collected by means of a mixed method. A questionnaire was established and pre-tested in order to obtain the expected evidence. This study used a questionnaire with closed- and open-ended questions, along with statement responses, using a 5-point Likert-scale.

### **1.13.2 Target population**

The overall target population comprised 1 216: 700 from DUT, 1 328 from UKZN, 239 from MUT, and 277 from UNIZULU. KZN universities were selected as a long colonial history, dating from the apartheid regime, has been shown to have undermined the education system of the black population, more especially in the province of KZN (Terblanche, 2014: 66; Ravhudzulo and Runhare, 2014: 4). Part-time, full-time lecturers and Head of Departments (HoDs) from financial accounting, management accounting, taxation, and auditing departments were the target population of the study. This target population was the population to which the researcher ideally would like to generalise the results (Welman, Kruger and Mitchell, 2011: 214-215; Goddard and Melville, 2007: 34-35).

### **1.13.3 Sampling method**

In order to advance the scope of the study, the researcher included a total of 103 accountancy academic staff: 44 from DUT, ten from MUT, 37 from UKZN, and 12 from UNIZULU. Saunders, Lewis and Thornhill (2009: 213) mention there are two well-known sampling methods: probability (representative sampling) and non-probability (judgemental sampling). Probability sampling applies a casual collection technique, while non-probability sampling does not follow casual selection but depends on a somewhat judgemental technique (Saunders *et al.* 2009). For this study, probability was applied, with the obvious advantage of this method that the researcher studies the entire population and data is, therefore, more reliable than using other methods. However, this method was lengthy and time-consuming for the researcher.

### **1.13.4 Research type**

The research design of this census, descriptive and cross-sectional study was predominantly quantitative in nature, with mostly closed-ended and only four open-ended questions (Sekaran and Bougie, 2014: 161). Quantitative analysis, in terms of descriptive and inferential statistics, leads to an understanding of general trends, whereas open-ended analysis allows for opinions of respondents (Saunders, Lewis and Thornhill, 2007: 134). The methodology of this study was applied with respect to accountancy academics and to gain an understanding of and interpret their opinions, perceptions and challenges of IRS operation.

### **1.13.5 Measuring instruments**

This study used both closed- and open-ended questions, and the researcher used online survey and self-administration methods. According to Bell (2005, as cited by Gabula 2012: 8), the researcher has two options when asking questions, either as open-ended or close-ended questions. Open-ended questions are more useful due to respondents being given space to express their feelings and ideas. However, most researchers prefer using closed-ended questions, as their arrangement is consistent and more easily analysed (Welman *et al.*, 2011: 85). In order to fulfil the objectives of this study, the instrument used was a questionnaire. The questionnaire was 5-point Likert scaled and used a nominal level with listed statements for respondents to tick where relevant (Hussey and Hussey, 1997: 126).

### **1.13.6 Data distribution and collection instruments**

This mixed method study used a closed- and open-ended questionnaire for data collection. Primary data was collected from 98 accountancy academic staff from KZN public institutions of higher education. As these public universities are spread all over the KZN province, the researcher used an email survey to gather data at MUT, UKZN and UNIZULU and a combination of administered and self-administered questionnaires at DUT.

### **1.13.7 Data analysis**

The researcher, assisted by a statistician, captured and analysed data, employing relevant descriptive and inferential statistics. On the one hand, the analysis of quantitative data was performed with the aid of the IBM Statistical Package for Social Sciences (IBM-SPSS). Open-ended data, on the other hand, was analysed by the researcher according to themes.

### **1.13.8 Pilot study**

A pilot study tested the questionnaire to determine its effectiveness and whether changes were necessary prior to the start of the full-scale study (Welman *et al.*, 2011: 85). In addition, the questionnaires were sent to 5 experts to check for spelling, grammar and comprehensibility. Dawson (2009: 98, as cited by Gabula 2012: 62) defines a pilot study as a minor and initial study conducted to assess practicality, time, cost, adverse events, and to predict a suitable sample size and improve the study design, prior to performance of a full research study.

Participants in the pilot study did not take part in the main survey. Incorrectly worded questions were adjusted after the pilot and thereafter distributed for the main study. The pilot study included a maximum of 5 academics, with all requested to comment on the validity/understandability of the questionnaire statements. The pilot study used an email survey as it was a convenient method to reach the respondents.

#### **1.13.9 Reliability, validity and trustworthiness**

In a research study, reliability and validity are two important judgement criteria of the correctness of a measure for specific inferences, decisions and consequences (Muijs, 2011: 56). Reliability was conducted as a measure to determine whether the study would repeat the same results should it be conducted again, and validity was performed to establish whether the designed questionnaire tested what the researcher intended to measure. Validity of this study was ensured by conducting a pilot study with a selected group of five academics. The results indicated that the respondents had some suggestions concerning the grammar and content of the study. Cronbach's Alpha was used to test the study's reliability, and an overall reliability score of 0.950 was achieved, which exceeded the recommended value of 0.7 (Muijs, 2011: 221). This specifies a great degree of satisfactory, consistent scoring for this study. Data trustworthiness has four key components: credibility, transferability, dependability, and confirmability (Given 2009).

#### **1.13.10 Ethical considerations for this study**

Appropriate ethical considerations have been adhered to in this research. Cohen, Manion and Marrion (2007: 55) state that formal processes of obtaining permission to conduct a research study should be carried out in all research fields. For the purpose of this study, the researcher submitted a research proposal to the DUT institutional research structures: the Faculty Research Committee (FRC), the Institutional Research Ethics Committee (IREC), and the Higher Degrees Committee (HDC). The researcher also considered respondents' protection and rights by obtaining permission letters from the target universities: DUT, MUT, UKZN, and UNIZULU. Respondents were not forced but rather requested to participate in the study. To ensure confidentiality, particulars such as respondents' names, contact numbers, addresses and other information were not included in the questionnaire or the published research.

To eliminate risks, respondents were informed timeously, prior to distribution and collection processes taking place. Participants were advised to complete their questionnaires confidentially, with the assurance that no personal information would be shared in any way, in order to protect their identities. This was outlined in a letter of consent.

#### **1.14 DEFINITION OF TERMS**

Key concepts used in this study are defined as follows:

**Institutional research strategy (IRS):** The South African Medical Research Council (2018) defines IRS as a broad institutional research programme carried out by a legally constituted institution, wherein research is one of the primary purposes for its existence, including the preparation of postgraduate students. Similarly, Johannes *et al.* (2012: 438) define IRS as a research strategy directed at leveraging and shaping the research and innovation in a university.

**Accountancy academics:** Accountancy academics encompass a broad range of the academic staff including those related to financial accounting, management accounting, auditing, and taxation (Cristina-Maria, 2012: 24; IRBA, 2016: iii; Dunkley, 2000:1).

#### **1.15 STRUCTURE OF THE THESIS**

This thesis consists of seven chapters, structured as follows:

Chapter 2 discusses IRS and presents new conceptual model for the study.

Chapter 3 examines the factors affecting the IRS operation in the public universities.

Chapter 4 expounds on the research methodology, population and sampling, the data collection tools and procedures, as well as data analysis techniques employed.

Chapter 5 presents the data analysis, findings and results of the study, which are discussed in line with the research objectives.

Chapter 6 offers a summary of the study, as well as submitting conclusions and recommendations on improving the effect of IRS and recommendations for future research studies.

## **1.16 CONCLUSION**

This introductory chapter explored the background to the study; statement of the research problem; aims and objectives of the study and hypotheses; and justified the need for the investigation. The scope and an overview of the methodology used were also presented. Finally, this chapter presented an overview of the chapters that follow and laid the foundation for this thesis.

The next chapter will survey the literature on IRS.

# CHAPTER TWO: INSTITUTIONAL RESEARCH STRATEGY

## 2.1 INTRODUCTION

The previous chapter provided a background to the study, with a statement of the research problem, the study aims, objectives and hypotheses, and justified the necessity for the investigation. This chapter fulfils the first objective and fourth objective of this study, which are to investigate the effect of IRS on the attitudes of academic and propose a conceptual model for the effect of IRS on accountancy academics' attitude towards research engagement. A theoretical framework is the construction that rationally assembles the related theories. According to theorists Kuratko, Morris and Schindehutte (2015: 2), a theoretical framework allows for identification of relationships and prioritisation of variables. In research, theoretical frameworks provide the researcher with the groundwork on which to hypothesise and develop models, as well as build and test theory (Kuratko et al., 2015: 3-4). According to Kakhbod (2013: 5), Vergert (2010: 6), and Tripp et al. (2017: 7), theories are the point of departure from which organisations find common direction for specific actions in pursuit of distinctive conclusions. Therefore, the chapter presents literature on the following:

- Previous studies on higher education research;
- IRS design in SA public universities;
- IRS approaches;
- IRS implementation;
- IRS operation;
- The role of IRS in the university;
- Universities' IRS progress in other parts of the world, Africa and SA;
- The South African global research collaboration framework;
- IRS performance appraisal;
- The concept of universities' international collaborations;
- Universal research challenges;
- The concept of innovation in research;

- Universities' research autonomy;
- Institutional governance;
- Considerations of theories to form a conceptual model for this study
- Institutional and organisational theory;
- Previous studies on institutional and organisational theory;
- Theory of planned behaviour;
- Previous staff attitude studies; and
- A new conceptual model.

## 2.2 PREVIOUS STUDIES ON HIGHER EDUCATION RESEARCH

This section seeks to provide the nature of some previous studies conducted in higher education research for the past four decades.

Title	Results	Authors	Year
The role of the departmental head	Study results revealed that to be the head of department in the university, at a time, did not require a professorship title.	Startup	1976
Teaching and work	Study found that 'teaching' is associated with work while 'research' is an individual's choice.	Rowe-Evans	1978
Material resources and the academic role	Qualitative results indicated that there was a lack of collegiality between the academic staff and their assistants. Moreover, the study revealed research as part of the academic staff workload.	Startup	1979
Organisational change and the improvement of university teaching	Study indicates teaching improvement as the most important factor for university change.	Woodbury	1979
Innovation processes in higher education	Results revealed that the innovation process of the university is linked with a political process including people, ideology, technology, organisational structure, and its response to the environment.	Berg and Ostergren	1979
Institutional differences: expectations and perceptions	Study indicates the need to evaluate strategies of the university from time to time in order to meet the changing demands of its stakeholders.	Silver	1982
Knowledge Creation and Knowledge Use in Professional Contexts	It was found that new knowledge is created both in the research community and in the professional community. However, research community develops theoretical knowledge for sharing whereas professionals create practical knowledge.	Eraut	1985
Academic Staff Training in British Universities: results of a national survey	The results indicated that most resources of the university are used to enhance teaching skills of the academic staff other than research.	Brown and Atkins	1986

Quality in Higher Education: nature and purpose	The study found that in a process of improving quality in higher education, an assessment of staff work related strategies should be aimed to improve their working conditions not to suppress them.	Elton	1986
The evaluation of the quality of research	Study revealed that there is a relationship between research productivity with age and motivation.	Rudd	1988
Scholarship, Research and Teaching in the Context of Academic Autonomy	The study found that freedom in academic research is influenced by political or other factors.	Millar	1990
Scholarship, Research and Teaching: a view from the social sciences	The article argued that the policy circles that do not promote research will create vacuum in the higher education sector including social inequalities.	Westergaard	1991
Professional Identity and the Restructuring of Higher Education	The study discloses that a restructuring process of higher education must consider new ways of conducting academic research, teaching and willingness to adapt to new traditions.	Nixon	1996
Undergraduate research supervision: A gender analysis	Research revealed that gender has an impact on research supervision through knowledge flow and power dynamics between student and supervisor.	Hammick and Acker	1998
New lecturers' constructions of learning, teaching and research in higher education	The study found a high correlation between new lecturers and their willingness to participate in research.	Nicholls	2005
Towards improving research among cost and management accounting academics at university of technology: a study of SA and Germany.	The study found that the academics participation in accounting research was behind when compared to German.	Rosentreter	2012
Research universities: networking the knowledge Economy	Results revealed that as knowledge becomes ever more complex, the success of research is accordingly important.	Kearney and Lincoln	2013

Efficacy and limitations of research steering in different disciplines	Research found that research is more effective in new disciplines, while other areas remain hardly steerable.	Seebera	2013
Impact of university intellectual policy on performance of university-industry research collaboration	The study found that university intellectual policy has a positive and significant impact on performances of university-industry research relations.	Okamuroa and Nishimurab	2011
Academic engagement and commercialisation: A review of the literature on university–industry relations.	The study noted that academics engage in commercial research to get access to financial resources other than to pursue academic objectives. In conclusion, authors recommended future researches to consider policy implications on academic research engagements.	Perkmann <i>et al.</i>	2013
Research productivity and its policy implications in higher education institutions	The study revealed factors such as faculty development program, research collaboration, and incentive system to be influencing research productivity.	Quimboa and Sulabob	2014
Factors that Motivate Academic Staff to Conduct Research and Influence Research Productivity in Chinese Project 211 Universities	Factors found to be influencing research performance were motivation, working conditions, reward, promotion, and recognition	Zhang	2014
A Model Using ICT Adoption and Training to Improve the Research Productivity of Academics	The found that less than 15 percent of the academic staff from accounting and information technology were active in research hence the study considered the need to propose a model that can be used to improve research productivity through ICT adoption.	Basak	2014
Higher education research in Hong Kong, Japan, China, and Malaysia: exploring research community cohesion and the integration of thematic approaches.	The findings highlight thematic issues and maturity of university systems to be influencing research outputs.	Kima, Hortac and Jung	2017
University strategic research planning: a key to reforming university research in Vietnam?	The study found that the four Vietnamese universities were just in pursuit of compliance rather than being strategic in research planning.	Nguyena and Gramberg	2018

Quality of working life of academics and researchers in the UK: the roles of contract type, tenure and university ranking	The working conditions of researchers and type of contract signed with the university were found to have significant relationship with their tenure.	Fontinhaa, Laarb and Eastonb	2018
Effects of work environment and collaboration on research productivity in Vietnamese social sciences: evidence from 2008 to 2017 Scopus data	International collaborations were found to have a potential to boost research outputs. Importantly, the study suggests research policy improvements.	Vuong, <i>et al.</i>	2019.
Academics' perceptions of what it means to be an academic	The study found that the academic role is beyond teaching and researching, rather it is a calling.	Rosewell and Ashwin	2019
Italy's national research assessment: some unpleasant effects	The findings point to national policy challenges to regulate and disseminate research resources across universities.	Grisorioa and Prota	2020
A comparative study of the internationalization of higher education policy in Australia and China (2008–2015)	The study found that there are differences in response to internationalisation with each country having its own essentials and ways of doing things.	Hong	2020
Should academic research be relevant and useful to practitioners? The contrasting difference between three applied disciplines	"The study found that accounting practitioners' perception of academia and use of academic research is very low, and when compared with engineers and medical practitioners, the differences were found to be statistically significant"	Fraser, Deng, Bruno and Rashid	2020

**Table 2.1: Previous studies conducted in higher education research**

Source: Developed by researcher

Table 2.1 reflects the manner in which research in higher education has advanced over the past four decades. The conclusion from the table is that, regardless of research challenges faced by universities across disciplines, there have not been any studies on the effect of IRS on the attitude of academic staff towards research engagement. This scarcity of IRS studies has led to insufficient literature, with most studies having examined the factors influencing research productivity. Therefore, it is important for this study to investigate what other studies have ignored, namely the effect of IRS on the attitude of accountancy academic staff towards research engagement. The next section discusses IRS design in public universities.

## **2.2 IRS DESIGN IN PUBLIC UNIVERSITIES – A BENCHMARKING APPROACH**

Sibal (2011) reveals that the concept of strategy, in general, arose around 1809 in Germany, following the explosion of new ideas that occurred after the industrial revolution. Soon after 1805, many American universities adopted this concept to improve research in the university, with the concept later spreading to other countries. More recently, universities are able to utilise IRS to significantly contribute to the development of research (Yun and Jung, 2017: 2-3), with the aim not only to generate new knowledge, but also to liaise with industries to conduct joint research and develop projects. In recent years, the pressure of competition has required a change in the methods of how public universities strategise.

Balamurugan and Poongodi (2016: 1) and Odora (2014: 521) point out that modern public universities are gradually adopting the benchmarking approach of IRS to accomplish their institutional revolution programme. The idea behind IRS benchmarking allows universities to enhance efficiencies, by comparing efficiencies of one university with another in a national and global context (Waters and Annamalai, 2018: 2). Some transformation strategies and systems are quality improvement and institutional re-engineering. Among the transformation tactics, benchmarking has arisen as a valuable and simple tool to remain competitive (Krishnamoorthy and Dlima, 2014: 343; Nicholson, 2011).

While public universities are optimistic where the advantages of benchmarking are concerned and have praised it as a suitable research quality assurance instrument, there is opposition, with those who consider this mechanism as an approach that merely results in a slight improvement of the IRS outlook (Yun and Jung, 2017: 2-3).

Larsen, Ussing and Brunoe (2016: 5-6) believe strategy benchmarking is a waste of resources and organisations would better spend their time and resources in designing suitable strategies of their own, rather than imposing other organisations' strategies. Waters and Annamalai (2018: 2) are also critical, pointing out that some universities compete with scarce resources, therefore, benchmarking strategies have the potential to disadvantage universities with fewer resources. The DHET (2016) and HESA (2014: 6) report that, due to a long colonial history in the province, KZN public universities are an example of less resourced institutions in the country. It is difficult, then, for these institutions to be under pressure to compete in the global space against world class universities.

Tait and Nienaber (2010) and Haddad (1995: 17-18) agree that, in general, IRS must differ per university in terms of scope, complexity, environment, and range of choices, as well as decision criteria; this should also be much broader in terms of research content but not difficult to comprehend. For this reason, EU-Project (2003: 3-12) suggests it is essential to break an IRS vision down into smaller, easily understandable parts. This can be done by linking the IRS vision with the faculty vision and academic department vision. Ofori and Atiogbe (2012: 71) call this link a decentralisation process of IRS into smaller research alternatives, to provide criteria for selecting appropriate research plans.

According to Pearce and Robinson (2009: 2), as soon as the necessary alignments are made, the first requirement in formulating an IRS is a scenario analysis, followed by participation of stakeholders, information and awareness raising, and research project management. Haddad (1995: 23) suggests a framework that public universities must use to design their IRS. This framework aims to extract and specify possible IRS elements to be analysed. Consisting of seven IRS design processes in the framework, the first four deal with creating the IRS, the fifth with IRS planning and the sixth and seventh with IRS adjustment. These processes are comprised of: analysis of the existing research situation, generation of research policy options, evaluation of research policy options, making the research policy decision, planning of research activities, IRS impact assessment, and subsequent IRS cycles.

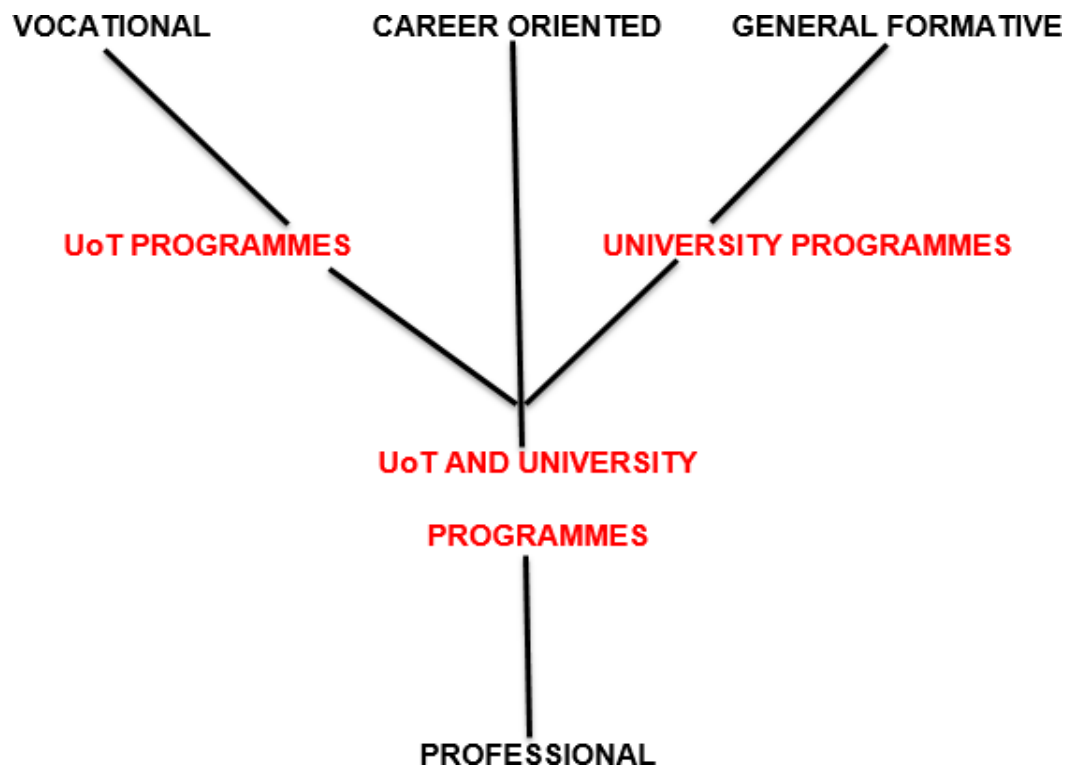
According to the University of Johannesburg (UJ, 2016: 8), IRS design should mainly depend on the type of post-graduate programmes offered, such as masters and

doctoral degrees. Some SA public universities do not offer this type of post-graduate programmes in accountancy (DUT, 2018a; UNIZULU, 2018), with their focus solely on producing under-graduates for further professional careers in accountancy. This suggests IRS design of these universities does not place strong emphasis on the importance of accountancy research and may result in a negative attitude on the part of accountancy academics towards research engagement.

Other public universities in SA offer three distinct types of post-graduate programmes in accountancy, namely: research-based, course work, and professional (Toolsee, 2011: 49-51). According to Pearce and Robinson (2011), research-based dissertations constitute the entire syllabus of the programme. In coursework degrees, the research work usually amounts to half of the programme requirements. In professional degrees, for which the research module may be undertaken in the form of independent study, this constitutes at least a quarter of the syllabus of the programme, in line with the related standards of the professional body.

Bhatti (2011: 53-54) shows that the uniqueness of a university's IRS can best be distinguished according to its main purpose (Figure 2.1). For example, other universities' system is categorised into three major types of institution, each with its own type of purpose: traditional universities, comprehensive universities, and UoTs. Traditional universities offer theoretically-oriented accounting degrees, whereas comprehensive universities offer a combination of theoretically-oriented education and vocational oriented education, with UoTs offering only vocationally oriented accounting education (Rosentreter, 2012: 52).

Notably, these designs are vertical and programmes offered are, therefore, informed by the nature of the university, with some universities being research driven and others research informed (DUT, 2017b: 3; UNISA, 2017). UoTs, for that matter, are research informed not research driven. Being research driven, as with traditional universities, means to offer theoretically-oriented accountancy education, whereas research informed means to offer vocationally-oriented accountancy education. UKZN is a clear example of a traditional university with clear objectives regarding accountancy research, which are to strengthen and enhance applied and policy related research.



**Figure 2-1: IRS design in public institutions of higher education**

Source: Department of Education (2004: 24)

However, Ngibe (2015: 11) is of the view that UoTs have not developed a clear research mandate, especially in the accountancy discipline, and are characterised as research informed rather than research driven. This is because their research should focus on strategic and applied research that can be translated into professional practice (DUT, 2017a: 3). Interestingly, this characteristic shares a common articulation with what the traditional universities do in terms of accountancy research, which is to produce applied research other than theoretical research. This is evident at the University of South Africa (UNISA), which is a comprehensive university. For example, the UNISA College of Accountancy articulates its commitment to provide relevant research that makes a significant contribution to practice and industry in SA and Africa (UNISA, 2017).

Authors, such as McInerney and Barrows (2011: 13-14) and van der Maas (2008: 33), are of the opinion that IRS design should spell out the research content, processes, and success. Therefore, universities require a strategic team to drive the research vision and that team must, undoubtedly, be well-informed and have the necessary tools to do that (Ofori and Atiogbe, 2012: 68). One more component that accompanies

IRS design, is that academic staff must have clarity and be happy with what the university is doing and request them to do (North, Zewotir and Murray, 2011: 1416).

The argument raised by the above, is that one of the challenges facing SA public universities is the development of a lifelong research strategy that can improve participation of academics to build a scholarly society, where all forms of application are research driven. This study believes that changing the current IRS design in KZN public universities is not feasible, considering it has already been benchmarked across the country, nevertheless, investigating the challenges affecting its operation can save valuable resources. IRS design was, however, not the focal point of this study, but the researcher has discussed it in order to validate the IRS dimensions, even though it may have its own shortcomings. Different IRS approaches are found in universities and are discussed in the next section.

## **2.4 IRS APPROACHES IN PUBLIC UNIVERSITIES**

Scholars (Mintzberg and Waters, 1985; CHE, 2013; Singh, 2011: 1191; Andrews, 1979) reveal that the attitudes of academic staff towards research engagement is related to IRS approaches, which can vary in five different ways, namely: planned or deliberate, emergent, opportunistic, and imposed, as well as realised or unrealised. These approaches, therefore, influence accountancy academics' attitudes regarding research engagement in KZN public universities, as set out below.

### **2.4.1 Planned IRS**

Planned IRS takes a top-down management approach, with information collected, scrutinised and analysed, allowing predictions to be made, from which senior management can make informed decisions on value adding operations (De Boer and Goedegebuure, 2007: 47; Toma, 2007: 58; Martinet, 2010: 1489). Clearly defined targets are established and enacted by top management. The time frame, or the period of time in which specific events are scheduled to occur and individual participation therein, are all clearly indicated in writing (Mintzberg and Waters, 1985). According to Fielden (2008: 65), top management has the right to devise the methods and means to achieve set outcomes for the entire university and is the principal decision maker of the manner in which research should be conducted in departments.

Thus, accountancy academics are guided by university rules on research processes, hence, planning has an influence on IRS operation. University research processes

include ethical clearances and research structures, with academics additionally provided with a list of accredited journals, as an indicator of where they must publish their research papers. In this approach, IRS is a top-down planned strategy from university management; its effect on the attitude of accountancy academic staff was investigated in this study.

#### **2.4.2 Emergent IRS**

Emergent IRS is often neither formal nor stated in writing, unlike planned IRS and at times, it occurs as part of the university culture, either as a top-down or bottom-up decision (Papagiannakis, Voudouris and Lioukas, 2013: 257; Mintzberg and Waters, 1985; Martinet, 2010: 1481). This strategy type is, nonetheless, not as applicable to public universities of SA because IRS is generally formal and documented in such institutions (Johannes *et al.*, 2012: 438; Lok, Rhodes and Cheng, 2010: 1379).

#### **2.4.3 Opportunistic IRS**

Opportunistic IRS can result in accountancy academics making significant gains that will benefit the university (Lok *et al.* 2010: 1379; Mintzberg and Waters, 1985). Due to a number of unforeseen changes in the world, universities are compelled to modify their IRS in relation to the economy, by recognising new skills, technologies, and other related infrastructure, in an opportunistic manner (Singh, 2011: 1191). Nevertheless, Canada's Victoria University (2009: 15-24) and Li and Hu (2008: 2011) are of the view that only well-resourced public universities can apply opportunistic IRS, as it requires new skills and fresh technologies to keep pace with the economy.

#### **2.4.4 Imposed IRS**

Victoria University (2009: 15-24) proposes that university policies and regulations are examples of imposed IRS for the entire institution and results from poor performance and low productivity by individual departments (Li and Hu, 2008: 2010). Adverse results call for management to establish control and impose certain changes, for instance, cost cutting or calling for staff retrenchment and so forth (Singh, 2011: 1191; Lok *et al.*, 2010: 1377). As revealed by CHE (2013), one notable policy management has imposed on accountancy academic staff is that they must be productive in research. In the earlier discussion on IRS design, it was concluded that SA public universities have applied a benchmarking approach in the adoption of IRS. Historically disadvantaged universities, such as those in KZN, were thus deprived of the

opportunity to design an IRS of their choice. Therefore, IRS in these universities is an example of imposed strategy.

#### **2.4.5 Realised or unrealised**

A successful IRS is referred to as realised, whereas a failed IRS is referred to as unrealised (Andrews, 1979; CHE, 2013). Many reasons may be put forward as the cause of unrealised IRS, including the failure to consider influential factors depending on the university structure, nature, size, and resources (Lok *et al.*, 2010: 1377). However, it is not yet understood how IRS is realised by accountancy academic staff in KZN public universities (Ngibe, 2015: 3-4; Mohamed, 2014: iv). The need for conducting a study of this nature will, therefore, determine the effect of IRS on the attitude of accountancy academic staff towards research engagement in KZN public universities. However, IRS must be well implemented and the implementation process is discussed in the next section.

### **2.5 IRS IMPLEMENTATION IN PUBLIC UNIVERSITIES**

Ofori and Atiogbe (2012: 68) state that IRS implementation occurs after IRS design or adoption, while Bhatti (2011: 53-54) points out that implementing IRS is a challenge. A study by Toolsee (2011: 49-51) found that strategy implementation is affected by factors such as staff attitude, personalities, leadership, and availability of resources. Pearce and Robinson (2011) highlight two general factors to be taken into account when implementing strategy in public universities. The first factor to consider is the development of annual objectives and short-term strategies compatible with selected long-term objectives. The second is translation of the above step into strategy guidelines. Mbaka and Mugambi (2014: 63) are of the view that strategy implementation must reflect four basic needs: planning of activities, development of operational tactics to create a competitive advantage, and empowerment of staff through policies that guide decisions, as well as implementation of both an effective reward system, and systems to adjust ambiguous strategies.

From the above discussion, it can be concluded that the end result of IRS implementation in the university should relate to achievement of high grades and research excellence. This can be accomplished when reasonable research resources are in place, which include staff capacity, research facilities, infrastructure, and proper planning, along with software systems or technology, research networks, and strong

support systems. Although IRS implementation was not the focal point of this study, the researcher discussed it in order to validate the IRS dimensions, even though it may have its own shortcomings. The stage that follows implementation is that of IRS operation and is discussed in the next section.

## **2.6 IRS OPERATION IN PUBLIC UNIVERSITIES**

According to Bhatti (2011: 53-54), most universities succeed in IRS design but fail in its operation. Singh (2011: 1191) states that executive management tends to leave strategy operation to operational managers, which in this case are HODs, leading to IRS losing its direction and intended purpose. Several ways exist in which IRS can be made operative in the university (Toolsee, 2011: 50-51), including aligning it with the departmental teaching and learning strategy, developing strong customer driven strategies, developing core competencies, and establishing strong competitive priorities, as well as developing innovative projects, and having a strong management support system.

Ofori and Atiogbe (2012: 68-71) add the importance of identifying core strategic units within the department. In addition, Bhatti (2011: 53-54) recommends accountancy academics should build professional relationships with many stakeholders, such as industry and professional bodies. Toolsee (2011: 49-51) assumes this relationship can lead to a positive attitude in accountancy academics towards research because they will produce relevant research needed to practically address local and international economic problems. Kumar and Eyono Obono (2013: 34) advise that in order to keep up with economic requirements, academics need to adapt to changing environments on an ongoing basis.

Tait and Nienaber (2010) and Mbaka and Mugambi (2014: 63) agree the role of top university management is to ensure total quality management of IRS, including facilitation of research ethics, research equipment, administration of all government research subsidies and subsidy claims. North-West University (2010: 6) highlights that accountancy academic departments must address accountancy research that offers specialised research knowledge on financial accounting, management accounting, auditing, and taxation. Instead of being mechanistic; to accomplish this, accountancy departments are to strategically control operational research activities and develop

new operational research structures, processes, and appropriate administrative alignments (Tavernier, 2005: 5; Mintzberg, 2008: 2; Cerniauskiene, 2014: 21).

According to Mbaka and Mugambi (2014: 63), the success and failure of research in the accountancy academic departments are dependent on the manner in which IRS is made operational. Other authors (Vergert, 2010: 25-26; Salimian, Khalili, Nazemi and Alborzi, 2012: 12018; Cerniauskiene, 2014: 20-21) maintain that the ability of academic departments to carry out IRS activities rests on the amount of available resources, including people, money, information, and technology, in addition to strategic initiatives, measures and targets, as well as study efficiency rates, and leadership consideration.

Prominent scholars in strategic management (Abdulwahid *et al.* 2013: 20; Randall *et al.*, 2014: 149; May, 2013: 5) reveal the cost of strategic failure as subjective and severe. For example, other than wasting a great deal of money, the effort and time devoted to failed strategic management will never be recovered and lead to a decrease in employee morale, as well as loss of trust and faith in management, which result in a more rigid organisation. Even should a change to improve strategy be initiated, the cost of a revised strategy will be added to that of a failed initial strategy. In the context of this study, the outcome is that IRS has the potential to influence academics' behaviour, underlining the importance of the next section's discussion of the effect IRS has on academics' attitudes.

## **2.7 THE ROLE OF IRS IN THE UNIVERSITY**

Scholars and practitioners of the 21st century have observed the rapid role of IRS in universities, which have resulted in an extension of academic roles (Lubbe and Coetzee, 2018: 453; Mbaka and Mugambi, 2014: 63). The emergence of research strategy in universities, in particular, requires knowledge creation and networking of distinguished scholars, who actively engage in research activities in order to search for the unknown. Altbach (2007) recognises the role of IRS in the age of knowledge-driven countries, due to these countries having invested resources in establishing research-oriented academics.

Chan (2015) and Littleto (1942: 215-216) mention that early academics were not IRS oriented, with researchers facing various challenges, due to materials and sources of inspiration being difficult to obtain. Academics' level of education included no broad

research knowledge (Benjamin, 1990). Myers (2012: 11) shares that even in the 21<sup>st</sup> century, most people were often referred to as academics, especially in banking, insurance and public sectors, even when they had no research background and, as a result, their knowledge had no capability to improve prescribed applications. Ivankova, Creswell and Plano-Clark (2015: 306) point out that academics were judged by their ability to teach and not by their inability, as is the case nowadays.

However, IRS is important in this century, not only in the academic sector, but also for industries. This is supported by Lubbe (2013: 111) who states that IRS is not intended to change principles in industries, but to improve practitioner understanding of applications. Some commentators (Guthrie, Burritt and Elaine, 2011; Kip Holderness et al., 2014: 87) argue that the ultimate purpose of IRS should be to improve practice, rather than simply to describe, understand or comment on it.

Randall *et al.* (2014: 149) perceive IRS to be a gateway for SA academics and those from other countries to move around the globe. According to Deegan and Unerman (2006: 4) there is also a link between research and community engagement, which provides a coherent and systematic IRS framework for investigating and understanding peoples' social life. Authors (Hopwood, 2009a; Guthrie *et al.*, 2011; Hopwood, 2009b: 1365; Bricker and Previts, 1990: 4) explain that academics are said to be identified by teaching jargon, however, IRS has the potential to bridge the knowledge gaps between academics and communities.

Mouton (1996: 173, cited by van der Schyf 2008: 13) supports that IRS should advance applied knowledge to benefit the country's socio-economic development. In addition, authors, such as the Oxford University (2017) and Ofori and Atiogbe (2012: 68) propose that IRS should be able to generate sufficient financial muscle to sustain the university's global research infrastructure and other research activities. The UJ (2016: 8) concurs the potential of IRS to financially benefit researchers through research subsidies and grants, including research awards. However, Toolsee (2011: 49-51) observes that most of the time, IRS investment is not financial, but includes nurturing and grooming of postgraduate students to become the next generation of research and innovation leaders.

Chan (2015) mentions the need for following investment in the IRS, with the setting of research questions in the context of key global themes and investing in subject areas

of long-term worth. Bhatti (2011: 53-54) and Northcott and Linacre (2013) are of the opinion that IRS should inspire academics to engage in ambitious projects, thus increasing the quality and extent of research collaborations in the university's research focus areas (RFAs). A broader strategic effect of IRS, according to Cornelia and Christian (2013: 22), is to give academic departments strategic support, through ensuring RFAs concentrate most strongly on those areas where the need is greatest and the strategic goals of the university are most strongly reflected.

The Ministry of Education (2004) shares that the IRS must maintain originality, significance, and rigour in research, which means IRS should empower the creative autonomy of individuals, so that academics can find spaces to lead the global research agenda across the world (UNISA, 2017). Allowing the individual researcher or research group to decide on the project to be carried forward, is a reflection of academic leadership and freedom to seek out truth and understanding (Gopalkrishna, 2010). Due to academics having a particular way in which they perceive the IRS, there is thus a necessity to trace IRS progress in universities from other parts of the world, including SA, where the study was conducted.

## **2.8 IRS PROGRESS AT UNIVERSITIES IN OTHER PARTS OF THE WORLD**

Prior to the discussion of IRS progress in other parts of the world, it is imperative to note the lack of literature on IRS progress in these universities. Instead, the study has traced IRS progress by demonstrating research effectiveness from the selected international universities. Johannes *et al.* (2012: 438) confirm that university research reflects its IRS.

### **2.8.1 Germany**

Koschatzky (2017: 7) observes that even though German universities have different objectives according to their status (teaching, research, infrastructure), they are making considerable improvements in the areas of international research and innovation. As a result, Germany is now closer to its IRS aim of being a leading country, worldwide, in terms of research and innovation. According to Kehm (2012: 86), German academics' work load is similar to all other academics from other countries. Beyond the core tasks of teaching and research, academic staff members and professors, in particular, are obliged to take an active interest in departmental activities, as well as in institutional activities and policies.

Qayyum and Sukirno (2012: 5-8) found that, as a way of motivating academic staff towards research, Germany has committed itself to spend 3.5 percent of the country's gross domestic product (GDP) on IRS development and improvement. This includes the goal of having one of the world's leading broadband infrastructures that will attract foreign investments, including human capital. Only one German university is among the world's 30 leading tertiary education institutions, however, the German government's strategy is to improve its universities' international image and the standing abroad of its science system, and for three or more German universities to be among the leading 30 universities in the Times Higher Education Ranking by 2025 (Commission of experts for Research and Innovation, 2017: 5-8).

Snelgar, Shelton and Giesser (2017: 1) report that Germany is planning to also increase the number of permanent professors in their universities and, at the same time, reduce individual teaching loads. According to Renard (2015), academic staff arrangements are being adjusted, to create a conducive environment and make it more attractive in the international context for excellent research and quality education. Moreover, Snelgar *et al.* (2017: 1) explain Germany's research vision for universities include a planned increase in the number of permanent professorships, in order to benefit young, up-and-coming academics for whom there are, otherwise, many options outside academia. Koschatzky (2017: 10) observes that the country is also committed to continue funding non-university research organisations beyond 2020. Basically, the collaboration between non-university organisations and universities is seen as important by Germany, as motivation for academics, in the sense that academic and corporate concepts can be used together to form new concepts.

### **2.8.2 India**

As Banerjee (2013: 7) explains, India is not exempt from facing research challenges, particularly in the schools of accountancy. India's higher education policy of 2017 confirms the country has been held back in academic rankings, due to the lack of internationalisation activities and lower research outputs (Fulwood, 2017: 8). When a comparison is made with other countries, India presents a poor picture. For example, India has 119 researchers per million in the population, whereas Japan and the USA have 5 287 and 4 484, respectively. In addition, India has as few as 6 000 doctorates in science, compared to 9 000 in China and 25 000 in the USA (Gupta, 2012: 23).

Moreover, Fulwood (2017: 8) and Banerjee (2013: 7) state that research in areas such as engineering, pharmaceuticals, business, and computers have been the recipients of most of the growth in India's higher education. This is corroborated by the number of engineering schools and their student enrolment which has, in the past 30 years, grown at a rate of 20 percent per annum.

Banerjee (2013: 7) determined that more than ten years ago, India's doctoral degree graduation rates in science and engineering increased twofold, while master's graduation rates in science and engineering tripled. Nonetheless, Chan (2015: 22) found that a holder of a master's degree in India is not fit to be a tertiary lecturer. Presently, existing academics with PhDs in India, in terms of staff/student ratios, are found by Banerjee (2013: 7) to not be adequate.

In an attempt to overcome research problems in the country, an article on academic business research productivity published by Banerjee (2013: 7) reveals that many universities in India have started their own conferences and journals for publishing research findings. On the one hand, the majority of these universities the driver for their research activities has been the regulatory body known as the All India Council for Technical Education (AICTE), which is a government initiative. On the other hand, Fulwood (2017: 8) reports there is no mechanism to determine the quality of these research outputs. Moreover, programmes such as international exchange of training and research activities and doctoral programmes across business schools are limited if not non-existent (Banerjee, 2013: 7).

According to authors, including Fulwood (2017: 8), Gupta (2012: 23) and Banerjee (2013: 7), various attempts have nevertheless been made to address research and innovation problems in India. Most of these have focused on regulation, which can dictate the physical infrastructure for institutes, as well as qualification requirements for lecturers. Accordingly, measures have been taken to entice Indians with PhDs, who are working outside the country, to return home. Examples of such schemes are the Ramalingaswami Re-entry Fellowship programme and programmes that encourage the establishment of careers in academia, including research, making a return to or continuation of further study and academic contribution more attractive to recent graduates.

From a study conducted by Bhattacharya (2015: 65) on motivational factors for academic staff, inspirational factors were found to include motivation from family, motivation from parents and teachers, respect from society, as well as a sense of responsibility, motivation to balance professional and personal life, and motivation to work with young and creative minds. Accordingly, Chan (2015: 23) determined that government intervention is seen as motivational when it suits the needs of staff members. In this case, the government of India has agreed to increase research and development spend, under the twelfth five-year plan (2012-2017), from 0.9 percent to two percent.

Other motivating factors found by Chhapia (2013) include staff salaries, funding, student enrolment ratio, and autonomy, in addition to adequate numbers of qualified staff with PhDs, and the environment. As pointed out by authors (Chhapia, 2013; Gupta, 2012: 17-24), the government of India is committed to providing adequate infrastructural facilities that will cater for present and future student enrolment. Other motivating factors for academic staff in India mentioned by Ramya (2013, as cited by Forbes 2013: 90), include industry collaborations with academia, as well as collaborations between overseas and national universities and public authorities.

### **2.8.3 Canada**

Canadian accomplishments in science and scholarly review, as stipulated by Hatakenaka (2009: 1), have long been a source of national pride. This suggests Canadian universities have a strong IRS to grow research beyond historical limitations, when compared to other countries worldwide. When examining only the top six premium accountancy journals, leading Canadian universities clearly outperform their counterparts in Australia and the UK (University affairs magazine, 2017). Bhattacharya (2015: 65) states that for Canada to remain competitive, it has adopted a policy stipulating that more than 40 percent of academic staff time should be devoted to research activities. Canadian universities also boost their research through doctoral students and postdoctoral trainees or fellows.

Chan *et al.* (2012: 12) and University Affairs Magazine (2017) refer to a study to examine the accountancy research output among Canadian HEIs between 1991 and 2016, which found that when compared to their counterparts in Australia and the UK, 38 Canadian universities contribute nearly five percent of all publications in 28 leading

accountancy journals in the world. The five most productive Canadian universities are the University of Alberta, the University of Toronto, the University of British Columbia, the University of Waterloo, and Simon Fraser University.

According to the Council of Canadian Academies (2017: v) and Hatakenaka (2009: 1), more than 46 percent of Canadian research in academic publications, have co-authors from abroad. This is due to Canadian universities having recently increased their institutional engagement in international research collaboration (Council of Canadian Academies, 2017: v). For example, the share of top cited researchers, who rate Canada's research as strong in their field of study, rose from 68 percent in 2012 to 72 percent in 2016. As a result, Canada ranks fourth overall, behind the USA and the UK.

Chan et al. (2012: 12) lists five motivating factors for Canadian academics involved in research. These include: public funding matched with innovation and international collaborations; industrial scale technology development available in Canadian research and technology organisations; industrial value chains with a huge number of Canadian based global industrial players; as well as staff practical knowledge; and skills and experiences that relate to the practice of technological innovation.

Despite the commendable reputation of Canadian research, HAL innovation policy economics (2017: iii-v) report an erosion of Canada's research effectiveness in recent years, when compared with international peers. However, as a percentage of GDP, globally, Canada ranks well in higher education expenditure on research and development (HAL innovation policy economics, 2017: iii-v). In particular, Canada's recent research erosion is linked to insufficient funding from sources such as federal government accounts, which is less than a quarter of the total, while other universities now underwrite half of these costs, with adverse effects on both research and education. According to Chan et al. (2012: 12), the most affected areas of research resulting from insufficiency of funding are international partnerships, multi-disciplinary research and early career researchers.

#### **2.8.4 United States of America (USA)**

Thorne (2017) and Eckel, Herberich and Meer (2014: 8-9) aver that USA academics lead the statistics where publishing in top international scientific journals are concerned. This is measured through the input of their scientists in high-quality scientific research and the absolute number of research articles published in top

journals. By implication, USA universities have a strong IRS to grow accountancy research beyond limitations, when compared to other countries worldwide. In fact, the contribution of the USA to high-quality scientific research was more than double its nearest competitor, China, in 2017. Accordingly, the article count, fractional count, and weighted fractional count amounted to 25 537, 17 764.24, and 15 791.80, respectively, as tracked by Nature Index (2018). However, despite its dominance, the USA contribution to articles included in the index declined between 2012 and 2017, although the country remained top of the league among the nations.

Eckel *et al.* (2014: 8-9) and Harvey (2003) state that the USA higher education system is a derivative of British and German research universities, with its character strongly affected by three, main, rational principles that shape American culture. The first rational principle is that religious groups and individuals maintain a range of HEIs and strongly protect these from levels of government control seen in most other countries. The second principle, is the dominance of capitalism and the belief in the rationality of markets. Finally, there is an extensive commitment to equal opportunity and social mobility. According to the American academy of arts & sciences (2015: 3), these three rational principles are indications of the USA community being absolutely accountable for the running of its universities.

Authors such as Renard (2015: 17) and Eckel *et al.* (2014: 8), determined that in the schools of arts, humanities and social sciences, collaboration between researchers in the USA lacks the necessary formalities and institutional structures. There is a confirmed movement of researchers across the Atlantic, but there is no structure on which to construct the networks and interactions required to inspire and sustain collaborative work and partnerships. As reported by Eckel *et al.* (2014: 10), close to 40 percent of all full-time academic staff members are women, yet women hold only 21 percent of full professorship positions. At assistant professor rank, however, 46 percent of full-time staff members are women.

Nonetheless, women's larger presence in junior ranks does not guarantee future proportionality in senior ranks. As Fulwood (2017) explains, the number of fulltime academic staff members from racial/ethnic minority groups almost doubled over the last 25 years, yet only 14 percent of all full-time staff are comprised of racial/ethnic minorities. The largest minority group is Asian American/Pacific Islander, comprising

six percent of the total full-time academic staff population, with African Americans at six percent and Hispanics at five percent. An overwhelming 83 percent of full-time staff are White, with 43 percent White men and 35 percent White women.

### **2.8.5 European**

A European study undertook to provide ranking, using a set of 19 accountancy journals to rank accountancy programmes for 253 European higher education universities. The findings showed the top three ranking universities, in terms of accountancy research outputs, were all in the UK, namely the University of Manchester, London School of Economics, and the University of Edinburgh (Chan, Chen and Cheng, 2006: 3). The results were scrutinised by the National research foundation (NRF, 2014: 6) and DHET (2015: 12-14), with the extent of European accountancy research growth over the years attributed to scholars affiliated to British higher education organisations, who have authored the majority of European contributions to well-recognised journals. This confirms the dominance of British academics in Europe-based research. Additionally, this suggests European universities have a successful IRS that encourages global networks to grow research.

The aforementioned findings, on universities' research development in other parts of the world, suggest first world countries have long recognised the importance of IRS to promote research and have committed themselves to it. However, one needs to understand the effects on SA public universities by colonial injustices that should, nevertheless, not discourage participation in international research collaboration projects.

## **2.9 UNIVERSITIES' IRS PROGRESS IN AFRICA**

This study did not find literature on African universities' IRS progress, however, the study has evaluated research effectiveness of African universities in order to fast track IRS progress and as a tool used to promote academic research in universities. Kotecha, Walwyn and Pinto (2017: 5) report African research as dominated by only three countries, namely Egypt, Nigeria and SA, with these three jointly accounting for more than 85 percent of Africa's total output of scientific papers. However, when Africa's research is compared to other countries abroad, the productivity is low, suggesting failure of IRS in African universities to grow accountancy research beyond current limitations, when compared to other countries abroad.

The European University Association (2010) reveals many African universities have been weakened by a combination of poor political management, insufficient public investment and the haemorrhaging of talent to developed nations. As a result, African universities are found to be far below their optimal performance levels, in terms of both research output and human capital development (Akinfolarin and Babatunde, 2014: 158). Therefore, a growing need exists for research capacity development planning, in order to tap the potential of Africa's people and to create value adding institutions.

In this regard, Renard (2015: 17) suggests that well-developed countries need to assist in the development of African research capacity. For example, centres of excellence of regional, national or international status need to be created, with collaboration between neighbouring countries encouraged, so that a critical mass of capability can be achieved. Much of the activity and most of the resources must be directed towards ensuring appropriate capacities are both built and retained in that setting.

As evidenced by studies from both Nigeria and the USA, respectively conducted by Akinfolarin and Babatunde (2014: 157) and Renard (2015: 17), academic staff members are motivated by being respected for creativity and innovation, appreciated for genuine effort, and in being awarded with impressive titles and honoured for their achievements. In the context of this study, the effect of IRS on accountancy academic staff attitudes towards research engagement could also be affected by the same motivational factors. A study by Imhonopi and Urim (2014: 1) reveals that 76 percent of respondents from two Nigerian South-Western universities were strongly motivated in research, due to their belief that they were contributing to new knowledge. It is further noted that respect for, and availability of resources for research, can motivate academics towards research (Commission of experts for research and innovation, 2017: 5-9).

The aforementioned findings on university IRS and research development in Africa suggest extended neglect of the importance of IRS and therefore, accountancy research, by African universities, resulting in their failure to increase accountancy research outputs beyond current limitations. However, in order to gain a competitive advantage, it is advisable that African universities cultivate IRS operation in a manner that increases participation of accountancy academics in research activities.

## **2.10 UNIVERSITIES' IRS PROGRESS IN SA**

Even though no literature on SA universities' IRS progress was found, the study has nonetheless evaluated research effectiveness of these universities, in order to fast track IRS progress and as a tool used to promote academic research. The NRF (2014: 6) reports SA public universities' research capacity growth as inclusive of growth in peer-reviewed primary research articles in appropriate journals, academic publications of original research in peer-reviewed journals (printed or electronic), invited articles and review articles, as well as books of scholarship. These must be research-based and independently refereed, while also aimed at the research community rather than just comprised of teaching material, and can be chapters in scholarly books (again, aimed at the research community), in addition, the work must be refereed, full-length papers in conference proceedings and edited scholarly books, all of which will be assessed on their merits (DHET, 2017: 12-14). Other evidence that will be considered includes the standing of a researcher, along with book reviews, editorship of journals, officials' positions in professional associations, and visiting professorships.

Publication in journals is generally recognised as the most suitable and speedy form of research and communicating research findings (DHET, 2017: 12-14). The majority of global research outputs are in the form of journal articles and it is not surprising that research outputs by all academics must follow this trend, yet, this is seemingly hard to attain. There are four SA public universities, namely University of Cape Town (UCT), University of the Witwatersrand (WITS), Rhodes University (RU), and University of Fort Hare (UFH), with a minimum of 80 percent of their journal publications found in international indices.

The other eight SA public universities have 70-78 percent of their publications in international indices; these are UKZN, University of Pretoria (UP), Stellenbosch University (SU), and the UJ, as well as Nelson Mandela Metropolitan University (NMMU), University of Venda (UNIVEN), DUT and MUT. This is commendable for national research development and experience for SA researchers, however, the inquiry regarding the position of SA accountancy research in a global context reveals accountancy researchers' outputs have not matched those of their counterparts abroad (DHET, 2017: 12-14; Coetsee and Stegmann, 2006: 96).

Opportunities nevertheless remain for conducting and publishing significant accountancy research, as government has made funds for research available to the universities (University affairs magazine, 2017). Other universities, apart from Sefako Makgatho Health Sciences University (SMU), situated in Pretoria North, in the Gauteng province, have between 50 and 70 percent of their journal publications in international journals. SMU, which is one of the newly established public universities, published 33 percent of their publications in international indices.

As reported by the SA DHET (2017: 27), in terms of research publications outputs for 2015, UP had the highest number of publication output units, followed by UKZN, UCT, WITS and SU. This report shows that UP replaced UKZN, which was previously at the top of the list in 2014. The UJ, which came after Northwest University (NWU) in 2014, accumulated more publication output units in 2015, through increased journal publication units. There are now eight universities accumulating more than 1 200 publication units, accounting for 74 percent of total publication units, which is 12 083.63 units of 16 320.76 units. The remaining 17 universities make up the residual 26 percent, with a total of 4 237.13 units. Nevertheless, accountancy research is not growing as speedily as research in other disciplines such as engineering, psychology, ecology, consumer sciences and management sciences (Cathrynne, 2018: 4; DHET, 2017: 16-18).

Journal publication output units by Classification of education subject matter (CESM) category for 2016 and 2017 (DHET, 2019: 21), shows the highest proportion of journal publications in 2017 was from the health professions and related clinical sciences, with 18.42 percent of all journal publication output units. This is followed by life sciences and business, economics and management studies, with 10.12 percent, and physical sciences with 9.71 percent. Regrettably, research units produced by business, economics and management studies in 2017 have decreased by almost three percent from 2016.

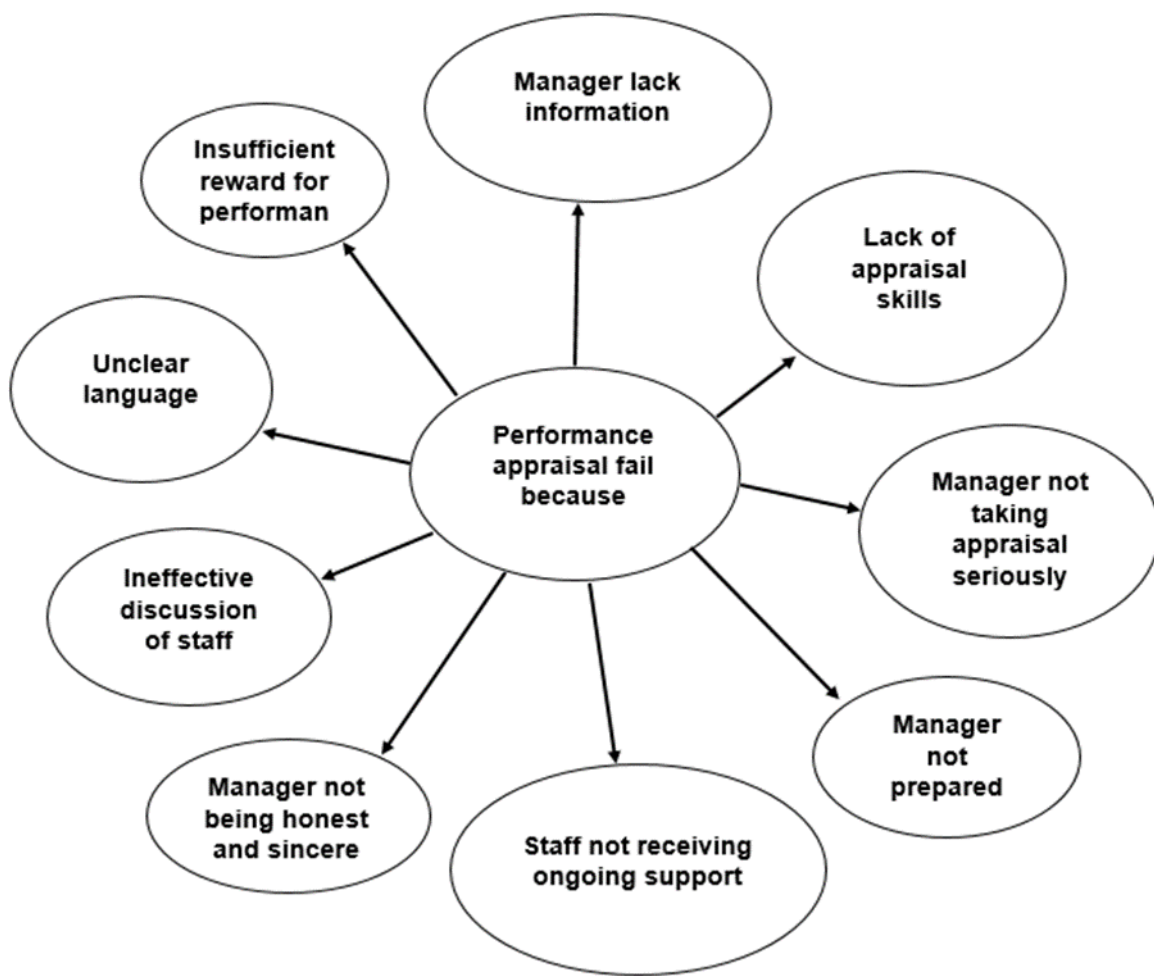
Unfortunately, the SA DHET report (DHET, 2019) does not list accountancy research outputs separately, instead, these are absorbed into the category of Business, Economics and Management Studies. Pouris (2012: 30) and Coetsee and Stegmann (2012: 92-93) confirm SA accountancy research outputs are 'shrouded in secrecy' and lag behind, even when compared to universities abroad. For this reason, an increase

of master's and doctoral graduates is essential in producing the next generation of SA accountancy academics and researchers (HESA, 2014: 6). SA is known in the rest of Africa as a country with strengths in sciences, and as at 2014, SA ranked 33<sup>rd</sup> in the world of science publications outputs (Mihaiu, 2017: 41). Knowledge output, as measured in terms of research article production, has reached a plateau of around 7 500 articles per year, which constitutes approximately 0.4 percent of total world science article production (HESA, 2014: 6). Accountancy research should be part of this production, yet universities clearly need to strengthen their IRS in order to improve accountancy academics' research participation (Mihaiu, 2017: 41). IRS progress can be traced through performance appraisal, discussed in the next section.

## **2.11 IRS PERFORMANCE APPRAISAL**

Performance appraisal is a process carried out to enable an organisation to analyse, examine and evaluate the performance of specified objectives, over a period of time. This process can be structured as either formal or informal (Comaniciu and Bunescu, 2012: 40; Ofori and Atiogbe, 2012: 71). According to Victoria University (2009: 15-24) in Canada, performance appraisal is a matter of real importance for organisational stakeholders, including for its policy makers. According to van der Merwe (2013: 19), absolute yardsticks by which to judge performance rarely exist, however, organisations may set targets for their intended outputs. Nevertheless, Mihaiu (2017: 40-41) states performance can be measured using comparative data.

These comparisons in research can be done through determining output numbers, such as through article publication units and research conference proceedings (Haddad, 1995: 24). The article publication unit is deemed the most acceptable research performance measurement tool. Comaniciu and Bunescu (2012: 40) argue that comparisons are not easy, but possible when organisations share similar resources. Nonetheless, authors (Cai and Wang, 2012: 794; De Bruijn, 2007: 29-33; and Comaniciu and Bunescu, 2012: 43) concur that universities have different calibres of leadership and staff. Mihaiu (2017: 40-41) suggests bibliometric analyses of publication numbers in indexed journals and profiles of major prizes and awards, citations, and patents as elements of performance appraisal (Bhatti, 2011: 52).



**Figure 2-2: Reasons why performance appraisals fail**

Source: Bohlander and Snell (2004).

As explained by Nassazi (2013: 18-19), performance appraisal feedback can encourage or demoralise staff members, and may sometimes lead to losing key staff who could not accept appraisal feedback and feel they would be better off somewhere else. Therefore, Bohlander and Snell (2004) state that management should note some of the reasons why performance appraisals fail. All public universities undergo a process of internationalisation and collaborations with their counterparts. The next section seeks to discuss this concept in broader terms.

## **2.12 CONCEPT OF UNIVERSITIES' INTERNATIONAL COLLABORATIONS**

According to Akinfolarin and Babatunde (2014: 158), international collaboration of universities means universities recognise the importance of collaborative research work and often partner with colleagues in foreign countries. Renard (2015: 17) considers that when less than 21 percent of a particular university's scientific papers

are co-authored internationally, there is inflexibility on the part of researchers to engage collaboratively in the production of knowledge and innovation. For Johannes *et al.* (2012: 438), the description “international collaboration” is often used nonchalantly in literature.

While there is no official and exact definition, a growing body of expert opinion now points to some common attributes of international collaboration. King (2017) observes that Clarivate Analytics’ Web of Science includes universities’ international research outputs in their measurement and benchmarking utilities and essential science indicators, in order to define international collaborations. In terms of this, a university that offers internationally recognised post-graduate programmes is defined as having international collaborations with other universities.

Johannes *et al.* (2012: 438-441) state that international collaborations widen university research. Global collaborations can be evident (King, 2017) through assessment of a university’s research citations by a foreign university. Trinity College Dublin (2017: 1) employs the strategy of finding institutions with which to collaborate; identifying highly cited researchers at other institutions for possible recruitment; and by locating suitable funding agencies to assist with support for foreign researchers. Clearly, all these activities hold the promise of elevating a university’s international collaboration. According to King (2017), international collaboration is frequently regarded as an indicator of quality research and a manner in which to not only develop but also disseminate scientific knowledge to both newly developing and well-developed countries. The Government gazette (2017: 19) and King (2017) highlight SA as a known scientific knowledge centre on the African continent that receives an increasing number of requests from foreign institutions to offer joint research projects.

### **2.13 SA GLOBAL RESEARCH COLLABORATION FRAMEWORK**

As described by Randall *et al.* (2014: 149), the rationale for the SA research collaboration framework is to create global competition, advance the quality of research, and benefit society. The DHET (2017: 27) reports that research collaboration in SA requires a national policy to regulate these activities and, as a result, the country offers a variety of research opportunities to its international researchers. By implication, IRS operations are influenced by this framework, and are therefore relevant for accountancy academics. Randall *et al.* (2014: 149) state that SA is a

gateway to Africa for researchers from other countries, as well as a gateway for African researchers to move around the globe. As such, national and regional policies list SA as a preferred partner.

The Government gazette (2017: 18) outlines that the purpose of the policy framework is not as a treatise or a handbook on internationalisation, but to provide a national framework for internationalisation and innovation of higher education within which HEIs can develop and align their institutional internationalisation policies and strategies. Randall *et al.* (2014: 149) state that SA's policy framework extends an invitation to universities and other stakeholders in the sector to develop their own policies and strategies for internationalisation, in alignment with the national policy framework. The latitude of the policy framework encompasses all institutions of higher learning; government departments; students; and staff; in addition to national authorities and councils; professional and voluntary associations; as well as others able to develop an international dimension.

### **2.13.1 SA global collaboration framework for research goals**

This policy framework acknowledges that certain historically underprivileged SA universities have not yet established desired international relations and, therefore, do not benefit as much as they should from the framework (Rosentreter, 2012: ii). According to the Government gazette (2017: 20) and the Centre for Leadership in Research Development (2012: 2-3), the following are the SA research policy framework goals with which IRS can be improved:

- Use of a diverse workforce to enhance not only international research collaboration of all universities, but also intellectual property and innovation in the Southern African Development Community (SADC) region; in the rest of the African continent, as well as globally.
- To better equip SA students and staff members of HEIs with knowledge, skills and attitudes, including intercultural skills, needed to contribute to its socio-economic development and well-being.
- To attract talented and highly qualified people, “the best and brightest” to SA universities thus enhancing their human capital.

- To open SA higher education to both novice and experienced researchers, as well as academics and support staff, so they may gain knowledge and for professional and personal development.

As can be seen from the above points, the global collaboration framework has excellent goals and it is worth pushing for the implementation of IRS along these lines. Therefore, this study seeks to determine whether IRS operation goals are being achieved as they should be, with specific reference to accountancy academics in KZN public universities.

## **2.13.2 SA global research collaboration principles**

### **2.13.2.1 Priority focus**

In implementing the policy of university research internationalisation in SA, HEIs seek to prioritise SA's wellbeing and thereafter, where possible and relevant, the following order of priority must be adhered to: interests of SADC states; the rest of the African continent; the global South and emerging economies; and finally, the world (Government gazette, 2017: 20-21). However, this priority order may influence the degree to which foreign accountancy academics participate in research activities in KZN public universities, consequently, its impact needs to be monitored. According to Imhonopi and Urim (2014: 1), the unavailability of research funding for foreign researchers in SA is of great international concern. HESA (2014: 6) reports that it is not SA's intention to side-line foreign researchers, nonetheless, the country is in the process of rectifying colonial imbalances imposed on the education system by the previous apartheid government.

### **2.13.2.2 University freedom and legal compliance**

Universities have the freedom to establish partnerships with foreign universities of their choice (CHE, 2016). When exercising this freedom, universities are expected to consider those countries and institutions' human rights records, as well as any national priorities in foreign relations, as determined by the SA government, which may be relevant in specific cases (Imhonopi and Urim, 2014: 1). Thus, the internationalisation of universities must comply with the SA Higher Education Act and other legislation and regulations relevant to higher education (Government gazette, 2017: 2). Universities are, therefore, free to adjust their research policies to accommodate and create new research collaborations with their counterparts around the globe.

### **2.13.2.3 Mutuality and ethics**

Mutuality should result in shared benefits to both South African and international universities from international research relationships (HESA, 2014: 2). Accordingly, all activities related to research internationalisation must be principled and ethical in the South African context. For example, the Constitution of the Republic of SA must be the ultimate guide for global university research engagements (Government gazette, 2017: 21).

### **2.13.2.4 Complementarity and value creation**

Complementarity exists when research programmes at each university improve as a result of the relationship between the South African and an international university, instead of only reinforcing each other's existing strengths (HESA, 2014: 2). According to CHE (2013), the aim of activities related to the internationalisation of higher education are designed to create value for the parties involved, including development of knowledge and capacity and cultural enrichment. Notably, the use of public funds to promote university research internationalisation is not ruled out in principle because such expenditure serves to advance and support the contemplated policy framework goals and activities (Government gazette, 2017: 21). In the context of this study, complementarity and value creation relate to a fair and economically productive research relationship between accountancy academics and other researchers.

### **2.13.2.5 Quality**

In the education context, the term 'quality' is defined, according to the White Paper 3, to denote "keeping and applying academic and educational standards for both specific expectations and requirements that should be complied with and in the ideals of excellence that should be aimed at" (HESA, 2014: 2). Activities related to the internationalisation of university research must meet the highest quality standards associated with higher education in SA (CHE, 2013). The focus of university research internationalisation is not only on quality of research activities, but also on the number of international students and staff that work with the university (Government gazette, 2017: 22). In relation to this study, the expected high standard of research quality may have an impact on the IRS operation, resulting in negative attitudes of accountancy academics towards research in KZN public universities.

Although some criticism of the SA global research collaboration principles exist, in that they give first preference to South Africans and set high quality standards for research, these principles are not static and evolve and change over time as the country and universities improve their strategies and operational systems.

#### **2.14 SA DHET ON UNIVERSITIES' RESEARCH POLICIES**

In its research policy nexus, SA DHET (2017a: 7) reports more research studies are expected from SA to examine the relationship between policy, research and practice. It is an important research area in its own right. In the same way, inquiry into the manner in which relevant new knowledge in accountancy is generated, disseminated and taken up by decision-makers and practitioners needs to be problematised and investigated.

SA's DHET is more than prepared to engage professions with the research community to convey its priority interests; improve its own knowledge base; support mutually productive research partnerships with local, regional and international research bodies; and enhance its own capacity to manage, conduct, interpret, disseminate and apply research; as well as test and modify its policy ideas (as far as is practically possible) against appropriate research evidence. The 'White Paper for Post-School Education and Training' articulates that collaborative research projects with other countries carry significant benefits and will be encouraged, in particular, research partnerships involving African countries and other developing countries, including Brazil, Russia, India and China (BRICS countries) (DHET, 2017a: 8). Accountancy research partnerships between the DHET and researchers creates no obligations on either side, since each must play its own role with integrity and respect for the other's autonomy.

#### **2.15 SA DHET FOCUS AREAS OF RESEARCH**

DHET (2017a: 8) reveals nine focus areas of the SA DHET research agenda, pertaining to Post-School Education and Training (PSET) that have been derived *inter alia* from the 'White Paper for Post-School Education and Training' and the Department's key policy imperatives. These research areas are:

##### **a. Access to PSET**

The national development plan (NDP) has set enrolment targets to radically increase participation in HEIs, making it essential to address obstacles to accountancy research

access and seek new ways to expand access (DHET, 2017a: 9). SA DHET (2012) states the vision for higher education for 2030 involves each university having a clear mission that sets out its unique contribution towards knowledge production and national development. It is proposed by SA DHET (2012) that by 2030, 75 percent of university staff should hold PhDs. These and other PhD graduates are envisaged as the dominant drivers of new accountancy knowledge production within the higher education and science innovation systems (Gopalkrishna, 2010; Cornelia and Christian, 2013: 22; Ministry of Education, 2004; Northcott and Linacre, 2013).

The NDP 2030 (DHET 2012) sets out many targets that the higher education science and technology sector needs to reach by 2030. For example, in 2001 it set a target of a 20 percent gross participation rate by 2011-2016 (CHE, 2013). The sector also seeks to increase university science entrants to 450 000, which includes the disciplines of accountancy and mathematics. This is needed as the number of people embarking on careers in science and technology should be at least three times that of current levels. The number of graduates, therefore, needs to increase from 177 694 in public HEIs to a combined total of 425 000 by 2030, with a significant increase in accountancy, technology, engineering and mathematics graduates (DHET, 2012).

Participation rates should also increase to more than 30 percent, which translates to a 70 percent increase in enrolments – from 940 000 in 2011 to 1.68 million by 2030. The country thus needs to produce in excess of 100 doctoral graduates per million of the population, compared to the current 28 doctoral graduates per million, per annum. By implication, production is required to increase five times more per year than stipulated (DHET, 2012). The percentage of doctoral qualified academic staff within the public higher education sector must be increased from 37 to 75 percent, and the number of graduate, post-graduate and first-rate scientists also needs to be doubled (DHET, 2012). Further, the number of African and women post-graduates must be increased, especially with regard to a doctoral qualification, in order to improve research and innovation capacity and normalise staff demographics.

HESA (2014: 2-8) proposes that countries should develop a few centres of excellence and programmes, within both the national system of innovation and the higher education sector, in areas of comparative and competitive advantage, including indigenous knowledge systems, over the next 20 years. SA DHET adds that SA should

establish itself as a hub for higher education and training in the region, capable of attracting a significant share of the international community.

b. Quality and efficiency

The NDP (2012) and DHET (2017: 9) have considered the unacceptably high proportion of first year students that drops out of universities, as well as poor student graduation and pass rates versus intake rates. They draw attention to the need for research studies aimed at investigating causes of unsustainably high costs of producing graduates in SA, which leads to extensive wastage of much-needed resources in the country and results in gross inefficiencies. They further propose a short-to-medium strategy to counter low throughput rates for the PSET system, to compensate for new entrants' poor education background, through special programmes such as foundational programmes, bridging programmes and remedial programmes (NDP, 2012; DHET, 2017: 9). This suggests IRS operation is influenced by post-graduate students' dropout rates, which could have inspired accountancy academics to engage in supervision and other research activities.

c. Education and work

Many partnership arrangements are needed between government departments, education institutions, employers, and trade unions, as well as industries and Sector Education and Training Authorities (SETAs). These relationships are a result of technical and vocational education and training with a strong workplace learning requirement. Partnerships can assist in student placements on completing their studies, and to obtain regular workplace exposure. The 'White Paper for Post-School Education and Training' reveals unemployment problems, compounded by limited labour markets for graduates from universities. The government has invested a great deal of money in the Skills Levy Grant system, yet, due to limited opportunities for workplace training and experience, there are still a smaller number of graduates who enter the training programmes. DHET noted that training facilitated by SETAs does not improve trainee employability (DHET, 2017a: 10-11). This suggests the IRS operation is influenced by accountancy researchers' employment opportunities.

d. Skills planning: Analysis of skills needs

The 'White Paper for Post-School Education and Training' asserts that "if the provision of education and training is to be better coordinated with the needs of society and the

economy, central information about skills needs is required". SA DHET seeks to establish a planning unit that will work with key public universities and other research institutions, to develop an institutional mechanism for skills planning. The purpose of the skills planning unit would be to ensure research in the country is properly conducted – from SETAs, DHET and other sources – that can be used for the analysis (DHET, 2017a: 11).

e. Governance and management

Having effective governance and management in HEIs is crucial for effective operation and service delivery. The 'White Paper for Post-School Education and Training' observes that HEIs suffer from poor accountability, caused by autonomy. However, one should realise that, on the one hand, public HEIs are highly funded by the state and expected to respond positively to government policy directives, and on the other hand, HEIs are held accountable for the success of their own organisation. Therefore, strengthening governance and management will contribute to public HEIs (DHET, 2017a: 12). With regard to this study, a better research governance and management system will have an impact on accountancy academics' attitudes towards research engagement.

f. Staffing at post-school education and training institutions

The quality of lecturing staff has been identified as critical for effective student learning. The 'White Paper for Post-School Education and Training' reports that nearly half of professors and associate professors are due to retire in the next ten years, resulting in a succession problem. With insufficient numbers in the existing academic and postgraduate pipelines to replace them, there is cause for concern, as this highlights an existing shortage of qualified academics, especially in fields such as accounting and at particular universities. The composition of academic staff remains racially skewed, with White, male academics dominating key areas of university and academic life, especially at historically White universities (DHET, 2017a: 13). Literature suggests the potential of poor research skills and underqualified academics from accountancy departments, to negatively influence IRS operation in KZN public universities.

g. Curriculum, programmes and qualifications

The 'White Paper for Post-School Education and Training' proclaims the curricula offered by HEIs have to promote pedagogy through critical research and must be able to respond to changing national needs and the global environment (DHET, 2017a: 14).

h. The SA national qualifications framework, quality councils and articulation

The country needs a distinguished, yet coherent, PSET system. Basically, there is a necessity for articulation and mobility between general, vocational, higher and adult education and training and the workplace, with multiple entry and exit options (DHET, 2017a: 15). This articulation requires extensive research by academics.

i. Cross-cutting and other issues

SA DHET (2017a: 15) observes that the size and shape of PSET needs to be revisited and improved, which includes transformation of higher education and an evaluation of key research policies.

## **2.16 RESEARCH CHALLENGES FACING KZN PUBLIC UNIVERSITIES**

### **2.16.1 UKZN**

#### **2.16.1.1 IRS structure**

UKZN (2017) reports that the university has a number of research goals that include: excellence in teaching and learning; excellence and high impact in research, innovation and entrepreneurship; and promotion of high-impact societal and stakeholder community engagement. The list of UKZN RFAs are as follows:

- Energy and technology for sustainable development;
- Gender race and identity studies;
- Energy and technology for sustainable development;
- Gender race and identity studies;
- HIV/AIDS, tuberculosis and health promotion;
- Indigenous African knowledge systems;
- Maritime studies;
- Social development and economic studies; and
- Water, environment and biodiversity.

The above list highlights that, sadly, UKZN does not list accountancy as a research focus. This suggests that as a SAICA accredited institution, UKZN offers accounting

degrees that lead to professional qualifications, however, the institution has focused on producing CAs, at the expense of research. This gap can be a major contributing factor to poor IRS operation and lack of research engagement by accountancy academics. The next section seeks to discuss some of the research obstacles faced by UKZN.

#### **2.16.1.2 Research challenges**

With UKZN failing to produce accountancy research beyond existing limitations, this suggests that IRS operation is experiencing challenges that require investigation. The annual report from UKZN for 2016 indicates lagging research outputs from the school of accountancy as opposed to research outputs from the schools of life sciences, chemistry and physics, engineering, and agriculture, as well as earth and environmental science (UKZN Annual report, 2016: 66). UKZN (2018) thus reveals that accountancy is not part of the university RFAs, with more attention given to biotechnology, agriculture and food security, energy and technology, as well as gender, race, health and sciences, along with social development, environmental sciences, maritime, and economic studies, and finance.

However, the UKZN Annual report (2016: 9) claims that the university has, in general, made remarkable progress in research outputs over the past 12 years, and as a result, UKZN is ranked as the top university in SA for research productivity for the third consecutive year. In terms of the academic staff workload, thus far, UKZN has a system that quantifies workload but it does not do the allocation. The CHE (2017: 6-7) reports that UKZN has made a great deal of effort to upgrade information and communication technology infrastructure and that this progress has been made to upgrade and extend the use of Wi-Fi for research, including teaching and learning.

UKZN has an academic promotions policy that has been in operation since 2011, with the university able to thus far promote more than 50 academic staff on the basis of excellence in teaching and research (CHE, 2017: 7). Academics are able to choose relative weights of teaching, research, community engagement and university service when applying for promotion at UKZN. This policy is regarded as a loophole, where the building of accountancy research capacity in the university is concerned, due to many accountants' belief in textbooks over research. According to UKZN (2018), the love of textbooks by accounting academics is closely linked with UKZN's SAICA

accreditation and must, therefore, focus on accountancy application and practice, rather than research. As a result, implications of the UKZN academic staff promotion policy and other research challenges necessitate further investigation, which this study seeks to do.

## **2.16.2 UNIZULU**

### **2.16.2.1 IRS structure**

Where UNIZULU is concerned, the university does not have a strong IRS with clear focus areas. Nevertheless, UNIZULU (2019) reports that it seeks to accomplish the following:

- Support research efforts that are both trans-disciplinary and interdisciplinary;
- Strive towards formation of new centres of excellence that are trans-disciplinary and multidisciplinary;
- Promote collaborations within and across faculties, as well as collaborations external to the university involving national and international academic institutions, governments, non-governmental organisations and business entities;
- Foster and build new networks that address research, innovation and funding.

From this it can be established that UNIZULU remains far behind where research growth is concerned. Due to the university not having a clear IRS, including RFAs, means there is still a long way to go. Unfortunately, management has failed to provide research direction in the university and, consequently, accountancy academics have not shown research interest in their areas of expertise. The following section seeks to discuss some of the research challenges faced by UNIZULU.

### **2.16.2.2 Research challenges**

At present, UNIZULU employs approximately 13 NRF-rated researchers and ten research fellows from different fields. As a result, it is still a challenge for the university to increase its research scope, internationalisation, and innovation (UNIZULU annual report 2016, 17). CHE (2010: 22-23) is of the view that UNIZULU struggles to apply its research strategic plans because confusion exists regarding its research objectives and research strategic goals. This could be attributed to no existing clarity where tasks involved to give effect to each research objective are concerned. Further assumptions include a lack of intellectual leadership to provide strategic direction, the setting of

specific targets to be achieved within realistic time frames, without a clear understanding of what is required, in terms of staff development and training, for the empowerment of individuals as researchers. Nor does the institution have the necessary funding for future major capital expenditure on research.

The role of the research office has yet to be justified and a relatively small number of academics are involved in research activities at UNIZULU. Surprisingly, since 2008, UNIZULU claims an overall increase in the number of female academics that participate in research. However, provision of support services appears to be unavailable for post-graduate students.

With regards to post-graduate student supervision, CHE (2010: 25-26) reports that the roles and responsibilities of both students and their supervisors are clearly articulated in the research policy. However, minimal monitoring of the student/supervisor relationship is done to ensure continual striving for research endeavour quality. Training of supervisors is a further matter that requires attention, while UNIZULU also has tremendous challenges with regards to administrative processes, institutional and academic planning and infrastructure.

As mentioned by UNIZULU (2016: 8-16), the University experiences problems with staff morale, work ethics, weak managerial leadership and staff, along with lack of a staff retention strategy, the absence of a research operational plan, and poor corporate governance. It is not yet understood, however, whether these research challenges are also experienced by KZN public universities' accountancy academic staff, including those from UNIZULU. Therefore, the study seeks establish whether these challenges are experienced by accountancy academic staff, resulting in poor research engagement.

### **2.16.3 DUT**

#### **2.16.3.1 IRS structure**

DUT (2019) reports the university has realised a need to change its research culture by implementing IRS, in order to increase research outputs. The IRS for DUT seeks to accomplish the following:

- Engage academic staff in research to produce nationally and internationally recognized work within and across disciplines;

- Improve the qualifications profile of academic staff towards national norms set by the DHET;
- Publish the research in relevant and leading journals;
- Increase the postgraduate component of the student body substantially, in order that it reaches approximately ten percent over a ten-year period;
- Support systems will be created to facilitate and enhance research;
- Develop postgraduate research and publication;
- Increase the total research income (from the 2012 level), of which a significant proportion will be generated from Research Focus Area productivity units; and
- Ensuring that teaching and learning of the university are research-driven, starting at undergraduate level.

It is commendable that DUT has taken the step of establishing an IRS, unfortunately, it has not established accountancy as one of its RFAs. The university only has three focus areas, namely, Water and Waste Water Technology, Systems Science, and Enzyme Technology. Two emerging areas have been identified for growth, namely, material science and composite materials. This means DUT has not put adequate effort into ensuring its IRS also accommodates accountancy academics. The following section seeks to discuss some challenges facing DUT in its research activities.

#### **2.16.3.2 Research challenges**

The DUT Vice-Chancellor (VC) (DUT, 2016: 1) indicates that historically, as a university of technology, DUT was neither expected to produce any research nor engage in producing innovations. Its focus was merely production of high-level skills for the workplace. Research and innovation originated from academics' passion for the advancement of knowledge and due to their hard work. In addition, the DUT VC further acknowledges that university research infrastructure, such as the libraries, laboratories, facilities and equipment that academics depend on to teach, undertake research and innovate with, are in a poor condition.

Research in Science Innovation Technology and Engineering (SITE) and the gender round table (2017: 4) report that the involvement of woman academics in research from DUT still lags in comparison to that of male academics. The key findings of this report on gender research indicate women as less likely to collaborate internationally and across sectors on research; with women tending to publish in teams; while more

men than women travel to national and international conferences and workshops; and women are inclined to work more on an interdisciplinary level in their research than men, who focus on a particular field.

Some of the factors contributing to this problem were stated to be the lack of support, mentoring, acknowledgement, respect, and working in a patriarchal context. Research in SITE and the gender round table (2017: 4) concludes that the above indicators need to be further researched to ascertain reasons and provide the support that women need. The fact is that poor participation of female academics in accountancy research activities affects the IRS operation.

The research management model for DUT (DUT, 2018a: 3) is centralised for research and decentralised for post-graduate support, with faculties retaining quality assurance roles for the approval of research proposals for students, taking the research ethics requirements into account. As part of the research support for faculties, each faculty has a faculty research coordinator and faculty research officer to ensure increased administrative support for post-graduate students. At the same time, accountancy academics who publish their research papers in journals subscribe to the university ethics guidelines, issued and checked by a central office, the IREC.

Thus far, the DUT research policy (DUT, 2018b: 1) mentions the university's commitment to ensuring all of its academic staff are research active and produce nationally and internationally recognised research work, within and across disciplines. This includes motivating academic staff to improve qualifications in line with the national norms set by the DHET. Nevertheless, DUT is one of the universities failing to produce accountancy research beyond existing limitations, which suggests that accountancy academics have a particular attitude towards research engagement (DUT, 2018c: 3).

According to the DUT research strategic plan (2018: 2), there are only a few individual researchers at DUT that form the backbone of the university research system. DUT does not have key RFAs in accountancy. The university has identified three previously existing RFAs that are NRF research niche areas, namely, Water and Waste Water Technology, Systems Science, and Enzyme Technology. DUT suffers from inadequate staff skills, academic workload, and administrative systems failing to enable the building of a research culture and to facilitate research performance.

The DUT funding model for postgraduate students currently benefits local students and side-lines those from countries outside SA, including SADEC. Apart from the above challenges, DUT has Wi-Fi available on all campuses and towards the end of every year, DUT hosts a research awards ceremony to recognise those who have engaged and participated in research through publications, and attendance of conferences. However, it is not yet understood whether these research challenges are also experienced by the accountancy academic staff from KZN public universities, including those from DUT.

## **2.16.4 MUT**

### **2.16.4.1 IRS structure**

MUT (2017) reports that the university has long been trying to undertake innovative multi-disciplinary research initiatives in order to strengthen its contributions to applied research and community service throughout the KZN province. In this regard, MUT has established nine research objectives to accomplish IRS, as listed below.

**Objective 1:** Ensure the research niche areas are aligned to MUT's mission and strategic priorities, while also supported by a critical mass of researchers and allocation of resources, through the following strategies:

- Revisit the research niche areas;
- Strengthen links with business, industry and local communities;
- Critically examine the strategic priorities and revise and align accordingly;
- Establish a link between post-graduate studies and niche areas, in order to develop a critical mass of researchers in research niche areas;
- Develop a plan indicating how resources allocated to research could be redirected to support critical areas such as units, centres and niche areas;
- Offer masters' and doctoral qualifications in a limited number of departments;
- Develop MUT funded post-doctoral fellowships; and
- Advance a policy for the appointment of research fellows in niche areas.

**Objective 2:** Identify and nurture core fields of research activity for which MUT has strategic advantage, through strategies that include:

- Undertaking a strategic review of all current research activities;

- Development of a number of research units and centres focusing on research of national importance; and
- Encouraging multi-disciplinary research.

**Objective 3:** Review the role of the professoriate in developing academic and research leaders in areas where the university has strengths at undergraduate level and develop strategies aimed at widening research participation and productivity, by means of strategies that:

- Reflect on and revise responsibilities of research professors and centre directors;
- Clarify reporting structures of research leaders;
- Develop strategies to widen research participation;
- Develop strategies to increase sustainable research productivity; and
- Develop research professors' performance evaluation criteria.

**Objective 4:** Include more people in research activities and increase the academic staff proportion defined as "research active", with the following strategies:

- Promote specialised research;
- Encourage and assist with post-graduate degree registration;
- Identify and facilitate staff development needs (workshops and surveys);
- Support capacity building projects aimed at promoting staff members' qualifications;
- Increase the number of research projects and encourage teamwork; and
- Develop and support research leadership in the various faculties.

**Objective 5:** To maximise research output with strategies that:

- Encourage publication of research findings in DHET approved journals;
- Promote the presentation of research results at national as well as international conferences and symposia;
- Facilitate protection of intellectual property rights, including patents;
- Facilitate the publication process after post graduate study completion, in collaboration with staff development;
- Encourage application by all academic staff members on doctoral level for NRF rating as soon as they qualify; and

- Formulate mechanisms to prevent postgraduate studies in the final completion stages from spilling over to the following year.

**Objective 6:** To increase national and international collaboration through these strategies, to:

- Encourage collaboration with local and international research institutions; and
- Initiate joint research ventures such as resource sharing, joint symposia and technical training;

**Objective 7:** To encourage the commercialisation of research output and collaboration with industry, with the following strategies that:

- Encourage links with industry;
- Negotiate funding from industry in collaboration with academic departments (contract research);
- Commercialise research results; and
- Invite industry members to deliver presentations at the university as part of research days.

**Objective 8:** Create an environment supportive of research, ensuing from strategies that:

- Reduce the teaching load of active researchers;
- Optimise study leave and sabbatical leave for all staff members;
- Increase awareness of research policies and procedures;
- Initiate a dialogue on time-tabling; and
- Develop a mentorship programme.

**Objective 9:** To improve administrative facilitation for all researchers, with the following strategies to:

- Develop and maintain quality assurance mechanisms for research;
- Develop and maintain databases;
- Develop and regularly update an appropriate set of research and technology transfer policies and procedures;
- Optimise research facilities' use;

- Reinforce and optimise existing mechanisms for research performance monitoring and assessment;
- Review existing research management system to ensure efficiency and accountability; and
- Develop a range of strategies to increase research funding.

An assumption from the above listed research objectives and their strategies, is that MUT has taken some steps to draft a workable IRS, including research directions., it The university has, however, not yet reached a point where it can fashion its departmental RFAs, which could be due to the lack of staff capacity, including those in accountancy. This puts MUT in the emerging research institution category in the KZN province. Therefore, MUT should expect to face many research challenges, as discussed below.

#### **2.16.4.2 Research challenges**

According to the MUT annual report (2015: 9), the university is struggling to succeed in achieving its research output targets, including in accountancy areas. The report indicates some of the reasons for under-achievement can be attributed to, among others, high teaching workloads for academic staff and the absence of master's and doctoral accountancy students in the university. Further to this, MUT has for the first time in its history, now created and appointed a Deputy Vice-Chancellor (DVC) responsible for research, innovation and engagement. This simply means there is still a long research journey for MUT, as the DVC appointment cannot immediately end research challenges, with research policies still to be developed and successfully implemented. The MUT annual report (2015: 16) points out that the university is one of the historically disadvantaged institutions within the SA Higher Education landscape.

Some of MUT's challenges include the lowest number of academic staff with doctoral degrees in accountancy, highlighting that MUT at present only achieves a total of 25 units per annum research output. CHE (2016: 9-30) reveals that MUT is a teaching-oriented institution as opposed to being a research-intensive institution, and seeks to excel in the academic enterprise of teaching and learning. This suggests the culture of the university is not research-driven, which will influence the IRS operation. MUT's 2015 academic identity (AI) document states that the institution identifies teaching and

learning as its primary operation. Moreover, access to learning resources, such as technology and space, are a critical issue at MUT. The use of the internet and other technologies has rapidly grown in the higher education sector in SA, which means MUT accountancy academics and students must also be equipped to use this technology, so they may take advantage of research opportunities.

One can, therefore, infer that the IRS operation at KZN public universities is controversial and poorly structured and is, therefore, in danger of failing. While the reality is that IRS is difficult to accomplish in less resourced institutions, KZN public universities have established a long list of research strategies and plans, yet little has been done to determine the success of these strategies. It is through strategic research studies like this one and others that the effect of IRS can be interrogated in order to identify flaws in the IRS system. Despite the fact that this study might not result in any significant change in IRS design, it may contribute to the body of knowledge by identifying the effect of IRS in universities. Some of the research challenges can be mitigated through innovation of academics who conduct research. For this reason, the next section will discuss the concept of innovation in research.

## **2.17 THE CONCEPT OF INNOVATION IN RESEARCH**

Chan (2015) reveals the concept of innovation in research is important because it demonstrates the ability to be creative and share new knowledge. The Centre for Leadership in Research Development (2012: 2-3) observes a lack of innovation at poor universities resulting from poor global exposure. Todtling (2014) finds the ranking of international exposure is based on several criteria, including academic research quality and quantity, as well as the research ratings and academic reputation of staff. Such criteria seem to, on the one hand, be difficult for other universities to achieve (Darroux, Jonathan, Massele and Thibeli, 2013: 114).

On the other hand, Darrouxa *et al.* (2013: 114) indicate that, in the value creation process, innovation initiatives depend heavily on the key inputs of staff research knowledge, expertise, and commitment. This means human resource unit must source the right people for the right positions, as they are the principal centres by which universities can employ productive and skilled staff (Kumar and Eyono Obono, 2013: 27-34). However, Darrouxa *et al.* (2013: 114) point out that universities with less resources may not be able pay for highly qualified staff.

Nevertheless, Todtling (2014) and the Centre for Leadership in Research Development (2012: 2) are of the view that poor universities require external knowledge to generate new knowledge and innovation. According to Rosentreter (2012: 77), innovation is one of the most powerful mechanisms for new knowledge transfer to industries and broader society. In addition, innovation requires new education and training, more funding, new technologies, new infrastructure and other relevant tools (Albu and Toader (2012: 164). Ravhudzulo and Runhare (2014: 4) are of the view that government support can play a significant role to achieve innovation in research.

As explained by Ravhudzulo and Runhare (2014: 3), the nature of the transition in higher education have led to two opposing tendencies (Reddy, 2003). In the first, universities are expected to perform as viable "corporate enterprises", producing graduates to help steer the country into a competitive global economy. The second tendency finds that universities are expected to serve the common good and produce critical citizens for a vibrant democratic society (Ravhudzulo and Runhare, 2014: 3). In this regard, Todtling (2014) maintains that, to ensure transformation, universities must have a culture of innovation in mind, assisting them in the design of new curricula, which will be inspired by innovation. In order to be research innovative, researchers would require some sense of research autonomy which is next section.

## **2.18 UNIVERSITIES' RESEARCH AUTONOMY**

Alan and Johnson (2013: 40) highlight that SA public universities are founded on different histories. One may think of rearranging these structures in order to fulfil a particular goal, but restructuring is not an easy task as it requires more resources and probably more staff capacity (Docampo, 2011: 92; Morris, 2002). Governance in this regard is an important factor in order to safeguard university resources and to ensure their sustenance and effectiveness (Andersen, 2013: 5-6).

According to Connell (2004) as cited by Alan and Johnson (2013: 42), the SA government has given autonomy to public universities to carry out their own affairs and, as a result, each public university has its own research governance that works hard to sustain the university. Each university research governance can be broken into five levels, namely: institutional governance, institutional executive, faculty, academic departments, and research centres, as discussed below.

### **2.18.1 Institutional governance**

Authors, including Olum (2014: 14) and UNISA (2017), report that at the level of the university board of trustees or governors, the uppermost level in the university is usually composed of the university council, which must ceremonially appoint the university chancellor, with the method of appointment clearly outlined in the university legislation, while the policy is known as 'the policy for the appointment of the chancellor'. DUT (2017b: 3) states that the Higher Education Act 101 of 1997 (the Act), which regulates higher education in SA, inter alia, provides for governance of public universities.

The statute of the university must give effect to this Act and promote effective management and governance of the university. In other words, institutional research governance, which in this study refers to research management in public universities, has a role to play in improving IRS operations through encouraging accountancy academics to participate in research activities. In this regard, the chancellor plays a strategic leadership role in the governance of the institution and must give direction (Olum, 2014: 14). Institutional governance ensures that the university reflects exemplary leadership, complies with university objectives and that the university's mission, integrity and future strategic direction are of the highest standing. At Canada's Victoria University (2009: 15-24), for example, the chancellor is responsible for ensuring efficient operation of the university council in the performance of its governance role. However, it is not yet understood whether and in what manner, research management affects the IRS operation. Therefore, this study seeks to establish whether research management affects the IRS operation and the manner in which this is done in KZN public universities.

### **2.18.3 Council**

As Ofori and Atiogbe (2012: 71) explain, the institution's council is broadly accountable to the state and commonwealth governments, staff, students, and donors, as well as industry and business partners, and contractors. The council must ensure adherence to IRS policies, in order to achieve value for money by focusing on research efficiency and effectiveness. Toolsee (2011: 51) states that the council must report annually to not only the state government, via the university annual report, on matters of policy compliance, annual achievements and the fiscal state of the institution, but also to the federal government via university management, on the university's performance

agreement implementation. The latter incorporates matters pertaining to student load, expenditure of received funds, staffing and research. Among other matters, the council's fiduciary duties include being an advisory body to the university and approving the annual university research budget. In addition, responsibility of the council is to ensure the university has established the appropriate IRS policies and procedures to address the needs of the community at large (Ofori and Atiogbe, 2012: 71).

#### **2.18.4 Senate**

The senate is another governance wing of the university under sections 28 to 29 of the SA Higher Education Act, paragraphs 18 to 25, as discussed by Olum (2014: 14), DUT (2017b: 3) and UNISA (2017), and has to apply the principles and practices set out in King III. DUT (2017: 3b) and UNISA (2017) explain that the senate is accountable to the council for the university's academic and IRS operations, including quality assurance. Some public universities have a senate sub-structure, known as the Senate Higher Degrees Committee (SHDC), which considers recommendations from faculties on research related matters in detail and advises the senate accordingly. The SHDC is in a position to outline general expectations for all the university researchers. Olum (2014: 14) states that professional body requirements and disciplinary specific requirements may further modify researcher expectations, subject to complying with the relevant approvals process. This means the SHDC is likely to set rigid benchmarks that are further constricted by faculty specific regulations.

#### **2.18.5 Institutional executive committee (EXCO)**

SA public universities' executive is made up of a few members, depending on the structure of the university as designed by the council (University Council, 2005; Olum, 2014: 14). According to Rowland-jones, Holifield and Clarke (2005, as cited by Alan and Johnson, 2013: 44), the head of executive is the President, VC or Rector, who is responsible to the council/ board of trustees/ governors, and various senior structures within the university, including academic and administration. University Council (2005) states the main strategic task of the executive is to provide academic and administrative leadership to the entire university.

In the context of this study, the executive has the responsibility for the execution of IRS and fostering a robust research culture and research engagement of accountancy

academics. The executive assist in the promotion of research and leads academic activities, including fundraising and reinforcement of the university's reputation and scope, while also leading the senior team in pursuit of the university's overall mission and fulfilment of established institutional strategies. The VC has to administer the university with a sense of strategy in mind. However, the VC's responsibilities and authorities are conferred by the office of the country's president, in terms of the Higher Education Act No. 101 of 1997 (University Council, 2005; HESA, 2014: 6). This means the VC is required to optimise resources in line with government objectives, while considering other external factors (Olum, 2014: 14).

#### **2.18.6 Faculties**

Faculties refer to university units headed by a dean, including the Head of Faculty Administration's faculty officer/administrator, responsible for the coordination of teaching, research and service of related academic departments (Schuetzenmeister, 2010; Alan and Johnson, 2013: 441-45). Departments from within the faculty report directly to the faculty dean or sometimes to the vice-president of research (Kipling, 2013: 8). Within the faculty board, there is sometimes a subcommittee known as the Faculty Higher Degrees Committee (FHDC). Members of the FHDC are active researchers from various academic departments within the faculty, with responsibility for management of all research aspects. In some cases, an ad hoc or permanent subcommittee of the FHDC may be appointed to consider matters related to research, including the assessment of dissertations and theses.

Kezar and Maxey (2015: 5) confirm the role of faculties includes encouraging academic staff members to achieve quality teaching and research, and to improve its staff connections to the academic community within the university and other scholars in their disciplines in the world. However, Hamrick (2018) points out that the extent to which academic staff communicate research matters to their faculties is very limited and does not include proprietary rights and ethics. Such a poor relationship can influence the manner in which IRS operates in KZN public universities.

#### **2.18.7 Academic departments**

Primary tasks of academic departments across universities, according to Kumar and Eyono Obono (2013: 34), include the employment of competent staff to teach, research, administrate, and participate in community and curriculum developments.

The School of Accountancy comprises four major disciplines: financial accounting, management accounting, taxation, and auditing.

The financial accounting discipline has a mandate to teach and equip individuals in terms of explaining situations that involve money. Their work is to summarise, analyse and report financial information pertaining to a business for public consumption (Lodewyckx, Lotter, Rhodes and Seedat, 2013: 2). Management accounting is a discipline that combines finance and management, working with leading edge techniques to strategically drive successful businesses (CIMA, 2015). The discipline of taxation is responsible for educating individuals regarding collection of compulsory contributions to state revenue, as levied by the government on workers' income and business profits, or added to the cost of some services, and transactions (Myers, 2012: 17). The auditing discipline educates individuals to conduct official financial inspections of companies, with a mandate that generally includes execution of an annual audit, as well as performance audits and inquiries into any matter relating to an entity's use of its resources (van de Wetering, 2010, 25-27).

While Pouris (2012: 30) proposes that, beyond teaching accounting, accountancy departments should play a critical role in modernisation and innovation by means of research, Lee (1989: 237) and Donovan (2005: 452) reveal two roles of accountancy academics; accountancy education and accountancy practices. Accountancy education can be split into two parts, namely teaching and learning, and research. The teaching and learning aspect comprise accountancy education, whereas research is a tool used to integrate real-life data into research and teaching (Albu and Toader, 2012: 164; Kip Holderness *et al.*, 2014: 87).

On the one hand, Baker (2011, as cited by Albu and Toader, 2012: 165) describes the origin of accountancy research, mentioning that it is derived from real business practices, with an intention to bridge the gap between academia and business practices. Miller (1977: 47), on the other hand, examined accountancy practitioners' complaints with reference to the impracticality and uselessness of accountancy academic research. In response, Baldvinsdottir, Mitchell and Norreklit (2010: 80-82) are of the view that academic accountancy research was never meant to change the potential use of accountancy; it was instead meant to understand accountants' behaviour.

### **2.18.8 Research centres**

**The Canadian** University of the Frazer valley (2017: 1-3) describes a research centre as a formally organised unit within the university, other than a department or a school, established to mainly advance scholarly activities by means of collaborative research, research training and dissemination or creative endeavours. Myers (2012: 17) and Pouris (2012: 30) are of the view that research centres are expected to offer researchers exclusive, enquiry-based, learning opportunities, while also being dynamically involved in not only academic forums but also community outreach.

Research centres usually perform activities beyond the scope of academic departments and promote interdisciplinary research. These centres are approved by Senate and created as needed to support university research strategies' values, mission, and priorities. Olum (2014: 14) states that research centres reflect the university's commitment to excellence in scholarship and the integration of research and teaching. In general, research centres are presided over by a director, head or coordinator, whose appointment is approved by the university DVC.

According to Victoria University (2009: 15-24) in Canada, the director, head or coordinator sustains research management and governance structure, ensuring an effective assumption of its responsibilities; this includes adherence to policies, procedures and regulations that are both institutional and professional, along with ethics, and risk assessment, while also including but not being limited to retrieval and reclaiming of research contract costs. Research centres are expected to produce an annual research plan for the forthcoming year and an annual report at the end of each year, and communicate the activities of the centre as a whole. This suggests the manner in which accountancy research centres are designed in public universities has the potential to influence IRS operation.

Even though SA public universities are largely funded by the state through the DHET, autonomy in dealing with their own research strategic issues is still enjoyed by these universities. For example, it appears as though that each university has a right to set its own IRS, including its operational policies. In normal instances, the IRS style of SA public universities is benchmarked across the country. This is a common practice in both resourceful and unimaginative public universities, where those that are previously disadvantaged will benchmark their IRS style, such as design, implementation and

operation, with those that are imaginative. In doing so, the resource factor needs to be considered because many universities today find themselves impeded, having adopted IRS they are not capable to accomplish.

## **2.19 CONSIDERATIONS OF THEORIES TO FORM A CONCEPTUAL MODEL FOR THIS STUDY**

From the review of literature, it is noted that there is no framework base which can be confidently used to predict the effect of IRS on the attitude of academic staff towards research engagement. Based on the above evaluation and the nature of this study, the subsequent theories, including the Institutional and Organisational Theory and The theory of Planned Behaviour have been used in this study. However, the aim of this section is not to pay attention on theoretical issues; rather, to provide a brief preview of the uses of the theories in relation to the effect of IRS on the attitude of academic staff towards research engagement.

### **2.19.1 Institutional and organisational theory**

Institutional and organisational theory deals with the inter-organisational context, its systems and reasons for organisational behaviour and their effect on performance (Teisman and Klijn, 2011: 297; Corchon, 2007: 10; Lindblom, 1959). These behaviours consist of organisational morals, routines and customs (Guth, 2016: 1). Nebojsa (2014; 242) and Guth (2016: 1) reveal that institutional theories can be traced to 1977 and 1983 and are aimed at understanding elements that support organisational performance. According to Das and Teng (1998: 492) and Grilli and Milano (2009), institutional theory dimensions include stakeholders' interests, objectives, constraints, and incentives.

#### **2.19.1.1 Previous studies on institutional and organisational theory**

Studies by Guth (2016: 1) on organisational institutions are now undertaken across fields of research. Even with considerable effort by researchers from different fields, using diverse approaches, to investigate institutional factors, substantial variation is still found in their results (Stewart, 2014: 16). For example, Birken *et al.* (2017: 4) expose that organisation theory is not a 'one size fits all' and can be classified in three separate ways, with policies implemented in some organisations considered appropriate for their own environment. In other organisations, policies are put into effect in response to pressures to comply with rules and regulations, with yet another

group of organisations that replicate other effective organisations' behaviours and systems.

Studies conducted by Ofori and Atiogbe (2012: 68) and Eraut (1985) found that there is a correlation between new knowledge creation and universities, community and professional practitioners' relations. As for Perkmann et al. (2013), academics engage in commercial research to get access to financial resources other than to pursue academic objectives. Moreover, Northcott and Linacre (2013) found that grooming and training young academics in research has an influence on the research outputs.

A study conducted by Chan (2015), found that attracting the external researchers improves research productivity of the university. According to Zhang (2014), research rewarding policy influences the attitudes of the academic staff towards research engagement. Gopalkrishna (2010) states that universities with high research volumes have a strong research infrastructure including research leadership.

Various authors, such as Gillis, Combs and Ketchen (2013) and Warnier, Weppe and Lecocq (2013: 1366), state institutional theory to be effective and categorised in four hypothetical themes: the motivation perspective, the resource-based perspective, the configuration perspective, and the strategic adaptation perspective. Perkmann *et al.* (2013: 427) and Kathleen and Henning (2010: 29) expose three factors that influence institutional theory, namely individuals' characteristics, as well as both organisational and institutional context. In their explanation, the authors state that individuals' characteristics include the gender and age of staff, whereas organisational context deals with quality of staff or their experiences, while institutional context comprises staff affiliation to a scientific discipline and national regulations, including public policies.

Regarding institutional theories, Boateng and Boateng (2014: 11), Kalali, Anvari, Asghar and Kari (2011: 9835-9837), and Kipling (2013: 4-7) found two limitations: unlimited powers to rule and staff reluctance to change. Lindblom (1959) attempted to provide the groundwork for using alternative ways to strengthen institutional theory. However, Ronald Scott later revised Lindblom's work, due to only the internal factors having been addressed and not the factors relating to political frameworks (Meek, 2010: 1). Addae-Korankye (2012: 139) established that political factors are not the

only sensitive issues that should be considered when dealing with strategic perspectives of the theory, as other unknown factors still exist.

The contributions by Kathleen and Henning (2010: 29) and Brinkschroder (2014: 2) identified two major institutional theory drivers, namely external and internal content. While external content refers to environmental uncertainties and changes in the general and task environment, internal content addresses factors such as institutional structure and operational dynamics, including resource allocation, staff, and administration (Kakhbod, 2013: 5). Some of these factors are institutional background, integration, goals and priorities, as well as change in management, non-convergence, targets, divergent culture, and confusing strategy. This means there is no arrangement between processes, work systems, and other dimensions of the institution (Addae-Korankye, 2012: 139). Syed and Veronica (2015: 117) highlight a growing necessity for international corroborations, which has increased the need to consider organisations' external environment.

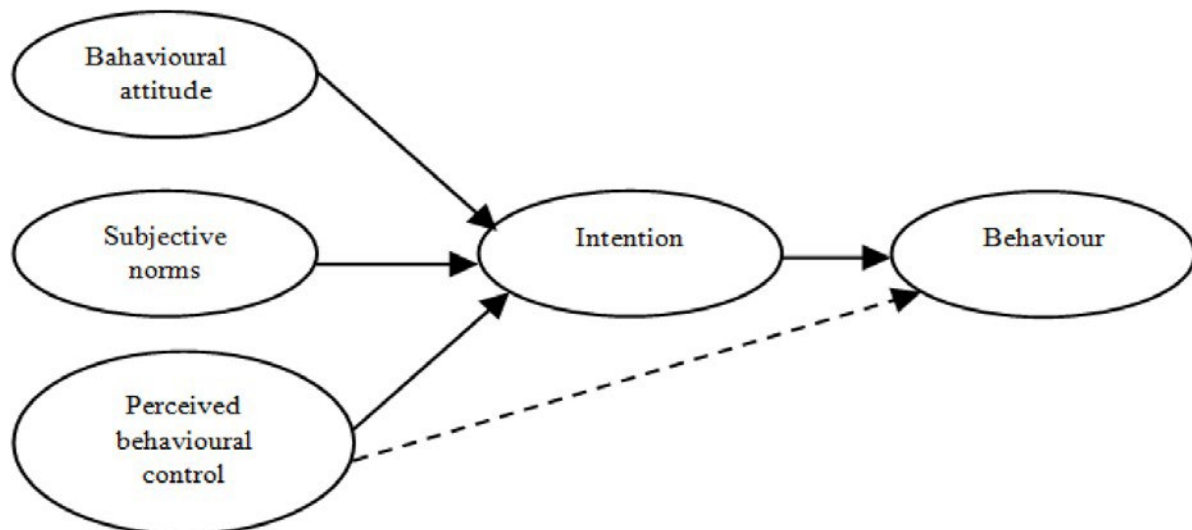
Certain authors (Teisman and Klijn, 2011: 297; Boateng and Boateng, 2014: 11; Addae-Korankye, 2012: 139) concur that institutional theories' widely acceptable frameworks that are aimed at streamlining business operations, should be those that encompass the organisation's internal and external factors.

Except for the study conducted by Okamuroa and Nishimurab (2011: 1) on the impact of university intellectual policy to promote university-industry research relations, most studies have barely investigated organisational theory's effect on employee attitudes towards performance. Okamuroa and Nishimurab (2011: 1) found that university intellectual policy has a positive and significant impact on performances of university-industry research relations, concluding that an institutional policy that is clear and unbiased will equitably address dimensions of inter-organisational context and is more needed in research.

Authors, including Gillis *et al.* (2013) and Bandura (1986: 18), maintain it is imperative for management to consider not only institutional factors but to also take staff attitudes towards organisational policy into account. The section that follows will discuss the theory of planned behaviour, to better understand employees' attitudes in the organisation.

### 2.19.2 Theory of planned behaviour

Armitage and Conner (2001: 477) reveal a theory of planned behaviour developed by Ajzen and Fishbein, which has been widely used by different scholars from different fields of study, to investigate reasons for employee behaviour in organisations. The first theory Ajzen and Fishbein developed, is the theory of reasoned action; further expanded to be the theory of planned behaviour. While the theory of reasoned action was, on the one hand, based on the assumption that people's actions rely on their perceptions and intentions, the theory of planned behaviour, on the other hand, assumes people's actions are governed by their attitudes, intentions and behavioural control (Ajzen, 1988; Ajzen, 1991: 184), as illustrated in Figure 2.3. The theory of planned behaviour basically includes a third construct, referred to as perceived behavioural control (Armitage and Conner, 2001: 477).



**Figure 2-3: Planned behaviour theory**

Source: (Ajzen, 1991: 194)

#### 2.19.2.1 Behavioural intention and behaviour

Behavioural intention indicates an individual's willingness to perform a given behaviour and is postulated as a direct originator of behaviour. It is supported that behavioural intention and behaviour are informed by a specific viewpoint concerning not only the behaviour, but also subjective norms, and perceived behavioural control. Behaviour is further explained as noticeable reactions by an individual in a particular position. Ajzen (1991: 183) maintains the meaning of behaviour is that of well-planned intention.

### **2.19.2.2 Subjective norms**

Subjective norms refer to the individual's perceptions and that these opinions are driven by an important person or group of people. An individuals' opinions on subjective norms are perceptions on whether they are supported by colleagues, relatives, and the community, to behave themselves as recommended. Should an individual perceive his group recommends the behaviour, he/she is more or less likely to perform it (Armitage and Conner, 2001: 477).

### **2.19.2.3 Attitude**

An attitude is defined by Fishbein and Ajzen (1975: 238) and Lunenburg (2011: 3) as a function of a person's beliefs with regard to an object and the critical or intuitive responses to the opinion. This perception is the manner in which individuals perceive, understand, or interpret something (Lunenburg (2011: 3). "A perception includes a process of complex thinking, starting from obtaining information or observing a situation, analysing, and converting it through the cognitive process" (French, Rayner, Rees, and Rumbles, 2011: 38). Katsaros, Tsirikas and Bani (2014: 37) state that perceptions influence individuals' attitudes, thus, leading to refusal to or acceptance of something. In general, an individual's intent to enact certain behaviours is more strongly affected by a more favourable attitude towards that behaviour (Armitage and Conner, 2001: 473). In accordance with Lunenburg (2011: 3), planned behaviour theory demonstrates that people's perceptions or beliefs inform their attitudes, with the theory entailing that the intention to perform, determines the performance of certain behaviour.

### **2.19.2.4 Perceived behavioural control (PBC)**

Individuals' behaviours are, in general, uncontrollable, with people only having total control of their behaviour when no limitations of any kind exist in the assumption of a specified behaviour. A lack of control exists when it is assumed that the behaviour needs resources that are not available at the time (Armitage and Conner, 2001). The potential of perceived behavioural control can influence intention and can directly foretell behaviour, and be correlated to the influence of intention in situations where behaviour cannot be controlled by an individual (Ajzen, 1991).

### **2.19.3 Previous studies on staff behaviour**

Mbaka and Mugambi (2014: 63) found that there is a correlation between the institutional flexibility and academic staff attitudes towards their job. Northcott and Linacre (2013) expose that there is a relationship between staff attitude towards their job and staff development in the organisation.

While the same object may elicit different perceptions by staff, research by Bekele, Shigutu and Tensay (2014: 136) established that there is a positive and significant relationship between staff perceptions and organisational factors. Kotler and Stonich (1992) stress management's importance in considering staff perceptions as it triggers staff attitudes. Sarah (2014: 333) found that performance in the organisation is affected by staff attitudes, more so when management does not deal with employees' needs (Galbraith and Kazanjian, 1986).

Lubbe (2013: 111), found that accounting academics prefer producing research that seek to fulfil the needs of their profession other than academic. On the other hand, Deegan and Unerman (2006: 4) found that accounting academics have a passion of advancing accounting research beyond the profession. Promoting unified and shared educational experiences were found to be influencing academic staff attitude towards research activities (Zhang, 2014).

Factors such as research collaboration, and incentive system we found to be influencing academic staff behaviour towards research (Quimboa and Sulabob, 2014). Elton (1986), Toolsee (2011: 50-51) and Northcott and Linacre (2013) found that there is a correlation between high quality research recognised globally and academic staff attitude towards research. James and Guthrie (2011) and Mainoma and Aruwa (2008: 1) found that there is a correlation between research improving teaching techniques and academics engagement in research activities.

In the framework that Okumus (2001) and Waterman, Peters and Phillips (1998) propose, issues related to staff attitudes are combined under a distinct management component. Whereas Hrebiniak and Joyce (1984) and Schmelzer and Olsen (1994) found that organisational culture influences staff attitude, some frameworks, such as those of Stonich (1982) and Waterman et al. (1980), observed that strategies pertaining to resource allocation are seen as the foremost factors that influence staff attitudes. Additional factors include contextual and operational dimensions that refer

to operational level problems, along with structural dimensions that highlight the strategic power in the organisation (Abdulwahid *et al.*, 2013: 20).

Several authors (Greenberg and Baron, 2003: 129; Fallatah and Syed, 2018: 19; Noah, Tomer and Joshua, 2010: 2; Smit and Cronje, 1992: 312) concur that challenges concerned with staff attitudes are more apparent when a clash occurs between what the employees want and organisational goals. Another study conducted by McGuire *et al.* (2018), on perceptions of supervisors with regards to organisational policies, discovered a positive association exists between attitudes towards work and supervisors' perceptions of management policies. Kamal (1970: 182) found a high congruence between staff attitudes when a supportive group is present. Malini and Atchyuthan (2016: 773) observed that there was a meaningful relationship between staff work-related attitudes and their effectiveness.

This section has examined the theories of institutional and organisational and the theory of planned behaviour. The examination of these two theories indicate that the attitude of academic staff towards research engagement can be influenced by whether IRS allows for research engagement of staff, promote high-quality and internationally recognised research, offer continuous research development, builds strong research leadership, and provides opportunities for strong research resources including research infrastructure.

## **2.20 A NEW CONCEPTUAL MODEL**

What is surprising from the above review of conceptual frameworks, is the absence of a study that developed a conceptual model of the effect of IRS on the attitude of academic staff towards research engagement. The following hypotheses of this study have been developed to examine correlations amongst the theoretical constructs, such as the IRS and academics' attitude towards research engagement by the accounting academics, contributing to a proposed conceptual model, as set out in Figure 2.4.

Ha 1.1 IRS allowing for research engagement has a correlation with the attitude of academics towards research engagement

Ha 1.2 IRS promoting global research recognised by accountancy bodies has a correlation with the attitude of academics towards research engagement

Ha 1.3 IRS advancing accountancy research has a correlation with the attitude of

academics towards research engagement

Ha 1.4 IRS delivering innovative research to industry has a correlation with the attitude of academics towards research engagement

Ha 1.5 IRS delivering innovative solutions to community has a correlation with the attitude of academics towards research engagement

Ha 1.6 IRS building financial strength for the department has a correlation with the attitude of academics towards research engagement

Ha 1.7 IRS promoting high-quality research has a correlation with the attitude of academics towards research engagement

Ha 1.8 IRS exposing accountancy academics to global research level has a correlation with the attitude of academics towards research engagement

Ha 1.9 IRS providing continuous improvement to research staff has a correlation with the attitude of academics towards research engagement

Ha 1.10 IRS nurturing postgraduates to be future researchers and innovation leaders has a correlation with the attitude of academics towards research engagement

Ha 1.11 IRS attracting talents of researchers has a correlation with the attitude of academics towards research engagement

Ha 1.12 IRS attracting workforce to work for accountancy departments has a correlation with the attitude of academics towards research engagement

Ha 1.13 IRS promoting productive academic activities has a correlation with the attitude of academics towards research engagement

Ha 1.14 IRS promoting unified and shared educational experiences has a correlation with the attitude of academics towards research engagement

Ha 1.15 IRS increasing quality and extent of research collaboration has a correlation with the attitude of academics towards research engagement

Ha 1.16 IRS enriching individual academics has a correlation with the attitude of academics towards research engagement

Ha 1.17 IRS enabling research training has a correlation with the attitude of academics towards research engagement

Ha 1.18 IRS potential to expose the department to global research infrastructure has a correlation with the attitude of academics towards research engagement

Ha 1.19 IRS building research leadership within the department has a correlation with the attitude of academics towards research engagement



**Figure 2-4: Proposed simplified conceptual model**

Source: Developed by researcher

## **2.21 CONCLUSION**

Since the focus of the study is on the effect of IRS, this chapter discussed the effect of IRS and its design; implementation; operation; and approaches. Literature reveals the effect of IRS and the attitude of academic staff, which can be considered to formulate a new conceptual model of the effect of IRS on the attitude of academics towards research engagement. This consideration, through the review of previous theoretical frameworks such as the institutional and organisational theory and theory of planned behaviour, has assisted the researcher in crafting and proposing a new conceptual framework for the study. The study also went on to present about international collaborations of universities including their IRS structures, and research developments in other parts of the world including SA. The SA DHET research policy and the consequences of IRS failure in the public universities, and conclusion of the chapter were also presented.

The methodology used for the empirical confirmation of the study is discussed in the next chapter.

## **CHAPTER THREE: FACTORS AFFECTING IRS IN PUBLIC UNIVERSITIES**

### **3.1 INTRODUCTION**

The previous chapter was aimed at developing a conceptual model for the study. This chapter fulfils the study's second and third objectives, which are to investigate factors affecting IRS operation and explore accountancy academic staff perceptions on the extent to which internal and external factors affect the IRS at operational level in KZN public universities. The chapter begins by discussing the external factors and internal factors followed by the extent to which internal and external factors influence academic staff towards research engagement. The factors are categorised into two main parts, namely external and internal factors.

### **3.2 FACTORS AFFECTING IRS IN PUBLIC UNIVERSITIES**

Though there has been no study that has investigated factors affecting IRS in public universities, there is a research consensus on the common factors influencing research productivity. Snelgar *et al.* (2017: 1) and Fevzi (2003: 875-877) agree there are two types of factors that generally influence operations of an organisation, namely external and internal factors. On the one hand, external factors comprise all stakeholders directly or indirectly affected by decisions made by the organisation. Internal factors, on the other hand, are concerned with inter-organisational participants, such as the owners and employees who work for the organisation. Therefore, this chapter seeks to discuss both the external and internal factors that affect research in universities.

### **3.3 EXTERNAL FACTORS**

#### **3.3.1 Government research policies and support**

According to Brenton (2011), government research policies have a strong degree of control over public universities' research, due to the fact that government invests extensively in public universities to sustain their survival. These funds are in the form of research grants, block grants and earmarked grants. As a result, government requires a detailed performance report per university, at the end of every financial term (SA government news agency, 2017).

Government Gazette No. 37726, Notice 9 of June, 2014, reveals accountability for government funds, in terms of regulations for reporting by the public institutions of higher education, remains paramount for the Ministry of Higher Education (DHET, 2013). This suggests that government research policies also affect the manner in which IRS operates in public universities, leading to accountancy academics having a particular attitude towards research engagement.

Government financial support is aimed at the support of universities in their research activities, including research policy implementation (Research grant for universities, 2016: 4; Teisman and Klijn, 2008: 297). The SA government news agency (2017) and HESA (2014: 11-12) report a decline in government research funding for public institutions of higher education, with the decline shown as a percentage of government's budget, GDP, and in both real and student per capita terms. This decline in government subsidies has left public institutions of higher education in a difficult financial position (Teisman and Klijn, 2011: 297) and under pressure to optimise other sources of available income, for example: tuition fee income, research grants, and third-stream income, such as contract income and donations (Research grant for universities, 2016: 3).

In 2013, Research grant for universities (2016: 3) reports that the SA government saw it necessary to introduce a new funding framework, following that of 2003. Proposed changes to the previous funding framework emanated from the report of the Ministerial Committee for the Review of the Funding of Universities. The draft was referred to the higher education community in early 2017, and after considering all comments, a final draft was developed and sent to the CHE for advice. In the interim, as illustrated by government budgets for higher education, the National Treasury issued an allocation letter showing the overall government budget for the period 2015 to 2019.

The specific points to note on the budget are those relating to research funding, as they relate to IRS funding models. One funding review process outcome is a proposal that the Teaching Development Grant (TDG) and the Research Development Grant (RDG) be consolidated and University Capacity Development Grant (UCDG) be established in the 2018 academic year (DUT, 2017b). The UCDG was meant to enhance TDG purposes and streamline universities' core operations, including

teaching and learning, research and innovation, as well as social responsiveness of staff (Research grant for universities, 2016: 4).

DUT (2017a: 4) shares similar sentiments, with the UCDG meant to strengthen research and innovation culture, build research capacity around identified university RFAs, strengthen and expand a supportive research administration and environment, and build national and international research collaborations. Therefore, it is of paramount importance that, as part of the NDP, public institutions of higher education must concentrate on staff development, postdoctoral recruitment and development, development grant supplementation for staff completing their masters and doctoral qualifications, and incoming and outgoing mobility programmes. Research grant for universities (2016: 11) reports the research output grants and their weightings for actual research outputs as per Table 3.1.

**Table 3-1: Funding weightings for research outputs for 2017/18 and 2018/19**

<b>Research output categories</b>	<b>Weightings</b>
Publication units (per research paper) with accredited journal	1
Publication units (per research paper) with non-accredited journal	0
Research master's graduate	1
Doctoral graduate	3

Source: Research grant for universities (2016: 11)

It is stated by Research grant for universities (2016: 11) that any journal on any of the indices recognised by the Department of Higher Education for subsidy purposes, which does not comply with the policies and directives of the department, will be removed from the list immediately, with articles published in such journals not receiving state funding, with immediate effect. Further to this, the Department of Higher Education reserves the right to recover the funds from a university that has claimed for and been paid out subsidies for such articles in error. However, it is not yet understood whether and in which manner, government research policies and financial support affect IRS operation. Therefore, this study seeks to establish whether IRS operation is affected by these variables and the manner in which this affects accountancy academics in KZN public universities.

### **3.3.2 Industry requirements and experience**

Education is, according to van der Schyf (2008: 21), becoming increasingly important as a way of meeting prospective employers' demands. Lubbe (2013: 111) found that

most modern employers prefer to employ candidates with professional qualifications and, as a result, accountancy professions have a strong control over accountancy education in universities, leading to refusal of academic research, as large employers are corporate oriented rather than driven by academic research. Irrespective of vocational demands of industry, de Villiers and Venter (2010: 1) stress that universities are still expected to carry out their mandates, such as teaching and learning and research. Sambumbu (2013: 47) and National treasury (2014: 2) reveal that most people prefer to be vocationally trained, as they stand a better chance to find a more decent job than those who are generally educated.

Lubbe (2013: 110) and Pouris (2012: 30) are of the view that the reluctance of accountants to engage in research is affected by the perception that new knowledge in accountancy is created in industry or by professional bodies and not from academic research. This perception influences the manner in which IRS operates in public universities, with accountancy academics seemingly reluctant to engage in research. ICAA (2011) and Brinkschroder (2014: 4) found the attitude of accountants closely linked with their industry work. According to Kamal (1970: 182), there is a great dissimilarity between professional and academic experience.

Unerman and O'Dwyer (2010), as well as Albrecht and Sack (2000), reveal that accountancy academics perceive themselves as professionals, not academics. According to Unerman and O'Dwyer (2010), little is known about how accountancy academics develop and sustain their own personal and professional attitudes. The universities are, therefore, faced with a series of industry factors (Sambumbu, 2013: 47). For this reason, it is necessary to conduct a study to determine whether industry experience affects the IRS operation and the manner in which this affects accountancy academics in KZN public universities.

### **3.3.3 Professional membership of accountancy academics**

A number of professional bodies of accountancy exist globally (Nowican, 2018), which include but are not limited to SAICA, SAIPA, Chartered Institute of Management Accountants (CIMA), Independent Regulatory Board for Auditors (IRBA), and the Association of Chartered Certified Accountants (ACCA) (SAICA, 2017; IRBA, 2016; ACCA, 2017; CIMA, 2015; SAIPA, 2018). Lubbe (2013: 111) stipulates that

accountancy professions have a high degree of control over universities' core curricula.

This can be attributed to students' desire to receive not just a degree, but a degree accredited by SAICA and other professional bodies of accountancy (Marx and van der Watt, 2013: 67; Uche, 2007). A SAICA article published in 2009 states that "research is important only for the universities and not for the accounting career". The article goes on to say that "...the prerequisite to do research is far removed from their profession requirements. Lecturers who embark on research may lose valuable time that they would have dedicated to the development of accounting knowledge..." (de Villiers and Venter, 2010: 11).

Nowican (2018) observes that while SAICA graduates, also known as CAs, are on the one hand allowed to work as academics in universities and are mostly appointed to senior positions. On the other hand, SAIPA and IRBA are commercially focused, rather than academic and have, thus far, not made claims that their graduates are suitable to work as academics in universities (Devi, 2013; Sambumbu, 2013: 47; Albu and Toader, 2012: 163). By extension, SAIPA (2018) reports that employment opportunities for their graduates include a broad range of operations in business and they can work as business consultants or advisers that are active in the process of decision-making of a business. IRBS graduates are qualified to work in an ethical financial sector to promote sound business practices (IRBA, 2016).

CIMA graduates have a combination of financial expertise and business wisdom and their skills are needed in the fast changing and complex business world that requires critical decisions to create and sustain organisational value (CIMA, 2005). Van der Schyf (2008: 21) agrees with Moneyweb (2016) that professional training of accountants does not necessarily qualify them to be academics. Due to accountancy academic departments' content being driven by professional accountancy bodies, the Southern African Accounting Association (SAAA) was established, with the aim of supporting accountancy academics from Southern Africa, to meet the demand for quality accountancy education and research (SAAA, 2016; Sambumbu, 2013: 47; National treasury, 2014: 2).

The literature review revealed that regulation by separate professional boards has led to differing, and potentially divisive, curricula in public universities, especially in the

schools of accountancy. Among other matters, this has resulted in an argument regarding whether a CA qualification is equivalent to that of a doctorate or not. However, this argument can be settled through referring to the South African Qualifications Authority (SAQA), which is responsible for the registration of all qualifications associated with the national qualification framework (NQF), as set out in the NQF Act of 2008, sections 37 and 38 (SAQA, 2016: 3-6). The SAQA professional bodies' consultative meeting, held on 21 April 2010, recommended the CA designation be recognised on NQF Level 8 (new) from 7 (old).

A doctoral qualification is recognised on NQF Level 10 (SAICA, 2010: 4). This indicates a difference between the CA qualification and a doctoral qualification. However, it is the university's responsibility to make this distinction clear. It is not yet understood whether and in which manner, professional membership of accountancy academic staff affects IRS operation. Therefore, this study seeks to establish whether professional membership of accountancy academic staff affects IRS operation, and how this affects accountancy academics in KZN public universities.

### **3.3.4 Requirements for publishing in research journals**

DHET (2015: 17-27), Pouris (2012: 30) and University world news (2008) report that SA public universities are lagging behind their counterparts abroad, with regards to research outputs. A study conducted by Imhonopi and Urim (2014: 1) on the factors affecting scholarly research output, indicated the standard and quality requirements for publishing in high impact research journals are too difficult and, as a result, there is high level of rejection of articles for publication, which has discouraged many academics from participating in research.

Singh (2006: 153) confirms this with a study investigating reasons for decreased research output in developing countries. The findings indicate that 5.2 percent of all manuscripts submitted for publication were from low- and middle-income countries, and while the overall acceptance rate of manuscripts was 16.6 percent, the acceptance rate for low- and middle-income countries was only 4.8 percent. Manuscripts from high-income countries had a 5.8 times greater chance (2.5 compared to 4.9) of being accepted for publication, as opposed to articles from low- and middle-income countries.

Considering the findings from the above literature, it is possible that poor academic staff involvement in research may be as a result of stringent requirements for publishing in high impact research journals, making it difficult for IRS to operate. Therefore, this study seeks determine whether publication requirements for accountancy research journals affect the IRS operation and the manner in which this affects accountancy academics in KZN public universities.

### **3.4 INTERNAL FACTORS**

#### **3.4.1 Academic staff skills, knowledge and understanding**

Academic staff skills can be defined as expertise needed by an academic staff member that is transferable, in order to be employable. Along with commendable technical understanding, experience and subject knowledge, universities often outline a set of skills they want from an academic (Waheed, Zaheer and Rehman, 2010: 2847). Similarly, Davenport and Prusak (1998: 5) define staff knowledge as a mixture of experience, insights and values based on contextual information. Since needs of public university constituencies are rapidly changing, skills and knowledge of academic staff need to be quickly updated (Takahashi and Tanaka, 2013: 1) which, within the context of this study, requires updating the expertise of accountancy academics.

HESA (2014: 6) highlights the need by public universities to hire and keep knowledgeable academic staff who understand the tertiary environment. However, authors report that public universities that were previously disadvantaged by an apartheid system in SA, still experience shortages of academic staff with skills that lack research knowledge and a clear understanding of IRS objectives (Rosentreter, 2012: iii; Lubbe, 2013: 109; Nieuwoudt and Wilcocks, 2005). In particular, the need to have well-qualified academic staff was studied by Lubbe (2013: 109), who observed that students supervised by well-qualified and experienced academic staff, are most likely to find commendable research topics that are more easily published by high-quality journals. Dragoni, In-sue, Vankatwyk, and Tesluk (2011: 830-831) suggest that retaining staff who retire, is a key to strengthening staff skills in the university.

The aforementioned literature suggests that one of the challenges facing IRS operation in KZN public universities is that of accountants generally not being trained as future academics, but as practitioners, resulting in their approach towards research

likely to differ from other academics. Therefore, this study seeks to establish whether academic staff skills, knowledge and understanding affect the IRS operation and should this be the case, the manner in which they affect accountancy academics in KZN public universities.

### **3.4.2 Academic staff career**

Accountants played a vital role in the development of cities and are still playing a significant role in businesses. They invented the double entry bookkeeping system that fuelled the Italian renaissance (Anderson-Gough *et al.* 1998). The double entry system and the first accounting institution were established in 1581 in the Italian city of Boudqua (Heefer, 2009). Today, the work of accountants is to perform financial operations related to recording, analysis and interpretation of business or organisational financial operations (Gracia, 2010: 51).

The central career of accountants is explained by various authors (Lubbe, 2013: 110; SAIPA, 2018; IRBA, 2016; CIMA, 2018; SAICA, 2018) as far removed from academia, however, it includes a range of operations such as acting as business advisers, business decision-makers, promoting sound business practices, and creating and sustaining organisational value. Lunenburg (2011: 1- 4) found the work of accountants in industry is more practical than theoretical, which suggests that accountancy academics from industry may find it difficult to co-operate with IRS through research engagement. Vroom (1964) observes that accountants make a career choice that can place them in an environment compatible with their practical personalities.

This was confirmed by Jamaliah, Erlane, Afizah and Noraini (2004: 17), who found that 71 percent of accountants preferred working for private companies, with the minority choosing to work in the public sector. Their individual choices were based on expectations of high salary earnings and they made it clear that accountancy is a lucrative field. Therefore, this study seeks to determine whether the career of being academic staff affects IRS operation and should this be the case, in what manner this affects accountancy academics in KZN public universities. The next section seeks to discuss related extrinsic factors.

### **3.4.3 Organisational support and staff incentives**

A study by Camilleri (2002) in a public university examined some of the main contributing factors to poor staff commitment, which found poor organisational support

and reward were significant factors in the issue of commitment. This suggests the university research support system for accountancy academics has the potential to influence IRS operation. Zhang (2014: i) and Ongori (2007) are of the view that the extent to which staff are committed to their work depends on job enhancement, staff empowerment and compensation for services. A study conducted by Ngibe (2015: 24) at a SA public university reveals that university staff support should be practical and include awards and prizes, depending on employee achievement.

According to Albu and Toader (2012: 164), academics are encouraged to publish their research papers with DHET accredited journals because universities are given government funding from such publications, which is received a year after publication. Rosentreter (2012: 77) this means that publication in a journal not accredited by DHET, does not attract government funding. One paper published with an accredited journal confers one unit to an author, which means that should there be two or more authors in producing the paper, a unit is divided evenly among the authors. In terms of rewarding the authors, Rosentreter (2012: 77) the university takes a certain percentage of the claim and transfers the balance to the author/s' research accounts, thus this compensation is not in cash. Where an author is an academic staff member and has co-authored a paper with a student, the entire 40 percent is paid into the supervisor's research account and the student does not receive anything. Money in a research account can only be used for research purposes, such as to pay for research publications, books, attend research conferences, and so on. The 60 percent portion of the claim taken by the university is used to build research capacity within the university.

**Conference funding support:** SA public universities have their own internal conference fund committee that deals with applications for attending research conferences. The committee receives applications from various faculties' academic staff requesting to attend conferences in or outside the country. The funding is granted on a competitive basis and considers the applicant's research profile, which consists of the research output over the last three years. However, Rosentreter (2012: 77) this criterion does not apply to early-stage researchers, as it is assumed they have not yet built a strong research profile. The committee also considers the status of the conference, the opportunity for interaction and exposure for the applicant, as well as expected research outputs emanating from the conference presentation.

Assessment of these criteria is based on information provided by the applicant and the motivation and support from the affiliated faculty. Mohamed (2014: iv) there is a rule that for an applicant attending a conference for the first time, he/she is awarded with an amount of not more than R30 000.00 but thereafter, is expected to publish at least one paper with an accredited journal. An applicant travelling for the second time is awarded not more than R15 000.00 and the same rule for publication applies (Research grant for universities, 2016: 11; Teisman and Klijn, 2011: 297).

**Research incentives for Master's and PhDs graduates:** the university is awarded funding from the government per registered graduate student (Mohamed, 2014: iv). Rosentreter (2012: 77) a stipend is paid to graduate students from the university research account, with the amount differing from one university to another. At the discretion of university management, a certain percentage of this government payment per registered post-graduate student is distributed as an incentive to the supervisor/s concerned. On the one hand, it is regrettable that (Kumar and Eyono Obono, 2013: 34) this policy does not allow for these incentives to be paid directly to the supervisors but are instead transferred to their research accounts and can only be used for research purposes. On the other hand, Fallatah and Syed (2018: 19) and Sahito and Pertti (2017: 209) agree that the policy for compensation of Post-Doctoral-Fellows differs from permanent and academics employed on contract; they are paid both the stipend and the incentives per Master's and PhD graduate that they supervise.

#### **3.4.4 Academic workload**

The responsibilities of academics at research universities point to a wide range of duties, such as producing articles for research publications, teaching and learning, curriculum renewal, and tutorial coordination, in addition to workshops, staff meetings, leadership within the university, and moderation of tests/exams, as well as examining theses, and further studies (Kumar and Eyono Obono, 2013: 34). According to Rosentreter (2012: 77), academics are also expected to consult with students, professional bodies, and the community at large. They are also expected to supervise bachelor's, master's and PhD students, mark test and exam scripts, be course directors, and do administration.

Research engagement of academics at universities is crucial in order to generate new knowledge and development (Rosentreter, 2012: 77). Nieuwoudt and Wilcocks (2005)

add that for this to happen, academics are required to shift from being teaching oriented to being research-oriented. However, Albu and Toader (2012: 164) and Kumar and Eyono Obono (2013: 34) agree that should universities require academics to be research-oriented, the present academic workload is too extensive. In fact, Mohamed (2014: iv) finds that academics spend almost 80 percent of their time in teaching, 15 percent on administration, three percent on student consultation, and two percent on research, excluding other matters, such as (but not limited to) meetings, curriculum renewals, test invigilation, and examination of theses and dissertations. Pop-Vasileva, Baird and Blair (2013: 1) agree that teaching is a key aspect of being an academic, nevertheless, the importance of research cannot be overlooked. Jenkins (2002, as cited by Lubbe, 2013: 113) found that academics who incorporate research into teaching are perceived by students to be up-to-date and devoted to their job.

It is not yet understood whether and which way academic workload affects IRS operation. Therefore, this study seeks to establish whether this variable affects IRS operation in relation to accountancy academics in KZN public universities. According to Kumar and Eyono Obono (2013: 34), issues of academic workload and allocation of research time to academics are not the university's responsibility, but are dealt with at faculty level, with each having their own policy. Research as part of the academic workload should be emphasised (Rosentreter, 2012: 77), therefore needs to be included in IRS processes and faculties should bear this in mind. University management should not expect the IRS operation to be the sole responsibility of individual academics, as this will lead to the IRS operation losing its direction and intended purpose.

#### **3.4.5 Job characteristics**

Kahya (2007: 515) defines job characteristics as an employee's physical efforts and job grade. Kassem and Sarhan (2013: 6127) reveal that job characteristics are a determinant of three critical psychological states, namely: experienced meaningfulness, experienced responsibility, and knowledge of results. These critical physiological states can lead to higher internal work satisfaction, high-quality performance, and high satisfaction with the work, as well as lower absenteeism and turnover. This highlights the importance of job characteristics as this has a direct link with employees' responses to their work (Hackman and Oldham, 1976: 252).

A study conducted by Abu-Elanain (2009: 457) found that job characteristics and job significance have an effect on the attitudes and behaviours of staff. KZN public institutions of higher education are facing a series of job characteristic factors that have substantially affected their IRS operation. Therefore, this study seeks to investigate whether job characteristics affect the IRS operation in relation to accountancy academics in KZN public universities.

Hackman and Oldham's (1976) job characteristics model identifies three job characteristics, namely: job identity, job significance, and autonomy. These characteristics are further explained below.

**Job identity:** Job identity is "the degree to which the job requires completion of a whole and identifiable piece of work, for example, doing a job from start to finish with a visible outcome" (dos Anjos and de Sa, 2014: 258). According to Dodd and Ganster (1996: 330) and Nieuwoudt and Wilcocks (2005), previous research has found that job identity has rarely appeared as a strong predictor of work performance.

**Job significance:** "Job significance is the degree to which the job has a substantial impact on the lives or work of other people whether in the immediate organisation or in the external environment" (Hackman and Oldham, 1976, 255). Empirical research has found job significance to be positively related to job satisfaction (Zhang, 2014: 1; Becherer, Morgan and Richard, 1982; Glission and Durick, 1988: 68; Abu-Elanain, 2009) and organisational commitment (Glission and Durick, 1988: 68).

**Employee autonomy:** Autonomy is the degree to which an employee is provided with substantial freedom, independence, and discretion in scheduling their own work and in determining the procedures to be used in its performance (Government gazette, 2017: 20-21; Hackman and Oldham, 1976: 162). Several empirical studies have determined that autonomy is significantly related to staff commitment (dos Anjos and de Sa, 2014: 258; Agarwal and Ramaswami, 1993: 55; Hunt, Chonko and Wood, 1985: 126), performance (Hackman and Oldham, 1976); and job satisfaction (Becherer *et al.*, 1982; Dodd and Ganster, 1996: 330).

Bitner and Ostrom (2010: 220) reveal a strong link between autonomy and decision-making, with decision-making described as a means to achieve organisational objectives course through a course of action intentionally decided on from a set of

choices (Nadia, Mohsin and Adnan, 2014: 52). According to Harber, Marriot and Idrus (1991), decision-making used to be a management task, but of late, Irawanto (2015: 159) reports that public universities are trying to transform from the custom of an autocratic style, to a way of working that is more democratic and participative. This means they allow academic staff to contribute opinions, with some universities beginning to involve staff more in the process of making organisational decisions (Zainnudin and Isa, 2011: 641). As explained by Irawanto (2015: 161), employees' participation is considered an appropriate solution to increase staff satisfaction, which means their input should be given importance.

Several authors (Cadwallader, Jarvis, Bitner and Ostrom, 2010: 220; Nadia, Mohsin and Adnan, 2014: 52; Johannes *et al.* 2012: 438-441) found growing evidence that staff participation in decision-making increases their effort, which consequently improves efficiency and productivity, reduces the cost of staff monitoring and leads to increased commitment. Johannes *et al.* (2012: 440) maintain that public universities should involve qualified and experienced academic staff in decision-making processes.

#### **3.4.6 Research decision-making**

Decision-making facilitates the entire research management process and is important in accountancy research planning. Research challenges experienced in public universities call for management to make appropriate decisions at the right time (Nadia, Mohsin and Adnan, 2014: 52). Johannes *et al.* (2012: 438-441) state that research decision-making encompasses "bounded rationality, adaptive decision-making, as well as fast and frugal heuristics". To arrive at the best solution for accountancy research decision problems, the strategic managerial decision-making approach proposes the following six steps: definition of the problem, criteria identification, criteria weighting, generating alternatives, rating each alternative on each criterion, and optimal decision computation (Bazerman, 1998, cited by Johannes *et al.*, 2012: 438).

In many universities, making proper research decisions is a challenge and, as a result, universities are failing to attract academics to engage in research activities. This is most evident at public universities where there are less resources. However, it is not yet understood whether and in what manner research decision-making affects IRS

operation. Therefore, this study seeks to determine whether this variable affects the IRS operation related to accountancy academics in KZN public universities.

#### **3.4.7 Information technology**

Johannes *et al.* (2012: 438-441) emphasise the importance of investing in information technology (IT) that enhances university academic communities' capacity. Various authors (Jawad *et al.*, 2014: 270; Hadjinicola and Soteriou, 2005: 1) found IT is part of academic staff support and that it has an effect on research productivity. Basak (2014: 17) established that academics' engagement in research is determined by how skilled they are in using IT tools, such as search engines, productivity software, and social networks, along with the university's portal tools, general communication, e-learning instruction and e-learning assessment, as well as online surveys, and e-curriculum for curriculum development work.

Therefore, in this study, particular attention will be paid to IT use. Azad and Seyyed (2007: 101) conducted a study on the use of IT in research and the results showed that IT support services had an influence on academics' research engagement. Similarly, Adogbeji and Akporhonor (2005: 18) found the advent of IT had made research easier for academics. The results also revealed that through IT, academics were able to access a variety of information from the internet.

It is clear that IT contributes to the fundamental aims of the IRS operation, and that IT capacity building should include resources to service the research areas and scientific aspects of accountancy. However, it is not yet understood whether and in what way IT affects the IRS operation. Therefore, the study seeks to determine whether this variable affects the IRS operation in relation to accountancy academics in KZN public universities.

#### **3.4.8 Institutional infrastructure**

Most SA universities are a result of the merger between colleges, with their initial existence having catered mainly to a relatively small, White population, while the 1994 evolution to democracy opened the sacred doors of learning to all South Africans, irrespective of race. The growth of staff and student enrolments have resulted in a dire scarcity of classrooms, laboratories, libraries, as well as offices, and technologies. Space allocated to accommodate growing staff and student enrolments has impacted

on the capacity of research, as some university infrastructure is old and out-dated (Fitzgerald and Hodgson, 2010: 2; Azad and Seyyed, 2007: 101).

A study conducted by Khumalo (2014: 1521) showed a relationship between infrastructure and school performance. Estache and Garsous (2012: 1) are of the view that better quantity and quality of infrastructure has the potential to directly raise the productivity of humans in the workplace. Singh and Singh (2014: 791) found that when proper sanitation facilities exist, classrooms are well designed, and there is access to adequate clean drinking water, electricity, ventilation, and light, students and academics feel more comfortable and staff retention chances are better.

The above literature suggests there should be a suitable and adequate school infrastructure wherein classrooms, laboratories and libraries are able to facilitate learning experiences. Adequate research infrastructure is also required to improve accountancy academics' participation in research activities. However, it is not yet understood whether and in what way institutional infrastructure affects the IRS operation. Therefore, the study seeks to determine whether this variable affects IRS operation in relation to accountancy academics in KZN public universities.

#### **3.4.9 Research communication and feedback**

There is a direct relationship between decision-making and communication in the organisation (Proctor, 2014: i). Basically, effective communication can improve organisational strategy, performance and staff job satisfaction (Eisenberger and Stinglhamber, 2011; Neves and Eisenberger, 2012; Proctor, 2014: 10; Rhoades and Eisenberger, 2002). Proctor (2014: 10) states communication is a way to improve commitment and to stimulate employees to achieve organisational goals.

Neves and Eisenberger (2012) found that organisations and managers that openly share information and encourage bi-directional communication have a higher rate of strategy success. This is because employees enjoy a sense of well-being, happiness and job satisfaction (Eisenberger and Stinglhamber, 2011; Neves and Eisenberger, 2012). According to Proctor (2014: 10), it is management's responsibility to improve communication in the organisation, train employees in communication skills, and encourage informal communication. A study conducted by Ngibe (2015: iv) established that communication plays an important role in improving research services

provided by the university and the author recommended three ways of communicating research: faculty orientations, workshop sessions, and online forums.

Research feedback is defined as “the degree to which the academics receive clear information about their research strategy and performance” (Hackman and Oldham, 1976: 162). While Bassett (1994) argued that feedback is the most effective device to improve strategy performance, empirical research has shown that management feedback is an important predictor of employee job satisfaction (Gil, Berenguer and Cervera, 2008: 922; Churchill, Ford and Walker, 1976: 323; Becherer *et al.*, 1982). Management feedback is shown to be positively related to work commitment (Agarwal and Ramaswami, 1993: 55; Hunt *et al.*, 1985) and negatively related to role ambiguity (Gil *et al.*, 2008: 922; Agarwal and Ramaswami, 1993: 55).

Hall, Symes and Luescher (2002: 14-16) are of the view that university governing structures must ensure effective research communication in the university. This can be done through spreading essential academic information that pertains to academic operations of the entire university. The National chairs of academic boards/senates conference (2013: 5-6) states that research governance must have recommendable high-level strategies and tools for communication.

Shattock (2012) explains that research communication strategies can be usefully classified as vertical – between the council, governance and academic community; and horizontal – between the governance, faculties, departments, and other academic units, as well as support units. In addition to spreading research information, the governance must have strategies in place to ensure transparent communication, such as regular reports, and a guide to academic policies, including research policies.

An analysis of the literature reveals good communication is necessary to stimulate IRS operation through participation of academics in research activities. However, it is not yet understood whether and in what manner research communication and feedback affect the IRS operation. Therefore, this study seeks to determine whether these variables affect the IRS operation in relation to accountancy academics in KZN public universities.

#### **3.4.10 Job security**

Fallatah and Syed (2018: 19) write that once the employee's basic needs have been fulfilled, security needs are activated, with security needs containing the need for physical protection, as well as job protection and benefits thereof. Tudor (2011: 100) and Sahito and Pertti (2017: 209) state that security needs mean employees are willing to achieve excellence, on condition that their job security needs are met. Job security can thus be defined as an assurance of an employee's job continuity (Zhang, 2014: I; James, 2012).

Zhang (2014: i) proposes that various factors exist that determine the need for an individual's service, which have an impact on their job security. These may include employment contract, collective bargaining agreement, labour legislation and personal factors, such as education, work experience, and job operational area, as well as work industry and location (Adebayo and Lucky, 2012). On the one hand, government employment, including educational jobs, is normally deemed to be secure while, on the other hand, employment in the private sector is widely perceived to offer lower job security (Esuh, Mohd and Hamzah, 2013: 65). Even though employment laws can protect employees against unemployment risks, the fact remains that individuals need to have the right skill set to have job security (Zhang, 2014: i-ii).

According to James (2012), employees prefer greater job security because it balances work and their personal lives, hence reduces stress. A study conducted by Esuh *et al.* (2013: 64) on the impact of job security on strategic performance, found that staff fear of losing their jobs led to poor strategy performance. James (2012) affirms that the more an employee enjoys high job security, the more he/she becomes productive and improves organisational performance. Bumi (2011) and Hasan (2016) hold a common view that low job security is likely to be evident in an environment where a particular ethnic group seems to dominate other ethnic groups. In this case, minority employees in that company will experience low job security and may, therefore, not be able to perform effectively (Esuh *et al.*, 2013: 68).

It may, therefore, be argued that since staff job security has the potential to improve strategy performance in organisations, it is imperative for KZN public universities to ensure job security for accountancy academic staff, as it is believed that staff job security has a positive effect on IRS operation. However, it is not yet understood

whether and in which manner job security affects the IRS operation. Therefore, this study seeks to establish whether this variable affects the IRS operation in relation to accountancy academics in KZN public universities.

#### **3.4.11 University promotion policy for accountancy academics**

SA public universities have adopted the criterion of employing and promoting CAs to senior lecturer positions, without requiring research-based qualifications such as master's and doctoral degrees (Irefin and Ali Mechanic, 2014: 33; Zhang, 2014: i). ICAA (2011) explains that this policy is in place to compensate for the loss of income sacrificed when CAs leave the corporate industry to enter the academic industry. Lubbe (2013: 110) and Nieuwoudt and Wilcocks (2005) are of the view that this policy has an impact on the overall university research culture since it suggests academic support and ranking systems are somehow not suited for academic purposes *per se*, but are more appropriate for lucrative ambitions.

Dundar and Lewis (1998) found, on the one hand, that promotion criteria of academic staff is a significant predictor of their research productivity. On the other hand, employing less qualified academic staff can make more qualified staff feel they are less important; this will, therefore, decrease their performance (Mehmood, Irum, Ahmed, 2012: 15; Wandera, 2011: 184). However, these findings have been argued against by Pacheco, Page and Webber (2010: 1), who state that being less qualified motivates staff to work hard and outperform those more qualified.

There appears to be an academic staff promotion policy in place in SA public universities, but it is not clear how this policy is applied for the appointment and promotion of accountancy academics. In cases where academic staff are employed from outside the university, a prior and verifiable research contribution should be required, especially for senior lecturer and professors' positions, with the exception of junior academic positions.

As reported by DHET (2015: 17-27), SA public universities are in the process of restructuring from old to new policies and, as a result, junior academic staff appointed without master's qualifications are ordinarily given a minimum period of three years to complete the qualification, with failure to do so resulting in expiry of their contract with the university. This effectively means research is now compulsory for all university lecturers in SA. Nevertheless, accountancy research fails to grow beyond present

limitations. An understanding of whether and in what way promotion policy affects the IRS operation is lacking. Therefore, this study seeks to determine whether this variable affects the IRS operation in relation to accountancy academics in KZN public universities.

#### **3.4.12 University status**

The survival of universities depends on their status, which reflects their ability to take full advantage of available resources (Adeagbo, 2016; Ismail, Mokhtar, Ali and Rahman, 2014:307). Being competitive is necessary in order for the university to survive (Walley, 1998, as cited by Lekhanya, 2016: 55). Public institutions of higher education are usually competing amongst themselves in terms of curriculum design, professional programme accreditation, staff skills, and knowledge, as well as innovation, investments that include university infrastructure and size, research outputs and quality, and student enrolment and throughputs, which are important factors in improving performance (DHET, 2012). Even previously disadvantaged universities, especially from KZN, find themselves in intense national and global competition with well-established and resourced universities. However, barriers and other restrictions generally favour historically White universities (Hurley, 2013; Lind, 2009).

Lubbe (2013: 113) is of the view that universities currently given the status they deserve, are those that are SAICA accredited to offer accountancy programmes, of which there is only one in KZN, namely UKZN. Apart from that, a perception exists that the status of UoTs is far less than that of traditional and comprehensive universities. This was evident to Marx and van der Watt (2013; 67), who found most of the accountancy research journals to be SAICA controlled, leading to fewer or even none of the unaccredited universities' research papers being considered for publication.

Rosentreter (2012: iii) and CHE (2012) observe that universities are unique and have unequal resources; this means universities are by nature competitive because they are not equal. CHE (2012) and DHET (2015: 17-27) report there are universities designed to offer a combination of general and vocational oriented education (comprehensive universities), with some that only offer general education (traditional universities), and others that only offer vocational education (UoTs). Marx and van der

Watt (2013: 67) state that universities that offer SAICA accredited qualifications are given more status in the body of accountancy than those who are not accredited.

In the context of public institutions of higher education of KZN, is the only university that is SAICA accredited is UKZN, whereas DUT, MUT and UNIZULU are not. Van der Schyf (2008: 21) claims the aim of SAICA is to promote CAs, rather than only academic knowledge. In the context of this study, universities being in competition suggest different approaches of IRS are used to promote research.

This means public universities with insufficient research resources may find themselves at the receiving end of competition from those with enough resources. However, it is not yet understood whether and in which manner university status affects the way IRS operates. Therefore, the study seeks to determine whether university status affects the IRS operation in relation to accountancy academics in KZN public universities.

#### **3.4.13 Research administration**

According to Mutula (2011), research administration differs from one university to another, with some having research structures decentralised into academic departments, whereas others only have these structures centralised into faculties. Embrett and Randall (2014: 149) expose that the decentralisation of research structures and administration, especially into academic departments, is not common in previously disadvantaged institutions. Ngibe (2015: iii) and McInerney and Barrows (2011: 13-14) are of the view that research centralisation or decentralisation depends on the size of the institution and its IRS policy design.

Miller (2002: 3) presents three ways generally recognised as the main forms of decentralising research administration. These are: de-concentration, delegation and devolution. De-concentration means to transfer research administrative operations from executive management to academic departments. Delegation is to transfer research administrative operations to a third party from outside, so that management exercises limited control. Devolution happens when the transfer of research administration involves both academic departments and management, which can then be said to enjoy autonomy in respect to devolved operations. Al Hinai and Bajracharya (2014: 17) mention that research decentralisation is aimed at improving staff morale

towards research because in this way, academic staff are able to exercise skills and demonstrate leadership abilities, while enjoying academic freedom.

It is further noted that through research administration, the university is able to address the role of change management as a key enabler for innovation (Abdulwahid *et al.*, 2013: 20). As explained by Ofori and Atiogbe (2012: 68), research administration can achieve innovation by focusing on the university's IRS mandate, through planning, sharing information, quality control, and performance evaluation, while also sharing values to achieve consensus. The process requires that the university provides secure jobs for researchers, inclusive of incentives and rewards, clear understanding, and reduced tension between management and employees (May, 2013: 5).

A style that involves teambuilding, balanced stakeholder interests, and trust, is needed to establish a strong research administration (McInerney and Barrows, 2011: 13-14). Thus far, no policy from public universities is in place that orders academic staff to participate and serve as members in research committees (Mutula, 2011; Mohamed, 2014: iv). Al Hinai and Bajracharya (2014: 17) claim IRS administration can be successfully headed by permanent staff members, because contract employees are not allowed to participate in university decision-making and therefore, cannot be members of any research committees (Singh, 2011: 1191; Northcott and Linacre, 2013).

Drennan and Clarke (2009: 484) are of the view that research administrations can help to apply and co-ordinate IRS in academic departments by sharing IRS objectives, knowledge and information. Rosentreter (2012: 6) points out that research administration is meant to equip researchers with particular researching skills, such as the ability to read, write, analyse, and plan, as well as develop research work, apply research, and have the capacity to develop and solve research problems. Other benefits of research administration, as mentioned by Mutula (2011) and Tauginiene (2009: 45), include proper control of research funding, in addition to various bureaucratic activities pertaining to research.

Nonetheless, it is not yet understood whether accountancy research administration is decentralised into accountancy academic departments or into faculties or the manner in which research administration affects the IRS operation. Therefore, this study seeks to establish whether research administration is decentralised into accountancy

departments or faculties and in what way research administration affects the IRS operation, in relation to accountancy academics in KZN public universities.

#### **3.4.14 Research planning**

The general crisis that has crippled research emphasises the importance of planning (Al Hinai and Bajracharya, 2014: 17). Arunachalam (2011) is of the opinion that the core cause of the crisis can be found in the lack of control and monitoring of operational research activities. Research planning can provide the information management requires to effectively decide in what way to allocate research resources (for example, funds, equipment and labour), to enable a university to achieve IRS objectives (Sebhatu, 2011). However, it is not yet understood whether and in which manner research planning affects the IRS operation. Therefore, this study seeks to determine whether research planning affects the IRS operation in relation to accountancy academics in KZN public universities.

#### **3.4.15 University culture**

**Described** as the way things are done in a university, the culture may include the university's vision, values, norms, and systems, along with symbols, language, assumptions, and beliefs, as well as habits (Deal and Kennedy, 2000; Needle, 2004). Lunenburg (2011: 1 - 3) states culture may include elements such as a culture of achievement, discipline, ownership, and support, in addition to collegiality, unity, enthusiasm, and appreciation, along with recognition, and rewarding. According to Hurley (2013), the historical culture still has an impact on the success of public institutions of higher education in SA. For example, the development of institutional strategies and policies and mergers were driven by socio-political transformation of civil society (Goldman, 2011: 36; DHET, 2012; Imhonopi and Urim, 2014: 1), which resulted in the current accountancy academics' research culture in public universities.

North *et al.* (2011: 1416) note the huge impact university culture has on overall university operation. Authors, such as Nieuwoudt and Wilcocks (2005), Khan, *et al.* (2013: 1) and DHET (2012) aver that university culture is more evident where there is a mixture of ethnic groups. For example, the 2016 DHET data show approximately 80 percent of professors nationwide are White, five percent are Indian, 4.5 percent are Coloured, and three percent are Black Africans. Drawing from this report, Adeagbo (2016) and City Press (2014) observe a university culture in which, it seems, only

White people can attain the academic rank of professor in SA. According to the Centre for Leadership in Research Development (2012: 2-3), researchers from various ethnic groups prefer working in isolation from other ethnic groups and with their native language speakers.

This literature suggests university culture has great potential to influence IRS operation, especially where there is a mixture of ethnic groups that do not take advantage of collaboration to move university strategies forward. Therefore, this study seeks to establish whether university culture affects the IRS operation, in relation to accountancy academics in KZN public universities.

#### **3.4.16 Research management and leadership**

**Management of strategy operation is held by** Philip (2010) as important in the organisation because management know why and in what way things should be done. Consequently, it is advisable for universities to prioritise strategy management and have management skills and capacity to run successful strategy programmes. A number of common factors, within the category of management, play a role in the operation of IRS. These include research coordination management skills and research funds management skills (Henrekson and Jakobsson, 2012: 212; Ngibe, 2015: iv; Rosentreter, 2012: ii).

Research strategy management and leadership in the university concentrates on identification of researchers' talents, passion, resource allocation, and staff support and motivation, including the translation of IRS policies into managerial action (South African Medical Research Council, 2018; Centre for Leadership in Research Development, 2012: 2-3). Ngibe (2015: iv) proposes that any IRS operation is limited by the scope of managerial resources, specifically the ability to coordinate capabilities and introduce new people into research.

Henrekson and Jakobsson (2012: 212) state that leadership is an important factor that drives research in the institution. Commendable research leadership, according to the Centre for Leadership in Research Development (2012), can be characterised as capable and well experienced in the areas of research strategy. The duties of leadership include implementing internal research policies and recruiting highly experienced researchers and mid-career researchers with admirable research potential (Ngibe, 2015: iv). However, it is not yet understood whether and in which

manner research management and leadership affect the IRS operation. Therefore, the study seeks to determine whether these variables affect the IRS operation, and how they affect it in relation to accountancy academics in KZN public universities.

According to Hall *et al.* (2002: 104-105), to ensure successful research governance, top management must have sufficient autonomy granted by the state or government. University Council (2005) reports that universities need a committed leadership, both on the part of universities and government, which then accordingly assign responsibility for implementing university research policies to a diverse set of governing boards (and to VCs responsible to councils, rather than directly to the Minister). However, HESA (2014: 6) and CHE (2013) state the country has frequently been affected by disputes between the state and the university sector, making it imperative to establish confidence in governance.

Shattock (2012) and Hall *et al.* (2002: 14-16) postulate that to ensure good research management, the board of research governance must be properly constituted, with clearly defined powers, roles, terms of reference and delegations that support the university's research mission and values. Hall *et al.* (2002: 15) add that the board of research governance must have a stable membership, which includes but is not limited to senior officers, academics, elected staff and students who can provide an inclusive range of university perspectives, voices and expertise.

The National chairs of academic boards/senates conference (2013: 2-5) states that research governance structures are required to understand their role in taking informed decisions that serve the pursuit of truth, wherever it may lead, and fulfil the best interests of the university as a whole. Last but not least, research governance at SA public universities also has a key mandate to formulate, approve and, in some cases, implement academic policies relating to teaching and learning, assessment, research, and admission standards as well as other academic substances.

#### **3.4.17 Staff gender and age**

**The** International Community Empowerment Foundation monitor (2014) point out that women continue to lag behind men in high positions and research activities at universities. Interestingly, Trinity College Dublin (2017: 1) notes a worldwide increase of women's participation in institutions of higher education. It was also found by Ngibe (2015: 68) that 80 percent of women showed interest in academic activities. Academic

staff's gender and age, including cultural norms concerning the roles of women and men, are somehow impacting institutions of higher education's performance (International community empowerment foundation monitor, 2014).

According to Mapesela and Strydom (2005, as cited by Ngibe, 2015: 12-13), the biggest challenge facing SA public universities is that most academic staff are nearing retirement age. In this regard, Lindsey (2013: 50) points out that having more older staff members should be an indication to the university to start training the younger age groups in order to sustain consistency after retrenchment or retirement of staff. Harle (2013) and CHE (2009) are of the view that gender parity and age stability are the most crucial factors for the university's sustainability.

Regarding IRS operation, this research speaks to the manner in which gender and age should be linked in order to achieve the aims of IRS operation in KZN public universities. However, it is not yet understood whether and in what way staff gender and age affect IRS operation. Therefore, this study seeks to determine whether academic staff gender and age affect the IRS operation, and in what way they do so, in relation to accountancy academics in KZN public universities.

#### **3.4.18 Academic staff commitment**

Zheng (2010) describes commitment as staff dedication towards their work, while Akintayo (2010) explains commitment as the degree to which staff feel dedicated to their organisation. According to Meyer and Allen (1991: 72), staff commitment to an organisation can be classified in three ways: affective commitment, normative commitment, and continuance commitment.

Affective commitment involves the affectivity and emotions of staff in the organisation; this commitment indicates staff attachment to the organisation. Continuance commitment indicates the financial conditions of staff causing them to remain in the organisation. Should their financial needs not be met, they will leave for another institution. Normative commitment reflects a sense of legal obligation to continue as staff of a particular organisation. Staff with normative commitment often remain with the organisation because of the binding rules and legal implications that create a sense of responsibility (Meyer and Allen, 1991: 72). Zheng (2010) agrees with Zhang (2014: i) that there is no doubt that staff commitment appears to have potentially serious consequences on achieving organisational goals.

Akintayo (2010) reports that factors affecting staff commitment is comprised of demonstrations of support for staff, such as good salaries. Academic staff commitment includes a collective role in benchmarking with other universities, in addition to regular performance reviews of the research syllabus (National chairs of academic boards/senates conference, 2013: 5-6). Canada's Victoria University (2009: 15-24) avers that academics must establish performance criteria, and commit to encourage and support each other where required.

Academic staff need to strengthen their commitment throughout their lives, not only for teaching but also to improve the IRS operation of their universities through research engagement. This suggests a close link between accountancy academics' commitment to the university and to the IRS operation. It is, therefore, important to conduct a study that seeks determine whether academic staff commitment affects the IRS operation in relation to accountancy academics in KZN public universities.

#### **3.4.19 Staff working against the power structure**

Sambumbu (2013: 47) explains it is imperative for strategy to gain support from staff because strategy will not work when it creates conflict between those in power and those whose support is required. Zhang (2014: i) shares the implied need for alliances with powerful colleagues in the university to attain full IRS support. When management offers a confusing and non-participative strategy this leads staff to work against the power structure, resulting in poor strategy performance (Al Hinai and Bajracharya, 2014: 24).

Working against power demonstrates a particular staff attitude in an organisation (Zheng, 2010). However, it is not yet understood whether and in which manner staff working against the power structure affect the IRS operation. Therefore, this study seeks to determine whether this variable affects the IRS operation in relation to accountancy academics in KZN public universities.

#### **3.4.20 Location of the university**

Universities located in rural areas may have a lower chance of success than those situated in metropolitan areas (Gilbert, 2002; Hurley, 2013). Goodfellow (2014) points out that due to the lack of highly skilled staff, support, and slow internet speeds, rural universities find it difficult to overcome challenges and compete with their metropolitan counterparts. Minai and Lucky (2011:110) are of the view that when setting a strategy

and measuring its performance, an organisation's location factor should be seriously considered. Gilbert (2002) points out that the physical area where the university is located has implications for its access to resources.

Better location of a university allows it to better focus on essential strategic areas. This means universities that are situated in areas where there are less resources have to adapt to that environment, but at the same time, management should not relax their strategies to improve their focus on research. It is possible that the IRS operation can be affected by the university location. Therefore, it is the intention of this study establish whether the university's location affects the IRS operation in relation to accountancy academics in KZN public universities.

### **3.5 THE EXTERNT TO WHICH THE INTERNAL AND EXTERNAL FACTORS INFLUENCE ACADEMICS IN RESEARCH ENGAGEMENT**

The study conducted by Ghabban, Selamat, Ibrahim, Krejcar, Maresova and Herrera-Viedma (2019: 1) from Saudi universities found that the factors such as the university policy, job satisfaction, international collaboration, personal use of information technology, university's use of information technology, and information technology funding are moderately influencing academics in research engagement. Another research study on the analysis of the influence of external and internal environmental factors conducted by Rizal, Mawardi and Kholid (2017: 47) found that both the external and internal factors have a significant impact on staff performance. Similarly, the study results of Minh-Quang (2016: 113) revealed that academics job satisfaction is highly influenced by the external and internal factors of the university.

From the review of the above literature, it can be claimed that the external and internal related factors of the university have a potential to influence academic staff towards research engagement. While other studies have used various statistical analysis to investigate the externt to which these factors influence academic staff in research productivity, the current study will investigate academic staff perceptions on the extent to which internal and external factors affect the IRS.

### **3.6 CONCLUSION**

This chapter reviewed literature highlighting factors affecting IRS in public universities and characteristics of successful research governance. Literature reveals factors that

affect IRS, which can be categorised into two main factors: external factors and internal factors. The internal factors were further classified into two sub-themes: intrinsic and extrinsic motivation. Therefore, it is clear IRS can be achieved by addressing these factors, while building up a strong research governance. It is, moreover, of utmost importance that public universities make proper arrangements to improve conditions, within which their accountancy academic staff operate.

The next chapter introduces the theoretical framework for the study.

## **CHAPTER FOUR: RESEARCH METHODOLOGY**

### **4.1 INTRODUCTION**

**Whereas** the previous chapter provided an overview of the factors affecting IRS at an operational level in the public universities, this chapter sets out the research methodology of the study. This study has four objectives to be achieved, namely:

- To investigate effects of existing IRS on the attitude of accountancy academic staff towards research engagement;
- To examine factors that affect IRS at operational level in KZN public universities;
- To explore accountancy academic staff perceptions on the extent to which internal and external factors affect the IRS at operational level in KZN public universities; and
- To propose a conceptual model for the effect of IRS on the attitude of accountancy academics towards research engagement.

According to Nylander and Renberg (2014), it is important that data exposed by a research study are truthful and measurable in statistical and descriptive terms. Statistical and descriptive data aid in producing accurate outcomes and to explain the phenomenon that drives the entire research. This chapter seeks to explain how the data were collected and analysed for this study and, furthermore, deals with the research design, questionnaire content, data distribution and collection instruments as well as the pilot test. The various issues of reliability and validity of the data from the methods chosen, as well as data analysis and processing, statistical approach and ethical concerns are also discussed.

### **4.2 RESEARCH DESIGN**

A research design outlines procedure to be followed for the research activity, with the intention of answering the research questions, such as: What techniques will be used to gather data? What kind of sampling will be used? How will time and cost constraints be dealt with? as espoused by Nylander and Renberg (2014). Terrell (2012: 255) states that three available methods can be employed by the researcher to gather data: quantitative, qualitative, and mixed methods. Choosing the research design for the

study starts with knowing the type of data to be analysed, whether it is quantitative or qualitative.

The research steps mentioned above were used to define the research process followed by this study. The methodology of this study was predominantly quantitative and only four open-ended, cross-sectional and descriptive in nature. The choice was relevant due to multiple factors (Kasinath, 2013: 47, 48) that impact IRS and its operation, which call for both inductive and deductive inquiry. Quantitative data was collected to measure the effect of IRS on the attitude of accountancy academic staff towards research engagement, factors affecting IRS at an operational level, and the extent to which these challenges (external and internal factors) affect IRS at an operational level.

Open-ended data were collected to provide answers to questions that may have not been included in the Likert scale questionnaire, such as 'what are other factors?', 'what needs to be done?', and 'list any other factors'. Open-ended data address present-day issues that are founded in reality and constrained by systems and numerous cases and events of interest (Yin, 2012; Creswell, 2013; Creswell and Plano Clark, 2011). Thomas (2011: 513) states that open-ended questions, as their defining factor, involve investigation of assorted views. Through the open-ended section of the questionnaire, the qualitative part of this study examined other possible effects of the IRS and what other external and internal factors are affecting the IRS at an operational level.

Leedy and Ormrod (2012: 35) state that should respondents be considered at a fixed point in time, that research is said to have used a cross-sectional methodology. Welman *et al.* (2011: 95), on the one hand, confirm that involvement of a cross-sectional method entails collection of data from any given sample of population elements only once. On the other hand, descriptive research is, by definition, a statistical study to identify patterns or trends in a situation, but not the casual linkages among its different elements (Leedy and Ormrod, 2012: 189). One of the advantages of descriptive research is that it can utilise elements of both quantitative and qualitative studies, in order to measure a central tendency that includes the mean, median, mode, and standard deviation from the mean, as well as variation, percentage, and correlation between variables (White and McBurney, 2012: 432). The design of this study assisted with data collection, measurement and analyses.

#### 4.2.1 Target population

This section describes the target population of this study.

**Table 4-1: Target population**

University	Target population
DUT	700
MUT	239
UKZN	1 328
UNIZULU	277
<b>Total</b>	<b>1 216</b>

The population of this study comprised 1 216 academics from the four public universities in KZN, namely; DUT, MUT, UKZN, and UNIZULU (DUT, 2017; MUT, 2017; UKZN, 2017; UNIZULU, 2017). Academics per university are made up of different departments. The researcher targeted this population because research engagement rests upon their shoulders. As Lee and Ormrod (2012: 35) state, the target population should be a set of all individuals relevant to a particular study and must be defined in terms of elements, geographical boundaries and time.

#### 4.2.2 Sampling method

Saunders *et al.* (2009: 213) the sampling techniques of the study could be divided into two types: probability (representative sampling) and non-probability (judgemental sampling). Probability sampling uses a random selection technique, while non-probability sampling does not follow random selection, instead, it relies on judgemental procedures. For this study, probability sampling was applied, with the obvious advantages of this method being that the researcher could study the accountancy academic population; data would, therefore, be more reliable than when using other methods. However, this method was lengthy and costly for the researcher.

Plowright (2012) supports the premise that probability sampling involves selecting those who are knowledgeable regarding the subject under investigation. Accountancy academic staff were chosen because the researcher knows they have information that will contribute directly to answering the research questions. Excluding 5 academics which were selected for the pilot study, the researcher decided to study the entire population of 98 accountancy academics from KZN public universities (DUT, MUT, UKZN, and UNIZULU). In this study, data were collected at a specified time from the entire population (White and McBurney, 2012: 429).

The following advantages of studying the entire school of accounting were confirmed by this study:

- It increases the level of confidence;
- It provides the maximum chance to identify negative feedback; and
- It studies the entire population.

Babbie (2011: 35) refers to the following disadvantages of a census study, which were confirmed by the current study:

- It limits other possible survey opportunities;
- It is time consuming;
- It is costly; and
- There is a high possibility of negative responses to the request to participate.

There is agreement among various authors, including Nzuza (2015: 45), Quao (2016: 203-204), Welman *et al.* (2011: 71), Nylander and Renberg (2014), Karun (2013) and Neves and Eisenberger (2012) that a study size larger than 25 and less than 500 is most appropriate for research studies. For the current study, a sample size of 98 respondents was adopted and considered appropriate to fulfil the aim of this study. Table 4.2 shows the breakdown of the study population in more detail.

**Table 4-2: Sample size**

University	Frequency	Percentage
DUT	42	43%
MUT	8	8%
UKZN	37	38%
UNIZULU	11	11%
<b>Total</b>	<b>98</b>	<b>100%</b>

As shown (Table 4.2), 42 (43 percent) of the population were from DUT, eight (eight percent) were from MUT, 37 (38 percent) were from UKZN, and 11 (11 percent) were from UNIZULU.

### 4.2.3 Response rate

Nylander and Renberg (2014) and Karun (2013) hold a common view that there is no agreement on minimum acceptable response rate in research studies. However, the authors agree that researchers generally consider an acceptable response rate to be

anything from 70 percent and higher. In this study, there were 82 (84 percent) positive responses from the population, which is considered a good response rate. Non-responses may have been due to a lack of interest.

#### **4.2.4 Measuring instrument**

The measuring instrument in this study was a questionnaire. Two ways are available for a researcher to ask questions, namely, closed-ended and open-ended. This questionnaire had 62 closed-ended questions and four open-ended questions. Considering that academics are very busy and difficult to reach, the use of closed-ended questions was assessed to be easier and quicker to answer. The open-ended questions in this study had a low response rate, which confirms that accountancy academics are difficult to locate for research studies. Siniscalco and Auriat (2011: 4) confirm the possibility of a low response rate when using open-ended questions and interviews. These authors suggest that, in addition to other possible methods, the researcher is required to also directly administer questionnaires to increase the response rate. In this study, the questionnaire was sent via email, with an online link or by means of a paper copy, which was self-administered.

The four variables of the questionnaire were taken from the conceptual model proposed in the preceding chapter, comprising external factors, internal factors, IRS and staff attitudes. The internal factors were, however, divided into two sub-themes, namely institutional and personal factors. The questionnaire consisted of five pages. A 5-point Likert scale with (1) strongly agree; (2) agree; (3) neutral; (4) strongly disagree; and (5) disagree was used to structure the majority of the questions, with the other questions in the form of multiple choice or open-ended. Likert scale and multiple choice were straightforward to score and easy to analyse (White and McBurney, 2012: 439). Clear and simple wording was used to construct the questions for respondents so they could easily understand and answer the questionnaire.

An extensive literature research was undertaken, which included exploration of various documents, such as university reports, government gazettes, selected journal articles, and internet articles, as well as textbooks on education pedagogies, in addition to theses and dissertations (as referenced). The themes of investigation were 'research strategy in higher education', 'accounting research', and 'factors affecting research output in higher education'.

The questionnaire was made up of four sections, A to D, as set out below:

**A: Biographical data.** The section covered 13 aspects for the identification of the accountancy academic staff. Variables were adapted from the literature review in Chapter 3.

- A1. Institution:
- A2. Gender:
- A3. Race:
- A4. Nationality:
- A5. Age:
- A6. Job title:
- A7. Work experience:
- A8. Responsibility
- A9. Qualification:
- A10. Profession:
- A11. Condition of employment:
- A12. Department in which respondents work:
- A13. Committee membership:

These results are interpreted (Chapter 6) as nominal questions. According to Saunders, Lewis and Thornhill (2011: 23-24), a nominal level organises data by name and by numbers, assigned as arbitrary.

**B: Effect of IRS on the attitude of accountancy academic staff towards research engagement.** This variable consisted of 19 Likert-scaled items, as listed below and adapted from the literature review on the IRS (Chapter 2).

- B14. IRS allows for research engagement
- B15. IRS promotes global research recognised by accountancy bodies
- B16. IRS advances accountancy research
- B17. IRS delivers innovative research to industry
- B18. IRS delivers innovative solutions to community
- B19. IRS builds financial strength for the department
- B20. IRS promotes high-quality research

- B21. IRS exposes accountancy academics to global research level
- B22. IRS provides continuous improvement to research staff
- B23. IRS nurtures postgraduates to be future researchers and innovation leaders
- B24. IRS attracts talents of researchers
- B25. IRS attracts workforce to work for accountancy departments
- B26. IRS promotes productive academic activities
- B27. IRS promotes unified and shared educational experiences
- B28. IRS increases quality and extent of research collaboration
- B29. IRS enriches individual academics
- B30. IRS enables a research training
- B31. IRS has a potential to expose the department to research infrastructure
- B32. IRS builds research leadership within the department

According to Babbie (2010: 256), the benefits of a Likert scale are that questions are ordinal data and easy to analyse.

**C: Factors affecting IRS.** This variable consists of external and internal factors. External factors had four statements, whereas internal factors comprised 29 statements.

**External factors:** were listed using the five Likert scale items adapted from the review of the literature on factors affecting the IRS operation (Chapter 3).

- C33. Government research policies
- C34. Professional membership of academics
- C35. External research funding
- C36. Requirements for publishing in research journals

**Internal factors:** both the institutional and personal, were listed using the five Likert scale items adapted from the review of literature on factors affecting the IRS operation (Chapter 3).

- C37. Research administration
- C38. Research impact assessment
- C39. Academic staff knowledge and understanding
- C40. Academic staff skills

- C41. Job characteristics
- C42. Academic workload
- C43. Decentralising research admin into departments:
- C44. Decentralising research admin into faculty:
- C45. Academic staff attitude towards research:
- C46. Research decision making
- C47. Staff incentives:
- C48. Staff participation in research:
- C49. Academic staff careers
- C50. Academic staff with industry experience
- C51. Research planning
- C52. Organisational culture
- C53. Research leadership
- C54. Staff promotion policy
- C55. Job security
- C56. Information technology
- C57. Status of the university
- C58. Research management
- C59. Infrastructure affects
- C60. Research communication
- C61. University global recognition
- C62. Institutional governance
- C63. Staff commitment
- C64. Staff working against the power structure
- C65. Research feedback

**D: Perceptions on the extent to which internal and external factors affect IRS.**

Respondents had to weigh the extent to which they think given external and internal factors affect their universities' IRS. Choices had to be made on the basis of whether they perceived the effect of a particular factor to be extreme, moderate, low, and don't know. Open-ended questions were asked at the end of the section.

- D66. Government support
- D67. Professional membership of academics

- D68. Staff commitment
- D69. University support
- D70. Academic staff skills
- D71. Research communication
- D72. Research planning
- D73. Research administration
- D74. Research leadership
- D75. Industry support
- D76. What other effects do you think IRS has on the academic staff attitudes towards research engagement?
- D77. What do you think needs to be done to improve IRS operation in your university?
- 78. List any other factors affecting IRS operation in your department into:
  - D78.1. External factors
  - D78.2. Internal factors

In measuring these variables, the section used a nominal level, the results of which are analysed in Chapter 6. The open-ended questions on the other hand were analysed as qualitative data, which are presented in Chapter 6.

### **4.3 DATA DISTRIBUTION AND COLLECTION INSTRUMENTS**

Since public universities are spread all over the KZN province, the researcher used an email or online survey method to distribute and collect questionnaires at MUT, UKZN and UNIZULU. Initially, the researcher opted to self-administer data, but due to respondents' unavailability, an online data distribution and collection method was also employed. Both online and paper methods were used at DUT, which was successful as the researcher could more easily liaise with respondents, due to his employment location being on that campus.

Data collection has assisted the researcher to measure results of secondary and primary data (Lee and Ormrod, 2012: 35). Secondary data was obtained from several sources, including books, newspapers, the internet, and dissertations, as well as journal articles. Primary data was obtained from 82 full and four partially completed questionnaires, with the partially completed questionnaires discarded. Hence, there were 82 respondents for this study.

In order to improve the response rate, the researcher gave the respondents a maximum of ten days to complete the questionnaire. Reminders to complete and return the questionnaires were sent every two days. To improve and increase respondents' ability to answer the questionnaire, a number of instructions were provided throughout the questionnaire and the researcher was always willing to help.

#### **4.3.1 Online survey method**

The online survey used in this study is an email survey with a link directing respondents to a web-based survey. A census sample was utilised in the online survey, wherein MUT, UKZN and UNIZULU accountancy academic staff were included and provided with the opportunity to respond. The online survey at DUT was applied only to those academics the researcher was unable to reach in their offices. A cross-sectional survey design was applied, which entailed carrying out the survey on one occasion at the three above mentioned universities (Russel Bernard, 2013: 234, as cited by Creswell, 2014: 157). A structured electronic questionnaire was designed using Google Drive and emailed directly to accountancy academic staff.

Creswell (2014: 157) states several factors that have to be reviewed when choosing to use an online survey, such as respondent availability and access to online infrastructure. The study population had access to email and internet; this method was thus chosen by the researcher because it was quick and easy to reach the respondents.

The advantage of using an internet and email survey is its speed of delivery and return, when compared to other methods. Internet surveys also have a lower cost (Creswell, 2014: 157). Rasmussen (2008: 89) agrees that conducting an online survey is much easier. The respondents were approached on their work email addresses to answer the questionnaire, which was accessible via a link they could click on in order to access an online questionnaire. The questionnaire used for the online survey was the same as the hard copy questionnaire used for self-administration. The structure of the email survey comprised the following information and sections:

- An email with a greeting note and a questionnaire link.
- After clicking on the link, respondents were directed to the consent letter, letter of information and questionnaire. The researcher requested that all sections be answered, which improved the quality of the responses.

### **4.3.2 Self-administration method**

A self-administered paper questionnaire method was applied at DUT; this method was chosen by the researcher because it increases the quality of responses. Creswell (2014: 157) states the importance of checking respondent availability when using a self-administration method. Therefore, the researcher administered the questionnaires at a time convenient to respondents.

The disadvantages of using a self-administered paper method is the less speedy response when compared to online methods (Rasmussen, 2008: 89), and the increased cost (Creswell, 2014: 157). Respondents were given a letter that included an introduction clarifying the reason for the research as well as the estimated time to complete the survey and were approached at their work stations to answer the questionnaire. In order to standardise conditions under which the questionnaires were completed, questionnaires were hand delivered to academic staff. For those who were not available in their offices, the searcher used an online survey.

Respondents were timeously informed, prior to distribution and collection processes took place. The population was relatively fluent in the English language, so the questionnaire was presented in the English language. A self-administration process was convenient and the researcher was willing to assist when respondents had any questions (Leedey and Ormrod, 2012: 30).

### **4.3.3 Pilot study**

A pilot study was conducted for this study as a preparatory 'dress rehearsal' for the actual study (Welman *et al.*, 2011: 148). The purpose of a pilot study is to detect possible flaws in the measurement procedures, such as vague instructions and an inadequate time limit of the intended study. A pilot study identifies unclear and vaguely formulated statements on the questionnaire. The pilot study was undertaken with a selected group of five respondents from the population of 103 accountancy academics, to establish whether they had any difficulties in answering the questionnaire. These accountancy academics were excluded from the main study.

The researcher used an online survey method for the pilot study and respondents were given five days at most to comment on the questionnaire. The pilot results showed respondents had some recommendations on the 5-point Likert scale statements in Sections B, C, and D. No recommendations were made on the biographic section,

Section A. It was recommended that statements from sections B, C, and D be reconstructed, as there were some spelling errors and vague statements. The suggested changes were not major, with most changes related to the questionnaire's format and content errors. These changes confirmed the necessity of piloting for this study. A questionnaire is required to be tested in order to ensure all items are clear and understandable.

#### **4.4 RELIABILITY AND VALIDITY**

##### **4.4.1 Reliability**

In this study, a reliability test was performed to determine whether the study would produce similar results, should the same study be repeated on the same sample (Parasuraman, Grewal and Krishnan, 2007: 133). To ensure reliability of this study, a Cronbach's Alpha was performed. According to Malhotra and Birks (2011: 467), there are two types of Cronbach's Alpha, namely; Cronbach's Alpha for raw variables and Cronbach's Alpha based on standardised items. The first Cronbach's Alpha makes use of covariance among the items, whereas the alpha based on standardised items utilises the correlations among items. The latter alpha is centred on the assumption that all of the items have equal variances, which is often false in practice (Reynaldo and Santos, 2011: 297). When the items are closely associated, the alpha coefficient will be close to one and where items are badly correlated, the alpha coefficient will be close to zero (Maree, 2010: 216). Generally, a reliability co-efficient of 0.70 or higher is acceptable (Muijs, 2011: 221).

Using IBM SPSS (version 25.0), the researcher used the following measures to ensure reliability of the study:

- Only the closed-ended questions (for example, SECTIONS B, C, and D) were used for the reliability test;
- A pilot study of the questionnaire was undertaken to ensure all questions and statements were both relevant and easily understood;
- The study questionnaire was designed to ensure anonymity of the respondent; and
- Cronbach's Alpha was calculated to measure reliability of the measurement.

#### **4.4.2 Validity**

To ensure validity of a study, a pilot study was conducted and results scrutinised by both the researcher and a statistician. Validity serves as a judgement of the correctness of a measure for specific inferences, decisions and consequences (Muijs, 2011: 56). To test validity of the instrument, questionnaires were sent to five accountancy academics from DUT, MUT, UKZN, and UNIZULU, with this pilot study ensuring validity, as recommended changes were made to the questionnaire. Melissa (2016), Kumar (2013: 48), Torrance (2012: 113), and Muijs (2011: 56) point out that there are four types of validity:

- Face validity determines whether statements are appropriate; this relies on subjective judgement by the researcher;
- Content validity judges the accuracy with which an instrument measures the contents being studied;
- Criterion validity is determined by relating the performance of one measure against another, with the second measure checking the accuracy of the first measure; and
- Construct validity measures the degree to which the content of the study is actually measured by the questionnaire.

For the purposes of this study, in order to see whether the questionnaire adequately covered the topic of this study, the following validities were ensured:

- Face validity was ensured by conducting a pilot test of the questionnaire with five accountancy academics from DUT, MUT, UKZN, and UNIZULU, in order to assess their understanding of the requirements; and
- Construct validity, which served as an indication of whether measures included a representative set of items that measured the concepts being addressed. This was achieved by ensuring all questions constructed in the questionnaire were derived from the literature review.

#### **4.5 INDEPENDENT AND DEPENDENT VARIABLES**

While Saunders *et al.* (2012: 76), on the one hand, describe the independent variable as a major variable in research, the dependent variable is, on the other hand, reliant on the independent variable. The independent variable of interest in this study comprises IRS whereas the dependent variable is the attitude of academic staff

towards research engagement. The conceptual model for the study was presented in chapter 2.

## **4.6 DATA ANALYSIS AND PROCESSING**

Data was analysed using the IBM SPSS (version 25.0). Due to this study's use of a mixed method for primary data collection, the questionnaire had both closed- and open-ended questions. The open-ended questions were analysed by establishing categories, then assigning each comment to one or several categories (known as 'coding'). This enabled the researcher to identify themes and subthemes. The closed-ended questions formed part of the quantitative research and were analysed in terms of descriptive and inferential statistics.

One form of analysis used was frequency tables. These assisted with analyses of the number of times a certain response was made (Bryman and Bell 2015: 347) and to check the total number of questionnaires distributed and collected. The resulting variables were tested to identify those that were highly influential on the dependent variables of the study. In order to test variable relationships, bivariate analysis was conducted in the form of cross-tabulations (Ho 2013), while appropriate inferential statistics were used to test relationships. Data were presented by means of bar graphs, as well as tables, to illustrate the association between variables (Kumar 2013: 48).

### **4.6.1 Descriptive statistics**

In this study, descriptive statistics were used by the researcher to assess in what way research variables were related to one another and whether any differences existed between two or more groups (Birley and Moreland, 2007: 351). The descriptive statistics involved included the use of percentage/frequency tables, standard deviation, and percentages presented in bar graphs to represent this study's results (Kinnear and Taylor, 2010: 671-676; Struwig and Stead, 2009: 271).

The types of descriptive statistics used included frequency tables, percentage tables, and percentage graphs. Frequency tables and percentage tables were used to analyse results on respondents' biographic profiles, the effect of IRS, and factors affecting the IRS at an operational level. Frequency tables report the number of responses in a table that a question has received, and were useful to count the total number of respondents (Kinnear and Taylor, 2010: 674). Percentage tables assisted

with analysis of the results on the extent to which the external and internal factors affect the IRS and to quantify the proportion of respondents that answered a question in a particular way, multiplied by 100 percent, and was presented in the form of a percentage table (Aaker, Kumar and Day, 2012: 452). The use of a graph was relevant because it could illustrate the quantitative differences between the research variables (Maree, 2010: 220; Struwig and Stead, 2009: 271). According to Muijs (2011: 59), a combination of frequency tables, percentage tables, and percentage graphs can aid the researcher in obtaining a count of the number of responses associated with different values and to express these counts in a percentage form.

#### **4.6.2 Inferential statistics**

As the researcher wanted to determine the manner in which variables were related to one another and whether there was any difference between two or more groups, inferential statistics were used. These allowed the researcher to make inferences from the sample to the population (Maree, 2010: 217). The inferential statistics used included cross-tabulations, bivariate correlation analysis, regression analysis, and ANOVA, as explained below.

##### **4.6.2.1 Cross-tabulation**

The use of cross-tabulation allows for the examination of observations that belong to specific categories on more than one variable (Maree, 2010: 217). Cross-tabulation is a combination of two (or more) frequency tables, arranged in a manner where each cell represents a unique combination of specific values of cross-tabulated variables. By examining these frequencies, relationships in this study were identified between biographic cross-tabulated indices (respondent's university where they work) versus questions 66, 67, 68, 69, 70, 71, 72, 73, 74, and 75, all from section D of the questionnaire.

##### **4.6.2.1.1 Bivariate correlation analysis and hypotheses tests: P-values and statistical significance**

The significance of testing or statistical hypothesis testing is confirmed by Malhotra and Birks (2011: 467), who state a central application in the social sciences of statistical theory is made around sampling distributions. Malhotra and Birks (2011) state that the p-values are generated from a test statistic and a significant result is indicated with " $p < 0.05$ ". The choice of the value 0.05 as the level of significance is

totally arbitrary, but is a standard in statistics. Hypothesis testing is normally applied to nominal, ordinal and interval questions in the form of statistical tests. The null hypothesis states there is no association between the two. The alternate hypothesis indicates that there is an association. In Chapter 6, results of the hypothesis tests are represented. To test correlations of the variables between the IRS and attitude of academics towards research engagement, the study developed the following hypotheses:

- Ha 1.1 IRS allowing for research engagement has a correlation with the attitude of academics towards research engagement
- Ha 1.2 IRS promoting global research recognised by accountancy bodies has a correlation with the attitude of academics towards research engagement
- Ha 1.3 IRS advancing accountancy research has a correlation with the attitude of academics towards research engagement
- Ha 1.4 IRS delivering innovative research to industry has a correlation with the attitude of academics towards research engagement
- Ha 1.5 IRS delivering innovative solutions to community has a correlation with the attitude of academics towards research engagement
- Ha 1.6 IRS building financial strength for the department has a correlation with the attitude of academics towards research engagement
- Ha 1.7 IRS promoting high-quality research has a correlation with the attitude of academics towards research engagement
- Ha 1.8 IRS exposing accountancy academics to global research level has a correlation with the attitude of academics towards research engagement
- Ha 1.9 IRS providing continuous improvement to research staff has a correlation with the attitude of academics towards research engagement
- Ha 1.10 IRS nurturing postgraduates to be future researchers and innovation leaders has a correlation with the attitude of academics towards research engagement
- Ha 1.11 IRS attracting talents of researchers has a correlation with the attitude of academics towards research engagement
- Ha 1.12 IRS attracting workforce to work for accountancy departments has a correlation with the attitude of academics towards research engagement
- Ha 1.13 IRS promoting productive academic activities has a correlation with the attitude of academics towards research engagement

- Ha 1.14 IRS promoting unified and shared educational experiences has a correlation with the attitude of academics towards research engagement
- Ha 1.15 IRS increasing quality and extent of research collaboration has a correlation with the attitude of academics towards research engagement
- Ha 1.16 IRS enriching individual academics has a correlation with the attitude of academics towards research engagement
- Ha 1.17 IRS enabling research training has a correlation with the attitude of academics towards research engagement
- Ha 1.18 IRS potential to expose the department to global research infrastructure has a correlation with the attitude of academics towards research engagement
- Ha 1.19 IRS building research leadership within the department has a correlation with the attitude of academics towards research engagement.

#### **4.6.2.1.2 Regression analysis and structural model**

Regression analysis was conducted in this study to test the linear relationship between C45 (attitude of academics towards research engagement), which is the dependent variable, and the independent variables that are IRS statements: B14 to B32 (D'Urso, Massari and Santoro, 2011: 4153).

McHugh (2011) the statistical procedure was used to determine whether there are any significant differences between the means of the independent variables. Mhlongo (2014: 256) and McHugh (2011: 206) state the analysis of significant differences is conducted in two ways, as follows:

- When the p value is less than or equal to 0.05, there is a statistically significant relationship between two variables.
- When the p value is greater than 0.05, there is no statistical relationship between two variables.

The structural model is a multivariate statistical result that is obtained using structural relationships, applying a combination of factor analysis and multiple regression analysis techniques. It was used to analyse the structural relationship between measured variables and latent constructs.

## **4.7 ETHICAL CONCERNS**

In this study, ethical matters were addressed because the researcher was concerned with ethical considerations in order to recruit respondents, undertake measurements and publish the research. Due to the sensitivity of the research topic, the use of the letters of permission from the universities (DUT, MUT, UKZN, and UNIZULU) assisted with distribution of questionnaires and each accountancy academic staff member was presented with a letter of information and consent and given the choice to either participate in the study or not. Participants were further assured that responses would be treated with confidentiality and their personal identification would remain anonymous throughout the research process (Welman *et al.*, 2011: 61).

## **4.8 ETHICAL CLEARANCE**

The researcher drafted and sent a letter (Appendix 1), along with a letter from the Institutional Research Ethics Committee (IREC) of the Durban University of Technology (DUT) (Appendix 2), requesting permission to conduct a study regarding the effect of IRS on the attitudes of accountancy academics towards research engagement, in the form of a case study of HEIs in KZN. Permission letters (Appendices 4, 5, 6, and 7) were then obtained from DUT, MUT, UKZN, and UNIZULU. An ethical clearance number was also granted by the DUT IREC office (Appendix 8).

### **4.8.1 Letters of information and consent**

For the purposes of this study, a letter of information functioned as a disclosure statement, with a clear account of all the risks and benefits involved in participation in the study. A consent letter confirmed a prospective respondent's agreement to voluntarily participate in the study (Burns and Grove, 2009: 704). A consent letter was sent prior to conducting the pilot study and the main study. Letters of information and consent assisted the researcher to guarantee a standard of confidentiality agreement on information provided by participants, with participation in the study being voluntary and refusal to participate permitted. There was no compulsion on the respondents to answer any specific question that he/she did not want to answer.

### **4.8.2 Anonymity**

Anonymity for this study means respondents were assured their personal particulars would not be disclosed at any time to anyone reading the research reports. Prior to questionnaire distribution, all participants were requested to not make any reference

to colleagues or to their personal identity. Participants were assured that all information gathered was treated precisely and anonymity was maintained by de-identifying themselves and no names were mentioned. Online responses were printed and sealed, together with the hard copy questionnaire responses, in a separate envelope. This ensured no answered questionnaire could be seen or linked to any other questionnaire to maintain anonymity (Holland and Rees, 2010: 98).

#### **4.8.3 Confidentiality**

Confidentiality relates to management of private data and was essential in order to protect participants, especially with the disclosure of personal information as part of the research (Holland and Rees, 2010: 89). The online questionnaire was sent directly to respondents' email addresses, whereas the self-administered questionnaires were distributed privately to the individual's working offices. All respondents were reassured about the confidentiality of the information provided. The researcher was available for assistance and requested respondents not to discuss the content of the questionnaire with each other.

#### **4.8.4 Guidelines for data storage**

The primary data of the study will be stored according to DUT guidelines for research data storage.

### **4.9 CONCLUSION**

This chapter provided an overview of the census survey, as well as the cross-sectional and mixed research methods adopted for this study, while also addressing a number of issues related to the choice of research methodology. The data distribution and collection tools chosen consisted of a questionnaire, which was self-administered at DUT and administered online at MUT, UKZN, and UNIZULU. There were no interviews. Finally, the data analysis methods utilised were thematic analysis and SPSS analysis.

The next chapter will present and discuss the quantitative and qualitative results from the questionnaires.

## **CHAPTER FIVE: STATEMENT OF FINDINGS, ANALYSIS AND INTERPRETATION OF PRIMARY DATA**

### **5.1 INTRODUCTION**

This chapter presents the results and discusses the findings obtained from the questionnaires in this study. The questionnaire was the primary tool used to collect data and was distributed to academic staff at each of the public universities in the KZN province, namely, DUT, MUT, UKZN, and UNIZULU. Data collected from the responses were analysed with IBM SPSS (version 25.0). Descriptive statistics will be presented in the form of graphs, cross-tabulations and other figures, with inferential techniques used that included the use of correlations, regression, and ANOVA tests. The aim of this study was to identify the effect of IRS and factors effecting the IRS in KZN public universities. The objectives of the study were:

- To investigate effects of the existing IRS on the attitude of accountancy academic staff towards research engagement;
- To investigate factors affecting IRS at operational level in KZN public universities;
- To investigate the accountancy academic staff perceptions on the extent to which internal and external factors affect the IRS at an operational level in KZN public universities; and
- To propose a conceptual model for the effect of IRS on the attitude of accountancy academics towards research engagement.

### **5.2 THE RESEARCH INSTRUMENT**

The research instrument consisted of 78 items including three open-ended statements, with a level of measurement at a nominal or an ordinal level. The questionnaire was divided into four sections, which measured the following areas:

- A Biographical data
- B Effect of the existing IRS
- C Factors affecting IRS at an operational level in the accountancy departments
- D The extent to which the external and internal factors affect the IRS at an operational level

### 5.3 RESPONSE RATE

The response rate for accountancy academic staff from DUT, MUT, UKZN, and UNIZULU is illustrated below.

**Table 5-1: Response rate**

	Planned sample	Achieved sample	Achieved response rate
DUT	42	40	95%
MUT	8	8	100%
UKZN	37	27	73%
UNIZULU	11	7	64%
Overall response	98	82	84%

Table 5.1 shows that in total, 98 questionnaires were dispatched, with 16 questionnaires not returned, resulting in a final sample of 82. The researcher dispatched 42 questionnaires to DUT but only 40 (95 percent) were returned, eight to MUT with eight (100 percent) returned, 37 to UKZN with 27 (73 percent) returned and 11 to UNIZULU with seven (64 percent) returned. This yielded a total response rate of 84 percent. According to Babbie (2010: 259), an 80 percent response rate is desirable to claim representativeness of the research sample.

### 5.4 RELIABILITY TEST

Table 5.2 illustrates the Cronbach's Alpha score for the closed-ended statements in sections B, C and D.

**Table 5-2: Reliability test results**

	Section	N of items	Cronbach's Alpha
B	Effect of the existing IRS on the attitude of accountancy academic staff towards research engagement	19	0.917
C	Factors affecting IRS at an operational level	33	0.900
D	The extent to which the external and internal factors affect IRS at an operational level	10	0.954
		62	0.950

Statements from section A were less critical and, therefore, did not warrant further inter-item correlation testing (Babbie, 2010: 256). A reliability co-efficient of 0.70 or higher is considered as acceptable (Muijs, 2011: 221). Table 5.2 demonstrates an overall Cronbach's Alpha score of 0.950, which exceeds the recommended value of 0.70. This result indicates a high overall degree of acceptable, consistent scoring for this research. All three sections, such as the effect of the existing IRS, factors affecting

IRS and the extent, record 0,917, 0,900 and 0,954, respectively (Table 5.2), which values exceeded the 0.70 reliability threshold for exploratory research. The results indicate internal consistency and high correlation among most of the items in the questionnaire sections. The results also imply that carrying out the same survey on a larger sample is likely to yield similar results.

## 5.5 SECTION A: BIOGRAPHICAL INFORMATION

A personal profile of the respondents is provided in this section. This information was obtained from questions 1 to 13 of Section A of the questionnaire. Biographic information includes respondents' university at which they work, their gender, race, nationality, and age, along with their job title, work experience, job responsibility, and qualification, as well as profession, condition of employment, department, and committee in which they were serving.

### 5.5.1 Background of respondents

The background of the respondents covered in this section include the universities at which they were employed, their gender, race, nationality, and age, as well as job title, and work experience. The statistical analysis for these variables is presented in Appendix 9.

**Table 5-3: Respondents' background**

Statement	Frequency	Percent
<b>Universities at which the respondents were employed:</b>		
DUT	40	48.8%
MUT	8	9.8%
UKZN	27	32.9%
UNIZULU	7	8.5%
<b>Total</b>	<b>82</b>	<b>100%</b>
<b>Gender:</b>		
Male	40	48.8%
Female	42	51.2%
<b>Total</b>	<b>82</b>	<b>100%</b>
<b>Race:</b>		
Indian	34	41.5%
White	31	37.8%
Black	13	15.9%
Coloureds	4	4.9%
<b>Total</b>	<b>82</b>	<b>100%</b>

<b>Nationality:</b>		
South African	77	93.9%
Nigeria	2	2.4%
Zimbabwean	2	2.4%
Other	1	1.2%
<b>Total</b>	<b>82</b>	<b>100%</b>
<b>Age:</b>		
20-30	20	24.4%
31-40	26	31.7%
41-50	22	27%
51-60	12	15%
60+	2	2%
<b>Total</b>	<b>82</b>	<b>100%</b>
<b>Job title:</b>		
Assistant lecturer	3	3.7%
Junior lecturer	9	11%
Lecturer	56	68.3%
Senior lecturer	11	13.4%
Associate professor	1	1.2%
Other	2	2.4%
<b>Total</b>	<b>82</b>	<b>100%</b>
<b>Work experience:</b>		
0-5 years	19	23.2%
5-10 years	23	28%
10-15 years	13	15.9%
15-20	16	19.5%
>20 years	11	13.4%
<b>Total</b>	<b>82</b>	<b>100%</b>

UNIZULU and MUT are historically Black institutions that are experiencing numerous challenges related to staff capacity (UNIZULU, 2018; MUT, 2018). DUT and UKZN are, however, the result of a merger of institutions, each with a large number of Indians, Whites, and Coloureds, and a few Blacks (DUT, 2008: 19; UKZN, 2018). Table 5.3 shows that, of the 82 respondents, the majority of 40 (48.8 percent) were from DUT, 27 (32.9 percent) were from UKZN, eight (9.8 percent) were from MUT, and seven (8.5 percent) were from UNIZULU. The results affirm the expected response that DUT and UKZN have the largest number of accountancy academic staff members and MUT and UNIZULU have the smallest number.

According to CHE (2004: 62), prior to 1994, participation rates in SA higher education were highly skewed by gender towards men, with women not well represented. The report considered that pre-1994, most Black South Africans, including women, were excluded from higher education. Trinity College Dublin (2017: 1) noted an increase in the number of females in universities. As illustrated (Table 5.3), the findings of this study indicate more academic accountancy women in this study than men, with 42 (51.2 percent) women and 40 (48.8 percent) men. Therefore, the study is in line with Trinity College Dublin's findings that the number of women in universities is increasing.

In 2011, Black people comprised 81 percent of the total population in SA universities. Women's participation in higher education significantly increased to 62 percent in 2012 (CHE, 2013). However, the high rate of Black people in 2011 resulted in a decrease in White and Indian participation in higher education, at 57 percent and 47 percent, respectively. It has been also noted that employment at historically White institutions continue to reflect a lower proportion of Black academic representation, whereas historically Black institutions, on the other hand, remain almost exclusively Black academics (HESA, 2014: 2). Table 5.3 illustrates that, of the 82 respondents, the majority of 34 (41.5 percent) were Indian, 31 (37.8 percent) were Black, 13 (15.9 percent) were White, and four (4.9 percent) were Coloured. Where race is concerned, these results differ from those of CHE (2013), which reported the Black population to be the majority in SA universities. This study, however, reveals the Indian community as the majority, followed by the Black community, then Whites and, lastly, the Coloured community.

According to the Government gazette (2017: 20-21), the process of internationalisation of SA universities seeks to give priority to SA's wellbeing and thereafter, where possible and relevant, the following order of priority should be adhered to: the interests of SADC states; followed by the rest of the African continent; after this the global South and emerging economies, and then the world beyond. Table 5.3 demonstrates that, of the 82 respondents, the majority of 77 (93.9 percent) are SA citizens, two (2.4 percent) are Nigerians, two (2.4 percent) are Zimbabweans, and one (1.2%) was indicated as other nationalities.

Mapesela and Strydom (2005, as cited by Ngibe, 2015: 12-13), indicate the biggest challenge facing SA public universities is the large number of experienced and older

academic staff retiring and nearing their retirement ages. The illustrated findings (Table 6.3) show that, of the 82 respondents, two (2 percent) were 61 years of age or above, and the largest number of 26 (31.7 percent) were between the ages of 31-40 years. However, there is a commendable spread of 22 (27 percent), 20 (24.4 percent), and 12 (15 percent) of newer and older accountancy academic staff, who were between the ages of 41-50, 20-30, and 51-60 years, respectively (Figure 5.3). The results of this study confirm the results of Mapesela and Strydom (2005, as cited by Ngibe, 2015: 12-13) that most (56 percent) of the respondents were between the ages of 20-40 years, which shows that KZN public universities have invested in the youth to reboot research.

Adeagbo (2016) found that in 2016, 80 percent of professors in SA were White, five percent were Indian, 4.5 percent were Coloured, and three percent were Black. The findings reveal that, of the 82 respondents, there was only one (1.2 percent) associate professor, the majority of 56 (68.3 percent) were lecturers, 11 (13.4 percent) were senior lecturers, nine (11 percent) were junior lecturers, three (3.7 percent) were assistant lecturers, and two (2.4 percent) were employed to do other work (Table 5.3). These results reveal the majority of respondents were appointed in lecturer positions, with the second largest group being senior lecturers. Professors, on the other hand, were not represented.

Rosentreter (2012: iii) stresses the need to have experienced academics in the field of accountancy, while Wilcocks (2005) observes that students supervised by an experienced lecturer are more likely to succeed in research. Table 5.3 shows that, of the 82 respondents, the majority of 23 (28 percent) had between 5-10 years of experience, 19 (23.2 percent) had between 0-5 years of experience, 16 (19.5 percent) had between 15-20 years of experience, 13 (15.9 percent) had between 10-15 years of experience, and 11 (13.4 percent) had 20 and more years of experience. These results are in line with those of Rosentreter (2012: iii), who stresses the need for academic staff to have experience.

### **5.5.2 Departmental responsibilities of respondents**

The departmental responsibility of respondents included their teaching loads, teaching, and supervision of post-graduate students, as well as research, and other responsibilities. The statistical analysis for these variables is presented in Appendix 9.

**Table 5-4: Departmental responsibility of the respondents**

Statement	Frequency	Percent
<b>Departmental responsibility</b>		
Not lecturing	4	4.9%
Teaching/lecturing	78	95.1%
<b>Supervision of post-graduate students</b>	19	23.2%
Not supervising	63	76.8%
<b>Research</b>	35	42.7%
Not researching	47	57.3%
Other responsibilities	37	45.1%

Pop-Vasileva *et al.* (2013: 1) mention teaching as one of the key functions of academic staff. Mohamed (2014: iv) found that academic staff spend almost 80 percent of their working time in teaching. The results (Table 5.4) show that, of the 82 respondents, 78 (95.1 percent) indicated they were involved in teaching and four (4.9 percent) indicated they were not involved in teaching. The study results are in line with findings by Pop-Vasileva *et al.* (2013: 1), who mention teaching as the most common duty of academic staff.

As pointed out by authors, such as Rosentreter (2012: 77) and Nieuwoudt and Wilcocks (2005), academic staff members have a duty to supervise bachelor, master's and PhD students. The results (Table 5.4) demonstrate that, of the 82 respondents, 19 (23.2 percent) were involved in post-graduate supervision, however, the majority of 63 (76.8 percent) indicated they were not involved in supervision at all. The results suggest research is not taken as seriously as teaching is.

Academic workload includes a wide range of duties, one of which is research (Kumar and Eyono Obono, 2013: 34). Mohamed (2014: iv) found that academic staff spend approximately two percent of their time on research. The results (Table 5.4) reveal that, of the 82 respondents, 35 (42.7 percent) indicated they were involved in research, however, the majority of 47 (57.3 percent) indicated they were not involved in research.

Mohamed (2014: iv) reports that academic staff are involved in other academic work, such as but not limited to staff meetings, curriculum renewals, test invigilation, and administration. Table 5.4 reveals that, of the 82 respondents, 37 (45.1 percent)

indicated they were involved in other academic duties, with the majority of 45 (54.9 percent) indicating they were not involved.

### 5.5.3 Levels of education of the respondents

The levels of respondents' education included their university qualifications and professional qualifications from professional bodies. The statistical analysis for these variables is presented in Appendix 9.

**Table 5-5: Levels of education of the respondents**

<b>Stamen</b>	<b>Frequency</b>	<b>Percent</b>
<b>Qualification:</b>		
Lower than a maters' degree	49	59.8%
Masters' degree	27	32.9%
Doctorate	6	7.3%
<b>Total</b>	<b>82</b>	<b>100%</b>
<b>Professional membership:</b>		
SAICA members	25	30.5%
Not SAICA members	57	69.5%
SAIPA members	8	9.8%
Not SAIPA members	74	90.2%
CIMA members	3	3.7%
Not CIMA members	79	96.3%
IRBA members	1	1.2%
Not IRBA members	81	98.8%
SAAA members	13	15.9%
Not SAAA members	69	84.1%
Other professional bodies	9	11.0%
Not in other professional bodies	73	89.0%

The issue of under qualified staff members is one of the most prominent challenges facing previously disadvantaged public universities (Lubbe, 2013: 111; Nieuwoudt and Wilcocks, 2005). This issue leads to poor IRS operation. Table 5.5 reveals that, of the 82 respondents, the majority of 49 (59.8 percent) had lower than a master's degree

qualification, 27 (32.9 percent) had a master's degree qualification, and six (7.3 percent) had a doctoral degree qualification.

SAICA members are permitted to work as academics in universities (Nowican, 2018) and their appointment procedure does not insist on research-based qualifications such as master's and doctoral degrees (ICAA, 2011; Irefin and Ali Mechanic, 2014: 33). Table 6.6 illustrates that, of the 82 respondents, 25 (30.5 percent) were SAICA qualified members, while the majority of 57 (69.5 percent) were not. The representation of SAICA qualified members in universities concurs with Nowican's (2018) findings that SAICA graduates are permitted to work as academics, even when they do not have post-graduate qualifications, such as master's and doctoral degrees. SAIPA is commercially based rather than academic (Devi, 2013; Sambumbu, 2013: 47; Albu and Toader, 2012: 163).

The results reflect that, of the 82 respondents, only eight (9.8 percent) were SAIPA qualified members and the majority of 74 (90.2 percent) were not (Table 6.4). The lower representation of SAIPA qualified members in universities confirms that SAIPA graduates are mostly employed to serve industries, rather than universities. As a result, SAIPA members are less represented in KZN public institutions of higher education.

CIMA qualified members have a combination of financial expertise and business wisdom and their skills are in great demand in the fast changing and complex business world (CIMA, 2018). The results show that, of the 82 respondents, only three (3.7 percent) were CIMA qualified members, with the majority of 79 (96.3 percent) were not CIMA qualified (Table 5.5). The results confirm that CIMA members are more frequently employed by industries, as opposed to being employed by universities for academic posts. As a result, CIMA graduates are less represented in KZN public universities. IRBA members are commercially trained rather than academically and, for that reason, IRBA does not make claims that its members are suitable to work as academics in universities (Devi, 2013; Sambumbu, 2013: 47; Albu and Toader, 2012: 163).

The results demonstrate that, of the 82 respondents, only one (1.2 percent) was an IRBA qualified member, while the majority of 81 (98.8 percent) were not (Table 5.5). The results confirm IRBA members are more trained for corporate industry rather than

to be academics. As a result, IRBA members are less represented in KZN public universities.

SAAA seeks to bridge the gap between academia and industry by supporting accountancy academics from Southern African universities, to meet the demand for quality accountancy education and research (SAAA, 2016). Table 5.5 demonstrates that, of 82 respondents, only 13 (15.9 percent) were SAAA members, while the majority of 69 (84.1 percent) were not. The results suggest the extent of poor research culture in the accountancy academic departments in KZN public in.

A dominant influence of the professional aspects of accountancy in the universities can be attributed to students' desire to receive not just a degree, but a degree recognised by the professional bodies of accountancy (Marx and van der Watt, 2013: 67; Uche, 2007; Lubbe, 2013: 111). Table 5.5 illustrates that, of 82 respondents, 38 (46.3 percent) were not members of any accountancy profession and 44 (53.7 percent) indicated they were members of a professional body. The results confirm that universities are controlled by accountancy professions and, as a result, many academics see it as useful to be members of one of the professional bodies. There are many professional accountancy bodies in the world and people have a choice to choose the one best suited to their expectations (Nowican, 2018).

Table 5.5 shows that, of 82 respondents, nine (11 percent) were members of other, unclassified accountancy professions and 73 (89 percent) indicated they were not members of such bodies. The results confirm that besides the well-known professional bodies, many other professional accountancy bodies exist in the world, which they can subscribe to as members.

#### 5.5.4 Respondents' departments and conditions of employment

This section seeks to cover respondents' departments and conditions of employment with the universities in which they work. The statistical analysis for these variables is presented in Appendix 9.

**Table 5-6: Respondents departments and conditions of employment**

Statement	Frequency	Percent
<b>Respondents' conditions of employment:</b>		
Permanent staff	64	78.0%
Contract staff	17	20.7%

Probation staff	1	1.2%
<b>Total</b>	<b>82</b>	<b>100%</b>
<b>Departments in which respondents work:</b>		
Financial accounting	30	36.6%
Management accounting	24	29.3%
Taxation	9	11.0%
Auditing	17	23.2%
<b>Total</b>	<b>82</b>	<b>100%</b>

According to Mehmood *et al.* (2012: 15), the nature of an employment contract has an effect on staff performance. For example, Wandera (2011: 184) discovered that permanent employment leads to high staff morale and high performance. Table 5.6 reveals that, of 82 respondents, the majority of 64 (78 percent) were on a fixed or permanent employment contract, 17 (20.7 percent) were on a temporary employment contract, and one (1.2 percent) was on a probation period, heading towards a permanent contract.

Lastly, Table 5.6 reveals that, of 82 respondents, the majority of 30 (36.6 percent) were employed in the financial accounting department, 24 (29.3 percent) were employed in the management accounting department, with 19 (23.2 percent) employed in the auditing department, and nine (11 percent) were employed in the taxation department. The results reveal the school of financial accounting is the largest department, when compared to other departments of accountancy.

### 5.5.5 Committees in which respondents were members

Respondents indicated they were members in committees such as: their respective faculty, EXCO, council, senate, while others were not research committee members. The statistical analysis for these variables is presented in Appendix 9.

**Table 5-7: Committees in which respondents were members**

<b>Statement</b>	<b>Frequency</b>	<b>Percent</b>
<b>Committees:</b>		
Faculty members	60	73.2%
Not faculty members	22	26.8%
EXCO members	3	3.7%
Not EXCO members	79	96.3%

Council members	1	1.2%
not council members	81	98.8%
Senate members	8	9.8%
Not senate members	74	90.2%
None research committee members	10	12.2%

Kezar and Maxey (2015: 5) reveal the importance of faculties includes the encouragement of academic staff members to achieve quality teaching, research, and improve staff connections, not only to the academic community within the university but also to other scholars in their disciplines in the world. It was, therefore, important to also examine this variable. Regarding respondents' answers on whether they are faculty members, Table 5.7 reveals that, of 82 respondents, 60 (73.2 percent) indicated they were faculty members and 22 (26.8 percent) indicated they were not. In summary, the results show that those who are not faculty members, may resist decisions made in the faculty meetings, leading to IRS failure.

According to the University Council (2005) and Olum (2014: 14), EXCO is made up of a few members, depending on the structure of the university designed by its council members. Table 5.7 shows that, of 82 respondents, only three (3.7 percent) were members of EXCO and the majority of 79 (96.3 percent) were not EXCO members at all. The results validate that EXCO is made up of a limited number of members.

According to Ofori and Atiogbe (2012: 71) and Toolsee (2011: 51), council is responsible for ensuring IRS policies are adhered to, in order to achieve value for money by focusing on research efficiency and effectiveness. It is the council's responsibility to ensure the university has established appropriate IRS policies and procedures that will address the needs of the community at large. Table 5.7 shows that, of 82 respondents, only one (1.2 percent) was a council member and the majority of 81 (98.8 percent) were not.

Senate is another governance wing of the university, which according to Olum (2014: 14), DUT (2017: 3) and UNISA (2017), must report to the council for academic and IRS operations of the university, including quality assurance. Table 5.7 shows that, of 82 respondents, only eight (9.8 percent) were senate members and the majority of 74

(90.2 percent) were not. The results indicate that only a few accountancy academics participate in the senate.

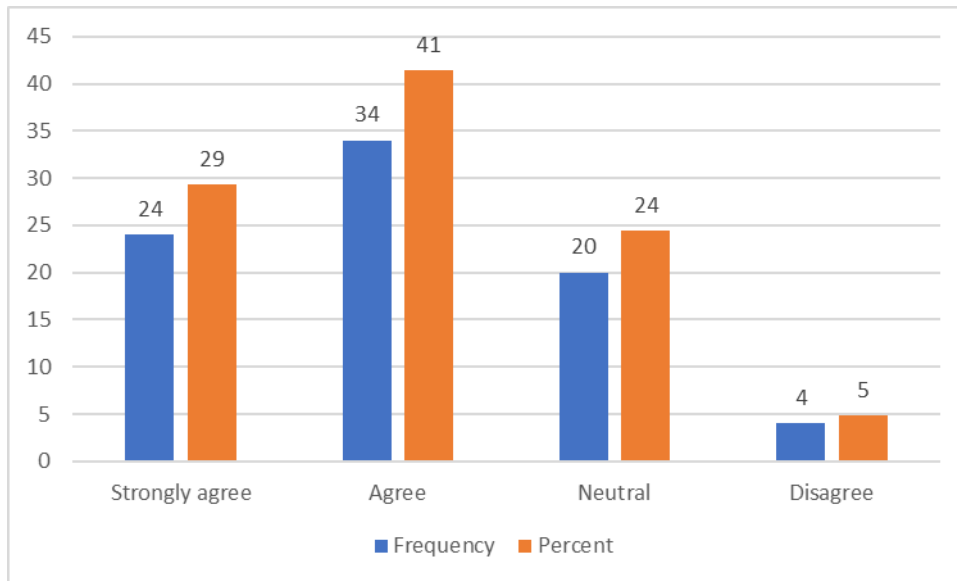
Mutula (2011) and Mohamed (2014: iv) share the view that there is no policy in place at public universities that binds academic staff to participate and serve as members in research committees. Table 5.7 shows that, of 82 respondents, 10 (12.2 percent) were not committee members. The results confirm that some academic staff still enjoy freedom of choice to either serve in the research committees or not.

## **5.6 OBJECTIVE 1: INVESTIGATE EFFECTS OF THE IRS ON THE ATTITUDE OF ACADEMIC ACCOUNTANCY STAFF TOWARDS RESEARCH ENGAGEMENT**

Objective 1 of the study sought to investigate the effect of the existing IRS on the attitude of academic accountancy staff towards research engagement in KZN public universities. The relevant questions of this objective were contained in section B of the questionnaire. This section intends to discuss the findings, with regards to the above objective, based on questions 14 to 32. The statistical information presented for these questions were obtained from 82 questionnaires completed by academic accountancy staff. The questions were formulated using a 5-point Likert scale, with 1 to 5 representing the following responses: 1 = Strongly Agree, 2 = Agree, 3 = Neutral 4 = Disagree, 5 = Strongly Disagree.

### **5.6.1 IRS allows staff to engage in research**

The respondents, when asked whether IRS allows staff to engage in research, a significant percentage of the respondents showed a similar response (Figure 5.1).

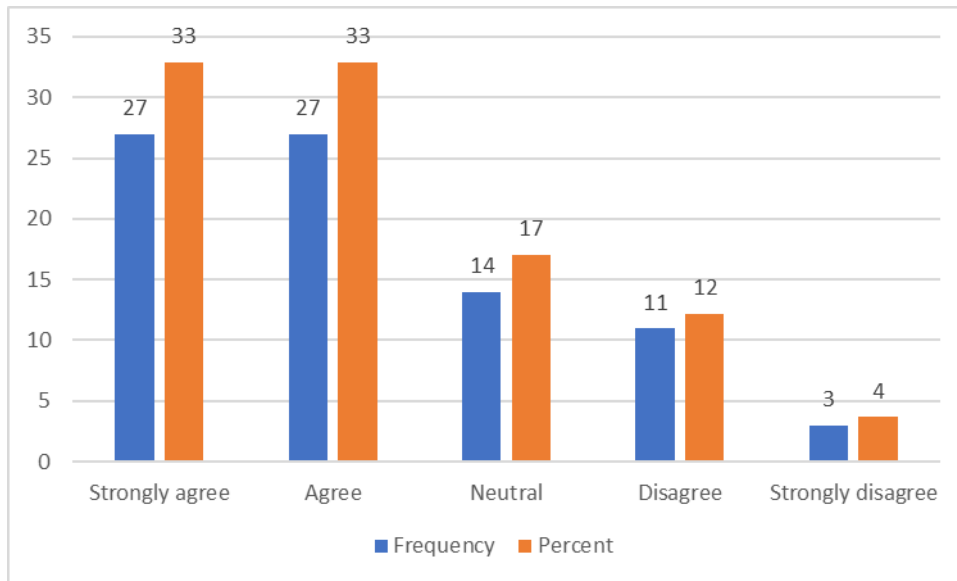


**Figure 5-1: IRS allows staff to engage in research**

As shown (Figure 5.1), the findings illustrate that most respondents, 34 (41 percent) and 24 (29 percent) agreed and strongly agreed with the statement that IRS allows staff to engage in research. However, 20 (24 percent) of the respondents remained neutral in response to the statement. The number of respondents who strongly disagreed and disagreed that IRS allows staff to engage in research were none and four (five percent) respectively. According to the UJ (2016: 8) and Mbaka and Mugambi (2014: 63), the operation and failure of research is dependent on the IRS's ability to allow for staff to engage in research activities.

### **5.6.2 IRS promotes global research recognised by accountancy bodies**

The respondents, when asked whether IRS promotes global research recognised by accountancy bodies, indicated a significant percentage with a similar response (Figure 5.2).

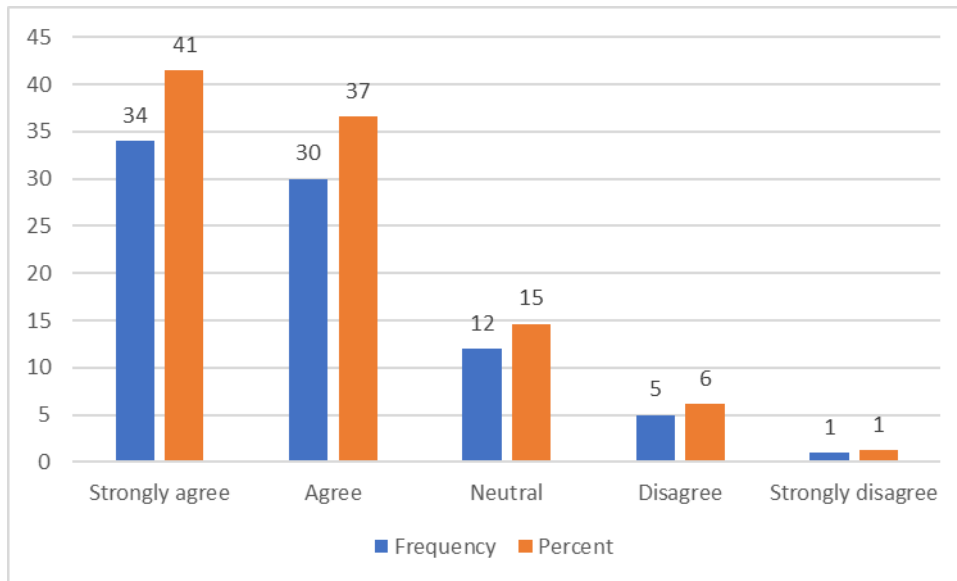


**Figure 5-2: IRS promotes a global research that is recognised by accountancy bodies**

As shown in Figure 5.2, the findings show that 27 (33 percent) and 27 (33 percent) of the respondents strongly agreed and agreed with the statement that IRS promotes global research recognised by accountancy bodies. However, 14 (17 percent) of the respondents remained neutral to the statement. The number of respondents who disagreed and strongly disagreed that IRS promotes a global research recognised by accountancy bodies were 11 (12 percent) and three (four percent), respectively. Likewise, the Centre for Leadership in Research Development (2012: 2-3) and Todtling (2014) report that the universities, especially those from previously disadvantaged backgrounds, lack innovation and global exposure.

### **5.6.3 IRS advances accountancy education**

Of the respondents, when asked whether IRS advances accountancy education, a significant percentage showed a similar response (Figure 5.3).

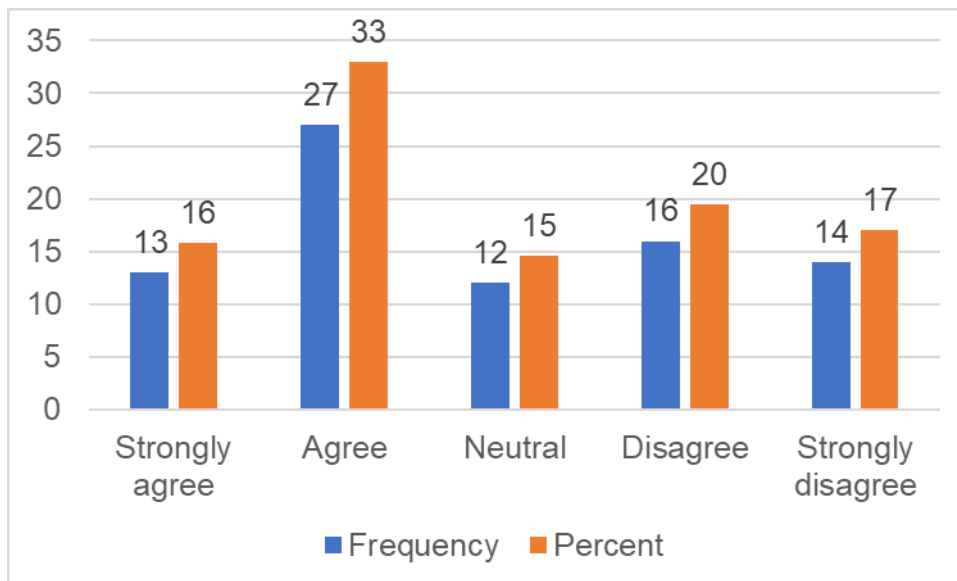


**Figure 5-3: IRS advances accountancy education**

The findings show that 34 (41 percent) and 30 (37 percent) of the respondents strongly agreed and agreed with the statement that IRS advances accountancy education. However, 12 (15 percent) of the respondents remained neutral to the statement. The number of respondents who disagreed and strongly disagreed that IRS advances accountancy education were five (six percent) and one (one percent) respectively (Figure 6.3). Authors such as Mbaka and Mugambi (2014: 63), Government gazette (2017: 20) and Centre for Leadership in Research Development (2012: 2-3) show that the task of IRS is to enhance education through research and collaboration.

#### **5.6.4 IRS delivers innovative solutions to partners in industry**

When asked whether IRS delivers innovative solutions to partners in industry, a significant percentage of the respondents showed a similar response (Figure 5.4).

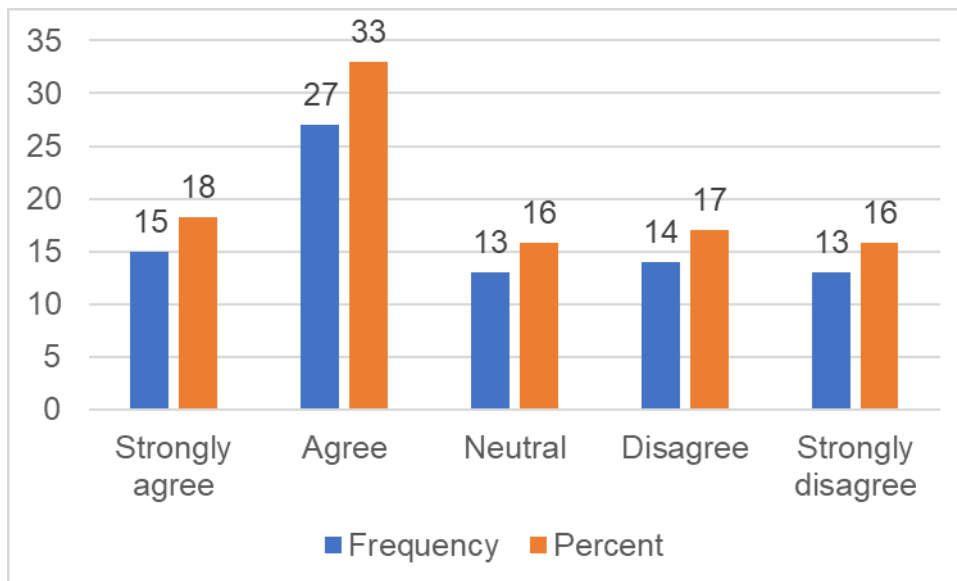


**Figure 5-4: IRS delivers innovative solutions to our partners in industry**

The findings show that 27 (33 percent) and 13 (16 percent) of the respondents strongly agreed and agreed with the statement that IRS delivers innovative solutions to their partners in industry. However, 12 (15 percent) of the respondents remained neutral to the statement. The number of respondents who disagreed and strongly disagreed were 16 (20 percent) and 14 (17 percent), respectively (Figure 5.4). According to Lubbe (2013: 111), IRS is important for industries because its intended purpose is not to change accountancy principles, but to improve understanding and promote accuracy in accounting application.

#### **5.6.5 IRS delivers innovative solutions to the wider community**

When asked whether IRS delivers innovative solutions to the wider community, a significant percentage of the respondents showed a similar response (Figure 5.5).

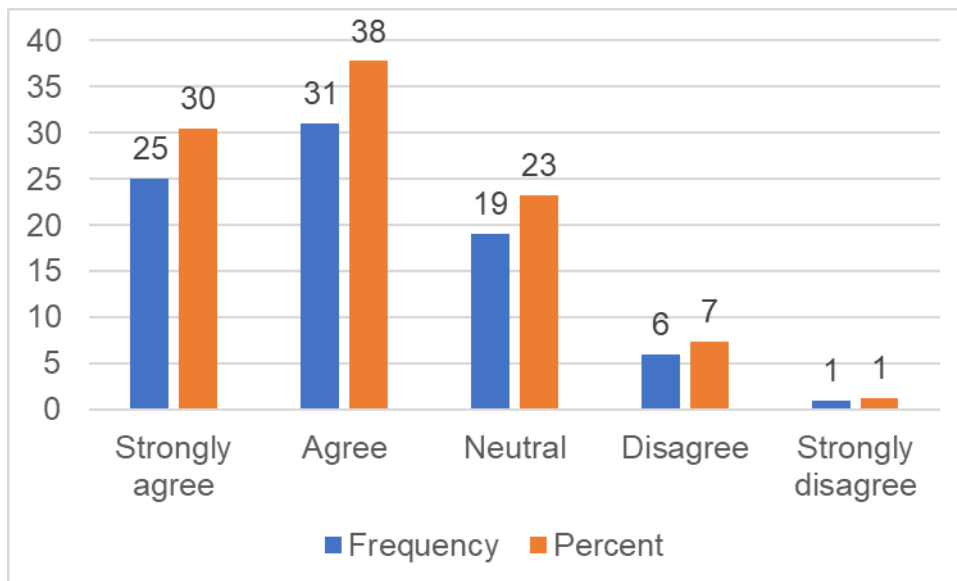


**Figure 5-5: IRS delivers innovative solutions to our partners in the wider community**

Figure 5.5 demonstrates that 27 (33 percent) and 15 (18 percent) of the respondents strongly agreed and agreed with the statement that IRS delivers innovative solutions to the wider community. However, 13 (16 percent) of respondents remained neutral to the statement. The number of respondents who disagreed and strongly disagreed were 14 (17 percent) and 13 (16 percent), respectively. Deegan and Unerman (2006: 4) assert that research is important to address socio-economic challenges.

#### **5.6.6 IRS builds the financial strength of my department**

When asked whether 'IRS builds the financial strength of my department', a significant percentage of the respondents showed a similar response (Figure 5.6).

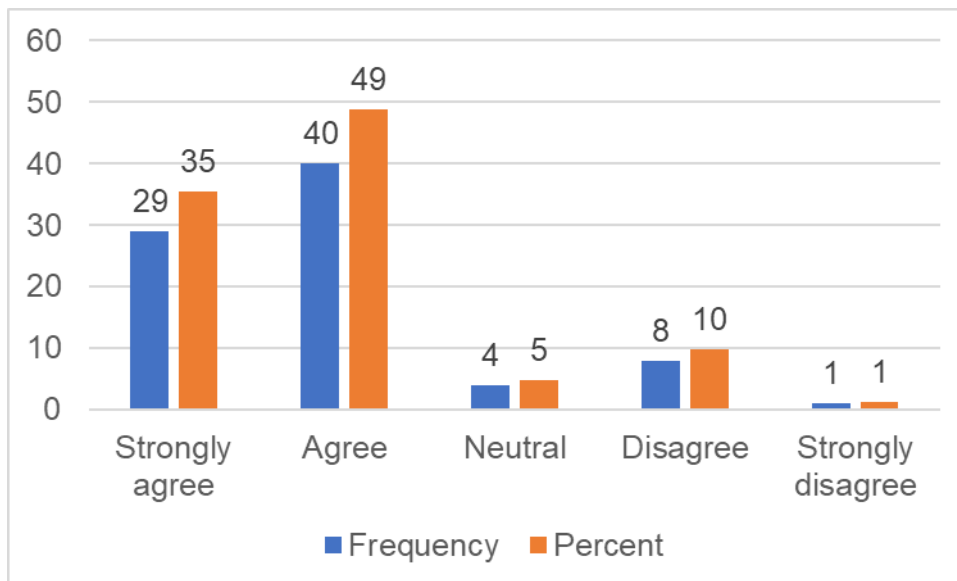


**Figure 5-6: IRS builds the financial strength of my department**

There were 31 (38 percent) and 25 (30 percent) of respondents who strongly agreed and agreed with the statement that IRS builds financial strength of their department. However, 19 (23 percent) of the respondents remained neutral to the statement. The number of respondents who disagreed and strongly disagreed were six (seven percent) and one (one percent), respectively (Figure 5.6). According to Oxford University (2017) and Ofori and Atiogbe (2012: 68), IRS must be able to generate sufficient financial muscle to sustain the university's research infrastructure and research activities.

#### **5.6.7 IRS promotes a departmental culture that recognises and supports development of the widest possible range of high-quality research**

When asked whether IRS promotes a departmental culture that recognises and supports development of the widest possible range of high-quality research, a significant percentage of the respondents showed a similar response, as shown in Figure 5.7.

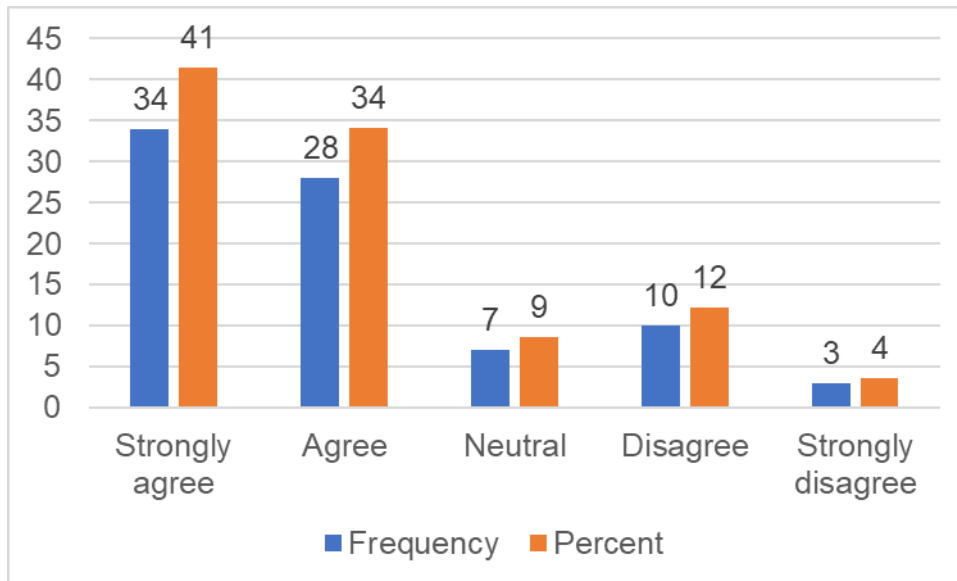


**Figure 5-7: IRS promotes a departmental culture that recognises and supports the development of the widest possible range of high-quality research**

As illustrated in Figure 5.7, 40 (49 percent) and 29 (35 percent) of the respondents strongly agreed and agreed with the statement that IRS promotes a departmental culture that recognises and supports the development of the widest possible range of high-quality research. However, four (five percent) of the respondents remained neutral to the statement. The number of respondents who disagreed and strongly disagreed were eight (ten percent) and one (one percent), respectively. According to authors (Kumar and Eyono Obono, 2013: 34; James and Guthrie, 2011; Mainoma and Aruwa, 2008: 1), IRS is central to promoting a research culture that seeks to achieve a commendable synergy of research outputs.

#### **5.6.8 IRS helps accountancy academics to establish themselves as key partners of choice for research collaborations at a global level**

When asked whether IRS helps accountancy academics to establish themselves as key partners of choice for research collaborations at a global level, a significant percentage of the respondents showed a similar response, as shown in Figure 5.8.

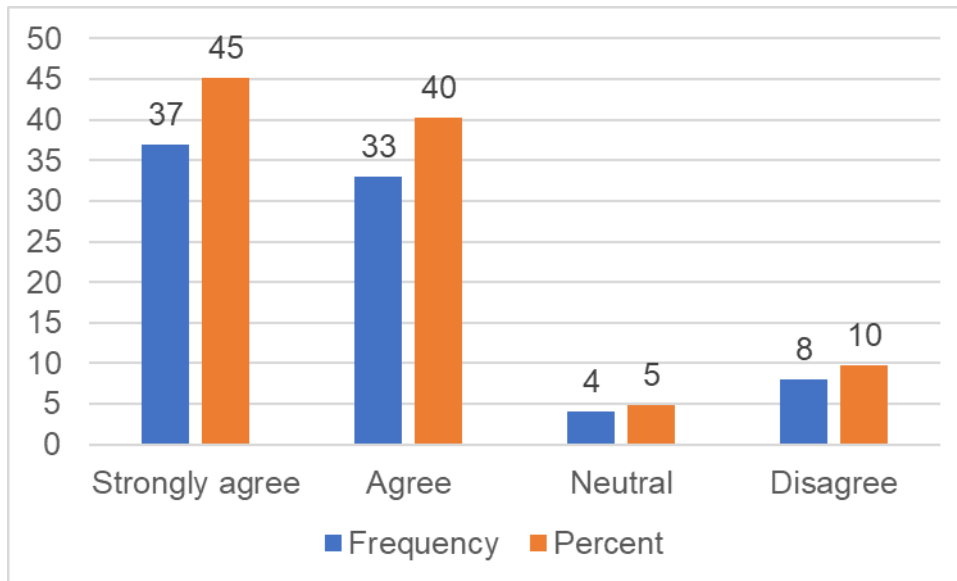


**Figure 5-8: IRS helps accountancy academics to establish themselves as key partners of choice for research collaborations at a global level**

As shown in Figure 5.8, 34 (41 percent) and 28 (34 percent) of respondents strongly agreed and agreed with the statement that IRS helps accountancy academics to establish themselves as key partners of choice for research collaborations at a global level. However, seven (nine percent) of the respondents remained neutral to the statement. The number of respondents who disagreed and strongly disagreed were ten (12 percent) and three (four percent) respectively. Randall *et al.* (2014: 149) state that IRS is a gateway for researchers to academic collaborations.

#### **5.6.9 IRS provides for a continuous improvement of staff research profile**

When asked whether IRS provides for a continuous improvement of staff research profile, a significant percentage of the respondents showed a similar response, as shown in Figure 5.9.

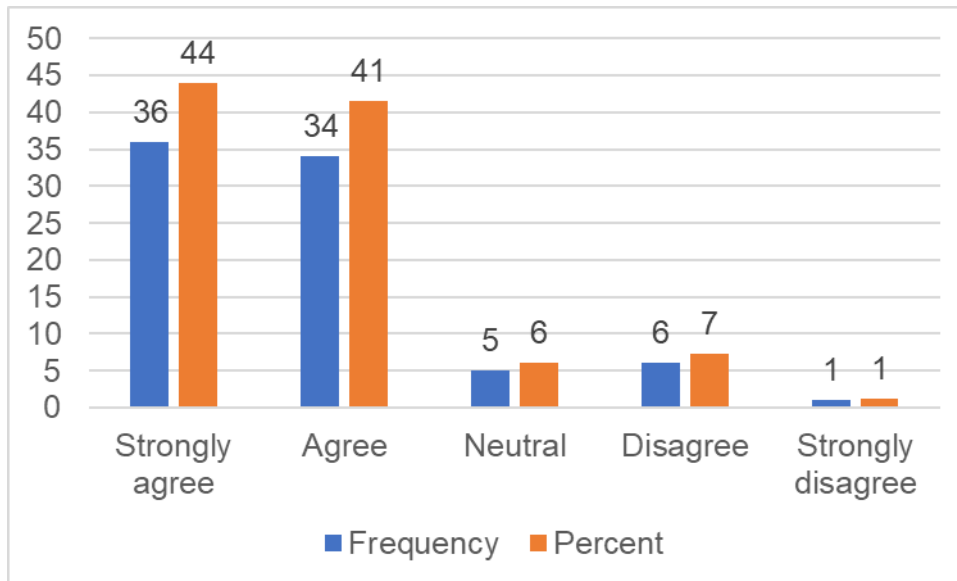


**Figure 5-9: IRS provides for a continuous improvement of staff research profile**

As presented in Figure 5.9, 37 (45 percent) and 33 (40 percent) of the respondents strongly agreed and agreed with the statement that IRS provides for a continuous improvement of staff research profile. However, four (five percent) of the respondents remained neutral to the statement. The number of respondents who disagreed were eight (ten percent). Gopalkrishna (2010) and UNISA (2017) share the view that IRS empowers the creative autonomy of individuals so that they can find spaces to lead the global research agenda across the world.

#### **5.6.10 IRS nurtures postgraduate researchers to become the next generation of accountancy research and innovation leaders**

When asked whether IRS nurtures postgraduate researchers to become the next generation of accountancy research and innovation leaders, a significant percentage of the respondents showed a similar response, as shown in Figure 5.10.

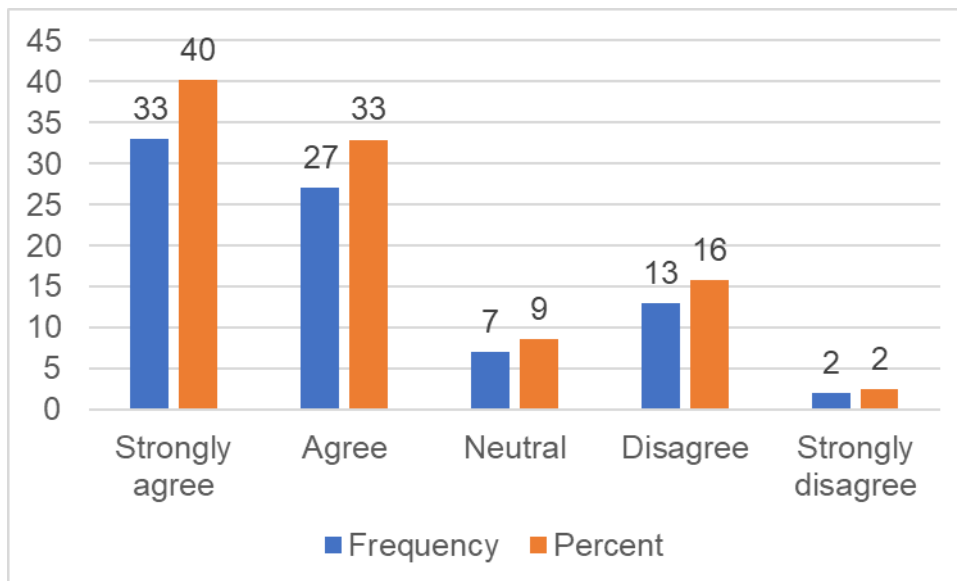


**Figure 5-10: IRS nurtures postgraduate researchers to become the next generation of accountancy research and innovation leaders**

Figure 5.10 shows that 36 (44 percent) and 34 (41 percent) of the respondents strongly agreed and agreed with the statement that IRS nurtures postgraduate researchers to become the next generation of accountancy research and innovation leaders. However, five (six percent) of the respondents remained neutral to the statement. The number of respondents who disagreed and strongly disagreed were six (seven percent) and one (one percent) respectively. The UJ (2016: 8) and Toolsee (2011: 49-51) write that IRS investment includes nurturing and grooming postgraduate students to become the next generation of research and innovation leaders.

#### **5.6.11 IRS attracts talented workforce to service the department**

When asked whether IRS attracts talented workforce to service the department, a significant percentage of the respondents showed a similar response, as shown in Figure 5.11.

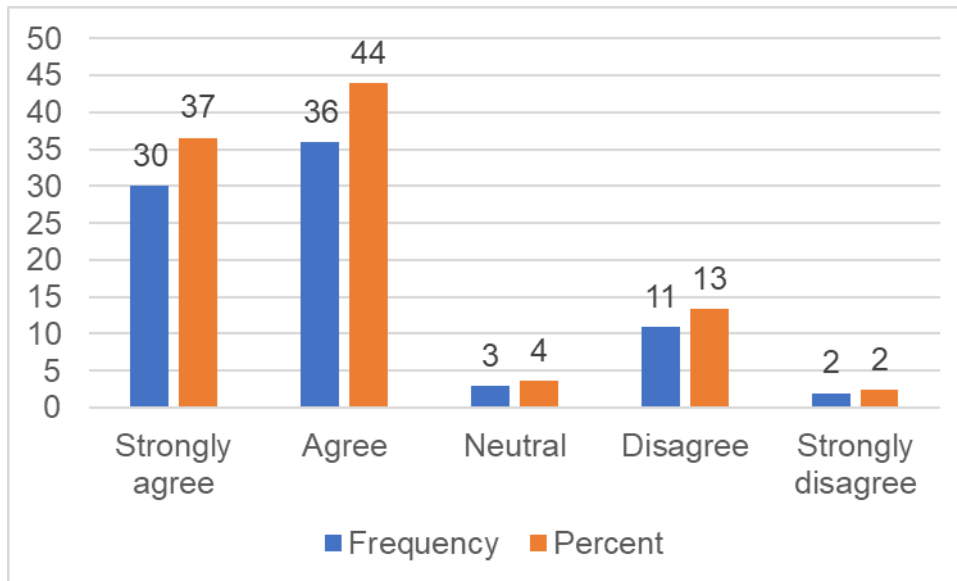


**Figure 5-11: IRS attracts talented workforce to service the department**

Figure 5.11 demonstrates that 33 (40 percent) and 27 (33 percent) of the respondents strongly agreed and agreed with the statement that IRS attracts a talented workforce to service the department. However, seven (nine percent) of the respondents remained neutral to the statement. The number of respondents who disagreed and strongly disagreed that IRS attracts a talented workforce to service the department were 13 (16 percent) and two (two percent) respectively. Therefore, the results reveal that IRS is able to embrace talents of every staff member according to their skills. The Centre for Leadership in Research Development (2012: 2-3) states that IRS seeks to attract talented and highly qualified people, “the best and brightest” to SA universities to enhance their human capital.

#### **5.6.12 IRS attracts a diverse workforce to service the department**

The respondents, when asked whether IRS attracts a diverse workforce to service the department, a significant percentage of the respondents showed a similar response, as shown in Figure 5.12.

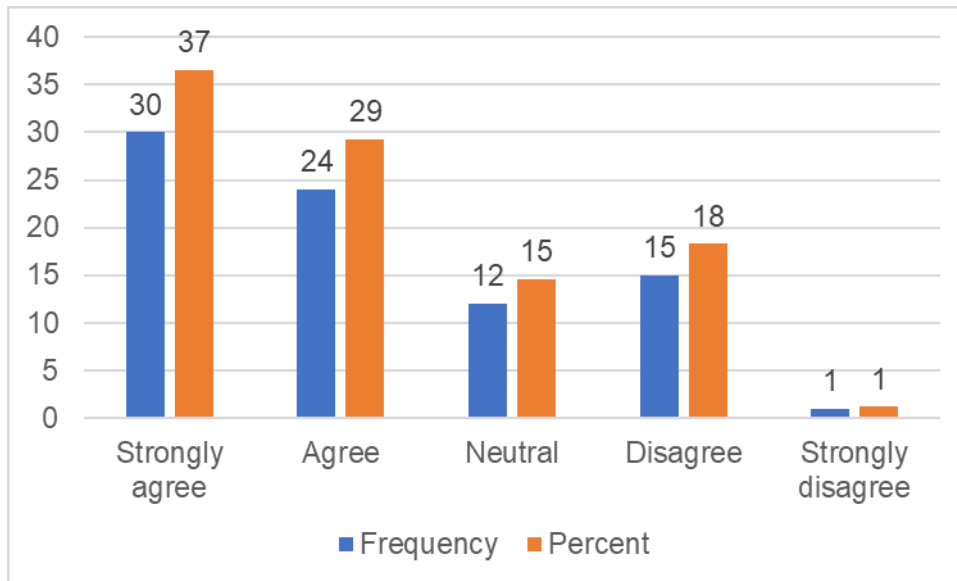


**Figure 5-12: IRS attracts a diverse workforce to service the department**

As demonstrated in Figure 5.12, a total of 36 (44 percent) and 30 (37 percent) of the respondents agreed and strongly agreed with the statement that, IRS attracts a diverse workforce to service the department. However, three (four percent) of the respondents remained neutral to the statement. The number of respondents who disagreed and strongly disagreed were 11 (13 percent) and two (two percent) respectively. Therefore, the results reveal that IRS is able to attract and draw together a diverse workforce with the aim of achieving scholarly efficiency. The Centre for Leadership in Research Development (2012: 2-3) is of the view that IRS seeks to promote international research collaborations.

#### **5.6.13 IRS helps my department to be productive in its core academic activities**

When asked whether 'IRS helps my department to be productive in its core academic activities', a significant percentage of the respondents showed a similar response, as shown in Figure 5.13.

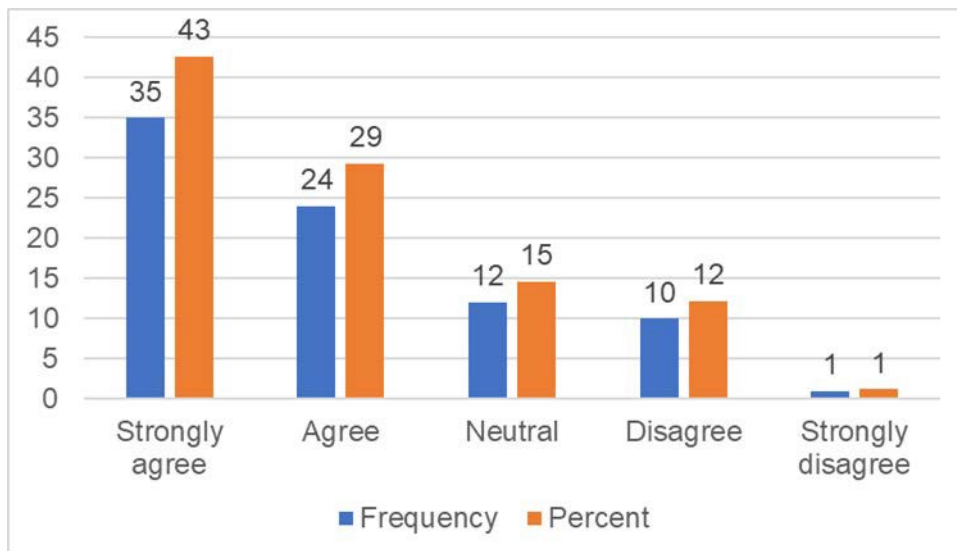


**Figure 5-13: IRS helps my department to be productive in its core academic activities**

Figure 5.13 shows that 30 (37 percent) and 24 (29 percent) of the respondents strongly agreed and agreed with the statement that IRS helps their department to be productive in its core academic activities. However, 12 (15 percent) of the respondents remained neutral to the statement. The number of respondents who disagreed and strongly disagreed were 15 (18 percent) and one (one percent) respectively. Therefore, the results concur that IRS is important for the accountancy academic departments to be productive in their core academic activities. James and Guthrie (2011) and Mainoma and Aruwa (2008: 1) propose IRS can help academic departments be productive in their core academic activities, such as teaching and learning, research, community engagement and other relevant activities, including a dynamic development of curriculum.

#### **5.6.14 IRS promotes a more unified and shared educational experience among academics**

The respondents, when asked whether IRS promotes a more unified and shared educational experience among academics, a significant percentage of the respondents showed a similar response, as shown in Figure 5.14.

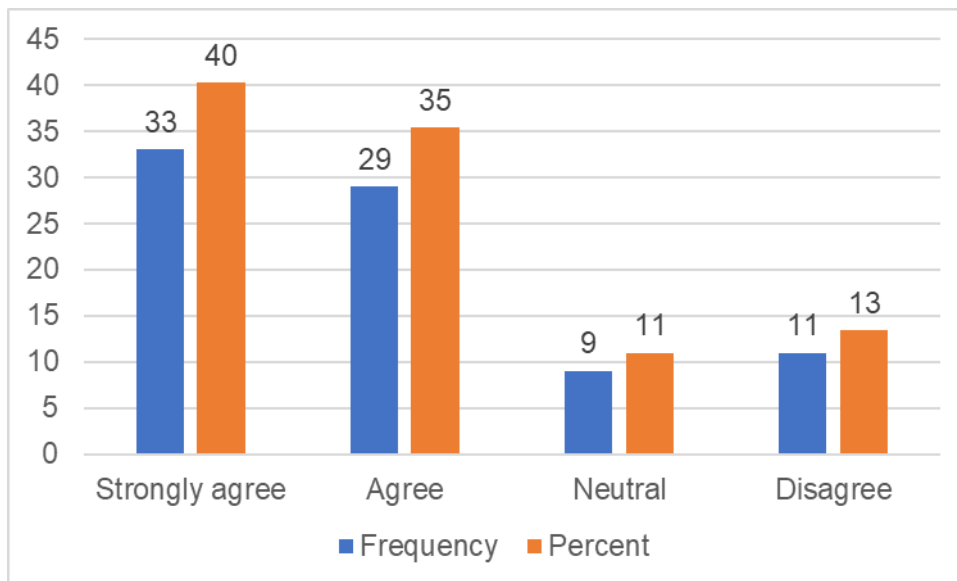


**Figure 5-14: IRS promotes a more unified and shared educational experience among academics**

Figure 5.14 reveals that 35 (43 percent) and 24 (29 percent) of the respondents strongly agreed and agreed with the statement that IRS promotes a more unified and shared educational experience among academics. However, 12 (15 percent) of the respondents remained neutral to the statement. The number of respondents who disagreed and strongly disagreed were 10 (12 percent) and one (one percent) respectively. Therefore, the results are in accord that observation that IRS plays an important role to promote academics' unity and shared educational experiences. Toolsee (2011: 50-51) states that IRS plays a major role in promoting academic staff cohesiveness and shared educational experiences.

#### **5.6.15 IRS increases the quality and extent of research collaboration in the university's RFAs**

When asked whether IRS increases the quality and extent of research collaboration in the university's RFAs, a significant percentage of the respondents showed a similar response, as shown in Figure 5.15.

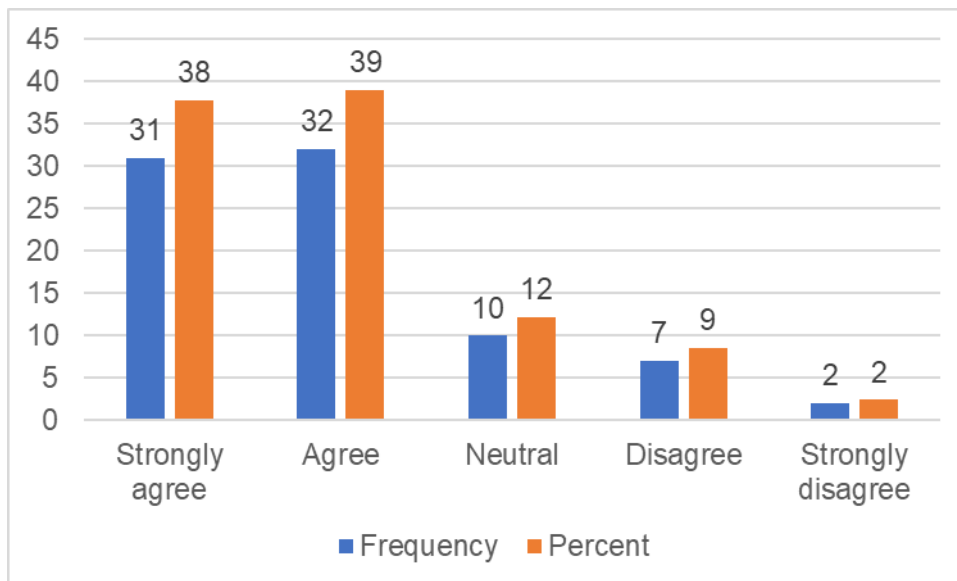


**Figure 5-15: IRS increases the quality and extent of research collaboration in the university's research focus areas**

As demonstrated in Figure 5.15, 33 (40 percent) and 29 (35 percent) of the respondents strongly agreed and agreed with the statement that, IRS increases the quality and extent of research collaboration in the university's RFAs. However, nine (11 percent) of the respondents remained neutral to the statement. The number of respondents who disagreed were 11 (13 percent). Therefore, the results concur that IRS increases the quality and extent of research collaboration in the university's RFAs. Northcott and Linacre (2013) report that IRS inspires academics to engage in ambitious projects thus increasing the quality and extent of research collaborations in the university's RFAs.

#### **5.6.16 IRS seeks to enrich individual academics**

When asked whether IRS seeks to enrich individual academics, a significant percentage of the respondents showed a similar response, as shown in Figure 5.16.

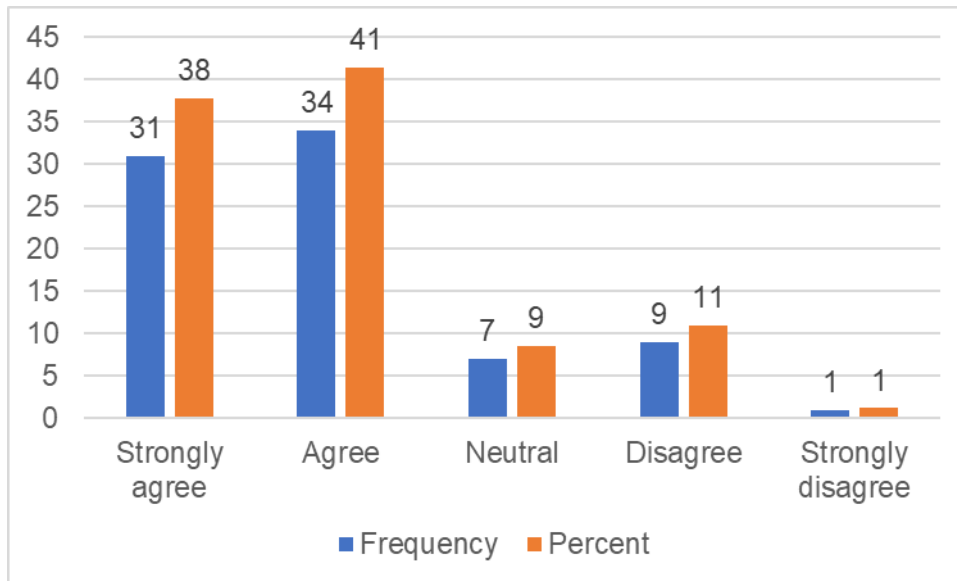


**Figure 5-16: IRS seeks to enrich individual academics**

Figure 5.16 shows that 32 (39 percent) and 31 (38 percent) of the respondents strongly agreed and agreed with the statement that IRS seeks to enrich individual academics. However, ten (12 percent) of the respondents remained neutral to the statement. The number of respondents who disagreed and strongly disagreed were seven (nine percent) and two (two percent) respectively. Therefore, the results are in accord that IRS is economically viable to those that are active in research. According to the UJ (2016: 8), IRS has the potential to financially benefit researchers through research subsidies and grants, including research rewards.

#### **5.6.17 IRS enables a research training environment by blending research, teaching and service**

When asked whether IRS enables a research training environment by blending research, teaching and service, a significant percentage of the respondents showed a similar response, as shown in Figure 5.17.

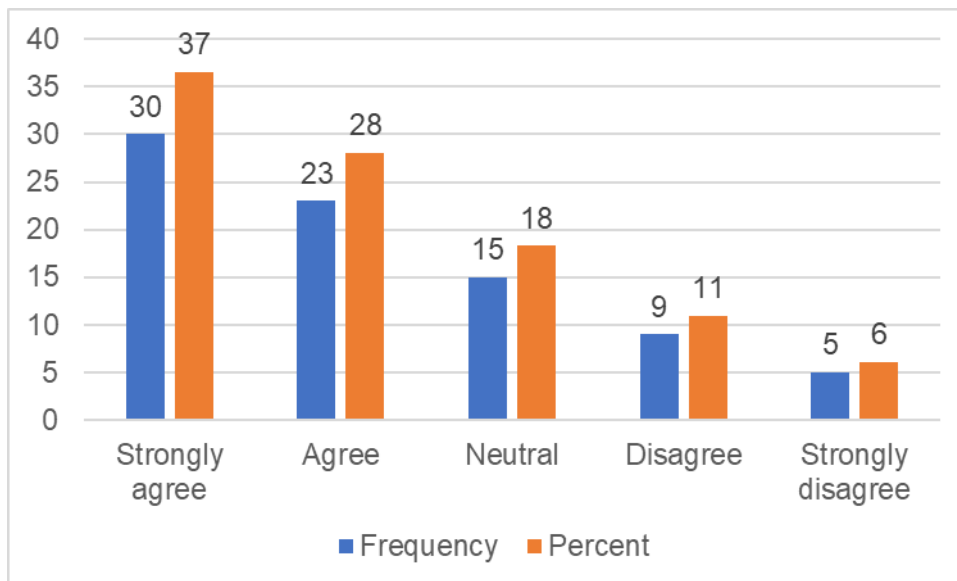


**Figure 5-17: IRS enables a research training environment by blending research, teaching and service**

As seen in Figure 5.17, a total of 34 (41 percent) and 31 (38 percent) of the respondents agreed and strongly agreed with the statement that IRS enables a research training environment by blending research, teaching and service. However, seven (nine percent) of the respondents remained neutral to the statement. The number of respondents who disagreed and strongly disagreed were nine (11 percent) and one (one percent) respectively. Therefore, the results indicate that IRS creates a research environment by enabling research training opportunities for academic staff, so they can improve their teaching and service in the university. IRS enables research training opportunities for academics by means of workshops, conferences and seminars (Chan, 2015).

#### **5.6.18 IRS has a potential to provide my department with access to a world-class research infrastructure**

When asked whether IRS has a potential to provide my department with access to a world-class research infrastructure, a significant percentage of the respondents showed a similar response, as shown in Figure 5.18.

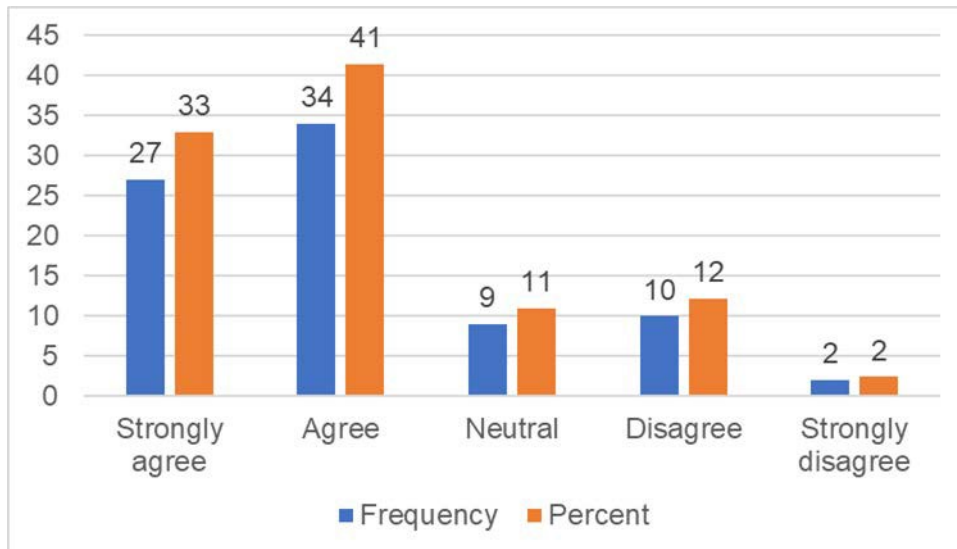


**Figure 5-18: IRS provides my department with access to a world-class research infrastructure**

As shown in Figure 5.18, 30 (37 percent) and 23 (28 percent) of the respondents agreed and strongly agreed with the statement that IRS has a potential to provide their department with access to a world-class research infrastructure. However, 15 (18 percent) of the respondents remained neutral to the statement. The number of respondents who disagreed and strongly disagreed were nine (11 percent) and five (six percent) respectively. Therefore, the results mean that IRS has the potential to provide researchers access to a world-class research infrastructure. According to Oxford University (2017) and Ofori and Atiogbe (2012: 68), IRS must be able to generate sufficient financial muscle to sustain the university's global research infrastructure and other research activities.

#### **5.6.19 IRS builds research leadership in the department**

When asked whether IRS builds research leadership in the department, a significant percentage of the respondents showed a similar response, as shown in Figure 5.19.



**Figure 5-19: IRS builds research leadership in the department**

Figure 5.19 illustrates that, 34 (41 percent) and 27 (33 percent) of the respondents agreed and strongly agreed with the statement that IRS builds research leadership in the department. However, nine (11 percent) of the respondents remained neutral to the statement. The number of respondents who disagreed and strongly disagreed were ten (12 percent) and two (two percent) respectively. Therefore, the results mean that IRS builds research leaders in the accountancy departments. The Ministry of Education (2004) shares that IRS maintains originality, significance, and rigour in research. This means the university does not decide what needs to be researched (Gopalkrishna, 2010), as it is a matter for individual researchers or research groups to decide on projects to be carried forward. This is a reflection of academic leadership and freedom to seek out truth and understanding.

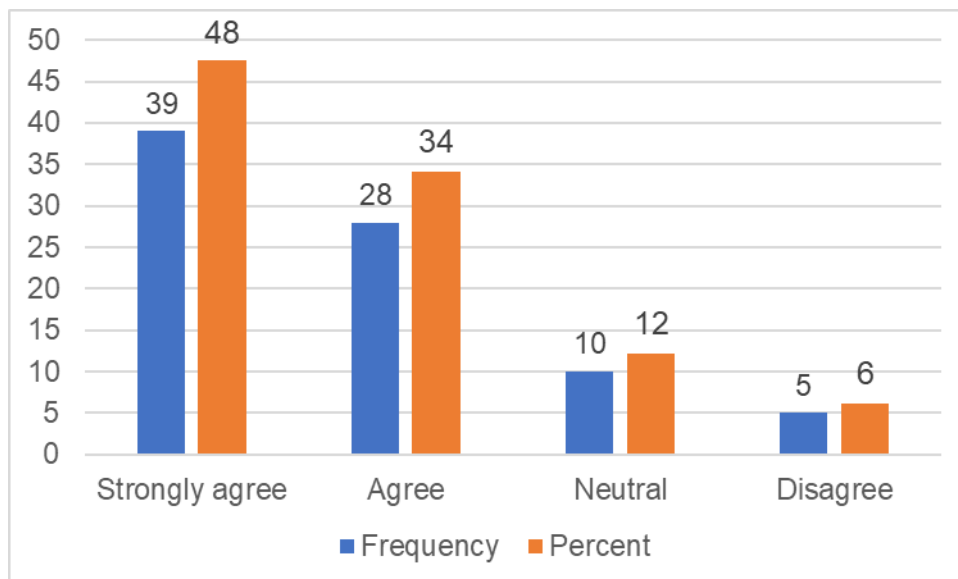
## **5.7 OBJECTIVE 2: FACTORS AFFECTING IRS AT AN OPERATIONAL LEVEL IN THE ACCOUNTANCY DEPARTMENTS**

Objective 2 of the study sought to investigate challenges or factors affecting IRS at an operational level in the accountancy departments in KZN public universities. The relevant questions of this objective appear in section C of the questionnaire and were divided into two sub-sections namely, internal and external factors. This section intends to discuss the findings with regard to this objective based on the following questions: External factors; 33 to 36. Internal factors; 37 to 65. The questions were formulated using a 5-point Likert scale, with 1 up to 5 representing the following

responses: 1 = Strongly Agree, 2 = Agree, 3 = Neutral 4 = Disagree, 5 = Strongly Disagree.

### 5.7.1 Government research policies

When asked whether government research policies affect the IRS operation, a significant percentage of the respondents showed a similar response, as shown in Figure 5.20.

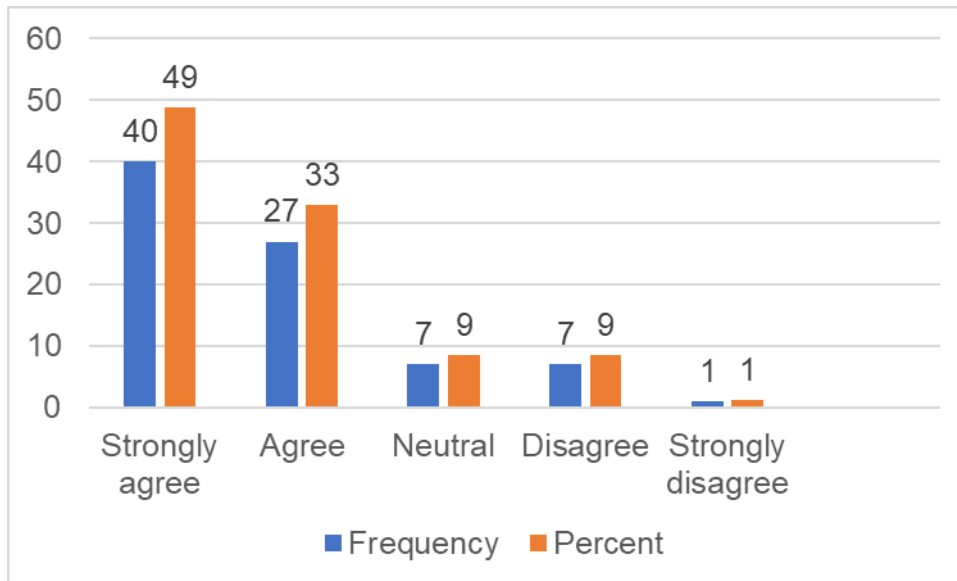


**Figure 5-20: Government research policies**

Most respondents, 39 (48 percent), strongly agreed and 28 (34 percent) agreed with the statement that government research policies have an effect on IRS. Ten (12 percent) of the respondents were neutral to the statement, while respondents who disagreed that government research policies have an impact on IRS numbered five (six percent) (Figure 5.20). Results are in line with Brenton (2011) who finds that government policies, in general, have a strong influence over public universities, due to the fact that government has invested much funds in public universities to sustain their survival.

### 5.7.2 Professional membership of accountancy academics

When asked whether professional membership of accountancy academics affect the IRS operation, a considerable percentage of the respondents showed a similar response, as shown in Figure 5.21.

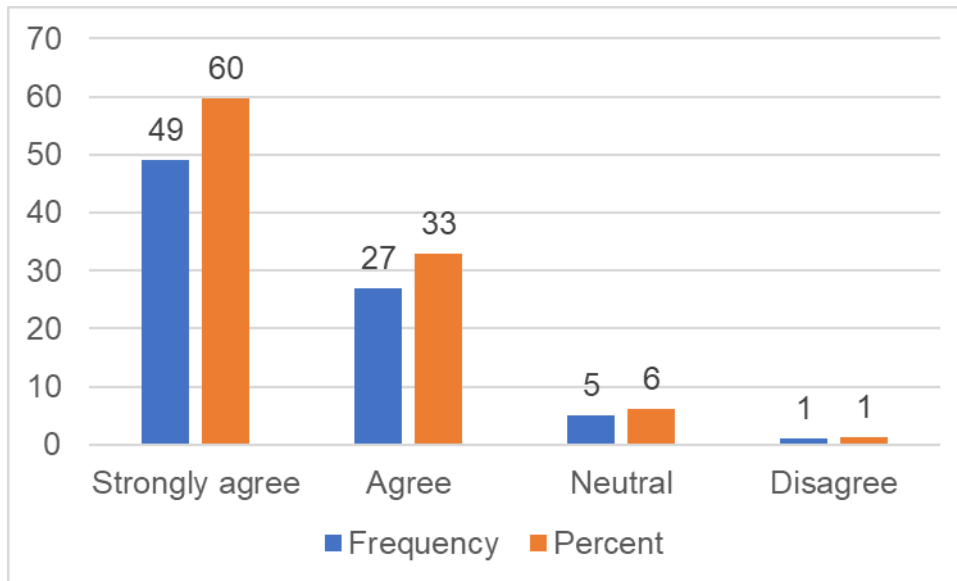


**Figure 5-21: Professional membership of accountancy academics**

The results indicate that 40 (49 percent) respondents strongly agreed and 27 (33 percent) agreed with the statement that professional membership of accountancy academics affect the IRS operation has an influence on the IRS operation, while seven (nine percent) were neutral. A number of the respondents, seven (nine percent) and one (one percent), disagreed and strongly disagreed, respectively, with the statement (Figure 5.21). Lubbe (2013: 111) also observes that the accountancy professions have a strong influence over universities' core curriculum.

### **5.7.3 External funding for researchers**

When asked whether external funding for researchers affect the IRS operation, a considerable percentage of the respondents showed a similar response, as shown in Figure 5.22.

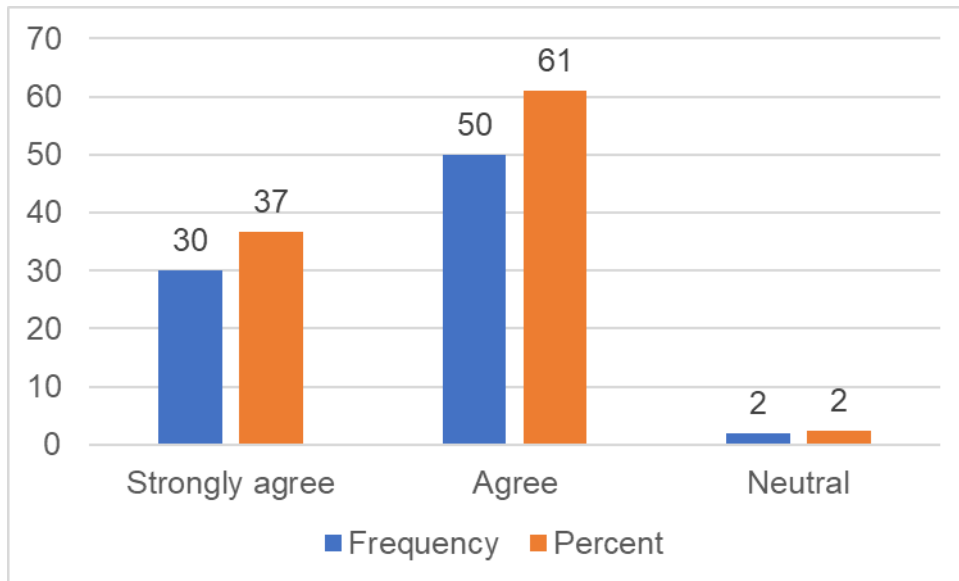


**Figure 5-22: External funding for researchers**

The results show that 49 (60 percent) and 27 (33 percent) of the respondents strongly agreed and agreed, respectively, with the statement that the external funding for researchers affects the IRS operation, with five (six percent) being neutral. A small number of the respondents one (one percent) disagreed with the statement (Figure 5.22). Teisman and Klijn (2011: 297) note the availability of external research funding has an effect on the university operation.

#### **5.7.4 Requirements for publishing in research journals**

When asked whether requirements for publishing in research journals affect the IRS operation, a considerable percentage of the respondents showed a similar response, as shown in Figure 5.23.

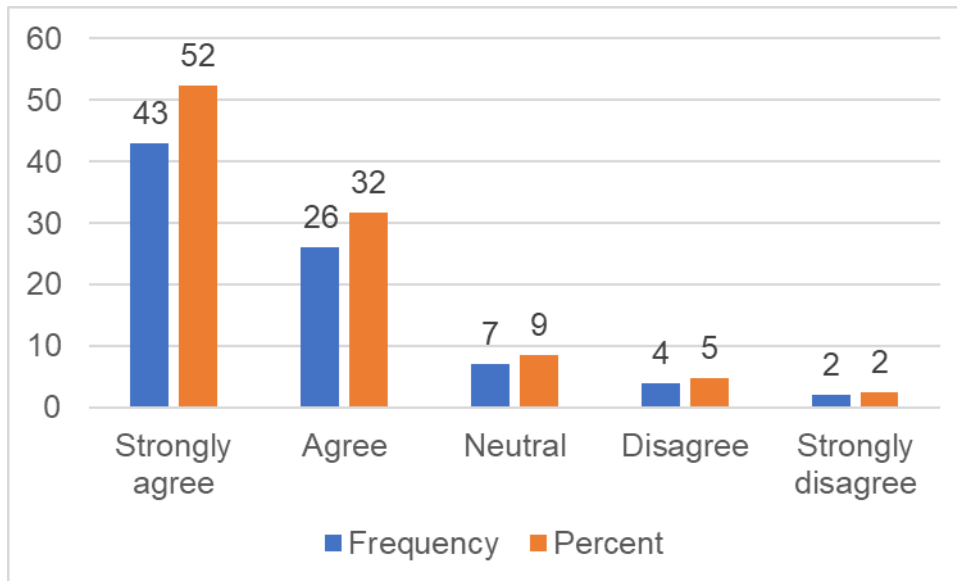


**Figure 5-23: Requirements for publishing in research journals**

Most respondents, 50 (61 percent) agreed and 30 (37 percent) strongly agreed with the statement that the requirements for publishing in research journals have an effect on the IRS operation. Two (two percent) of the respondents were neutral to the statement. None of the respondents disagreed or strongly disagreed with the statement (Figure 5.23). Likewise, Imhonopi and Urim (2014: 1) found that the standard and quality requirements of journals have an effect on academics in terms of them participating in IRS operations.

#### **5.7.5 Research administration**

When asked whether research administration affects the IRS operation, a considerable percentage of the respondents showed a similar response, as shown in Figure 5.24.

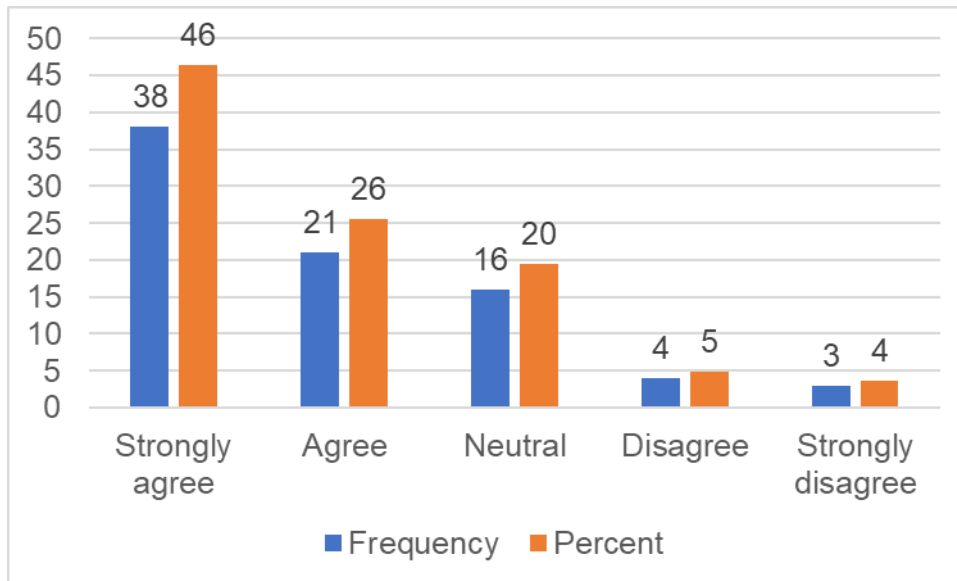


**Figure 5-24: Research administration**

Most respondents, 43 (52 percent), strongly agreed and 26 (32 percent) agreed with the statement that having a commendable research administration has an effect on the IRS operation. Seven (nine percent) of the respondents were neutral to the statement, with respondents who disagreed and strongly disagreed that their department have a proper research administration numbering four (five percent) and two (two percent) respectively (Figure 5.24). According to authors such as Drennan and Clarke (2009: 484) and Rosentreter (2012: 6), research administration is meant to equip researchers with research skills by sharing the research objectives, knowledge and information.

#### **5.7.6 Research impact assessment**

When asked whether research impact assessment affect the IRS operation, a considerable percentage of the respondents showed a similar response, as shown in Figure 5.25.

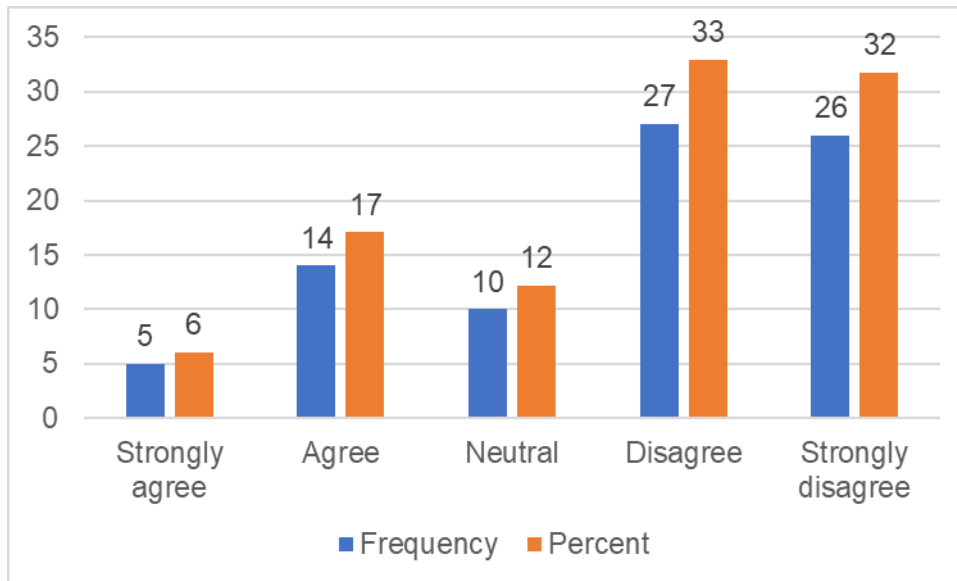


**Figure 5-25: Research impact assessment**

The results of the findings show that 38 (46 percent) and 21 (26 percent) of the respondents strongly agreed and agreed, respectively, with the statement that research impact assessment has an effect on the IRS operation, while 16 (20 percent) were neutral, and four (five percent) and three (four percent) disagreed and strongly disagreed, respectively, with the statement (Figure 5.25). Bhatti (2011: 52-55) states that impact measurement is a derivative of strategic management and is important to implement corrective actions in the organisation.

#### **5.7.7 Academic staff knowledge and understanding**

When asked whether academic staff knowledge and understanding affect the IRS operation, a considerable percentage of the respondents showed a similar response, as shown in Figure 5.26.

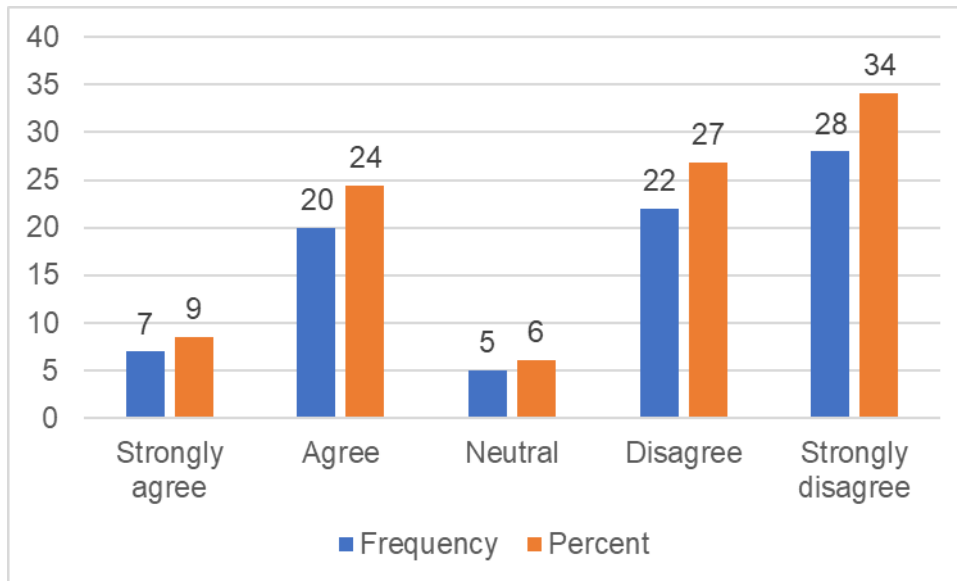


**Figure 5-26: Academic staff knowledge and understanding**

Figure 5.26 shows the majority of 27 (33 percent) and 26 (32 percent) of the respondents disagreed and strongly disagreed, respectively, with the statement that academic staff knowledge and understanding have an effect on the IRS operation. While ten (12 percent) were neutral, 14 (17 percent) and five (six percent) agreed and strongly agreed, respectively, with the statement. Authors such as Rosentreter (2012: iii), Lubbe (2013: 109) and Nieuwoudt and Wilcocks (2005), mention that public universities that were previously disadvantaged by the apartheid system in SA are still experiencing a lack of academic staff with research knowledge and a clear understanding of its goals.

#### **5.7.8 Academic staff skills**

When asked if whether academic staff skills affect the IRS operation, a considerable percentage of the respondents showed a similar response, as shown in Figure 5.27.

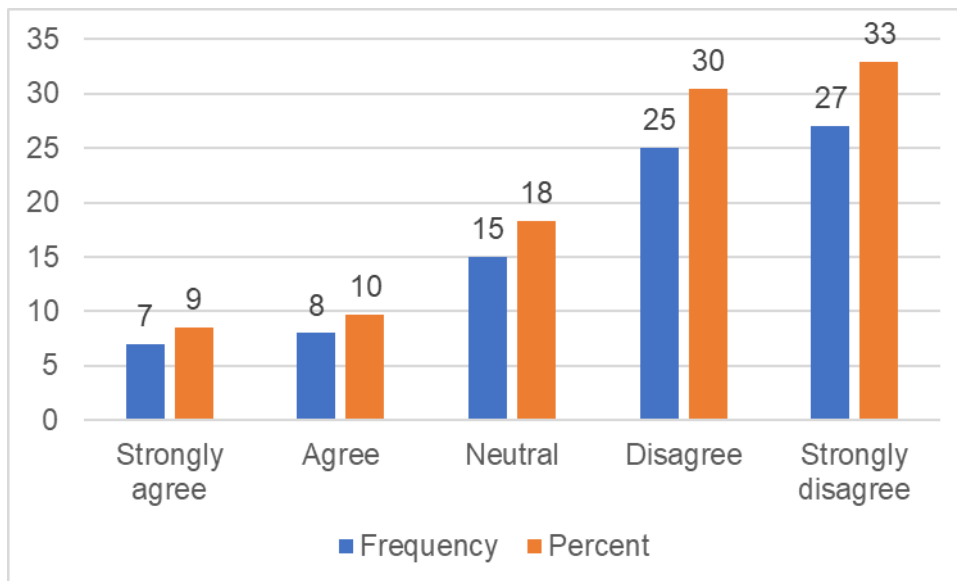


**Figure 5-27: Academic staff skills**

Figure 5.27 shows the majority of 27 (33 percent) and 26 (32 percent) of the respondents disagreed and strongly disagreed, respectively, with the statement that the academic staff skills have an effect on the IRS operation, while ten (12 percent) were neutral, and 14 (17 percent) and five (six percent) agreed and strongly agreed, respectively, with the statement. Rosentreter (2012: iii) indicates that public universities that were previously disadvantaged by an apartheid system in SA are still experiencing a shortage of academic staff skills in research.

#### **5.7.9 Job significance**

When asked whether job significance affects the IRS operation, a considerable percentage of the respondents showed a similar response, as shown in Figure 5.28.

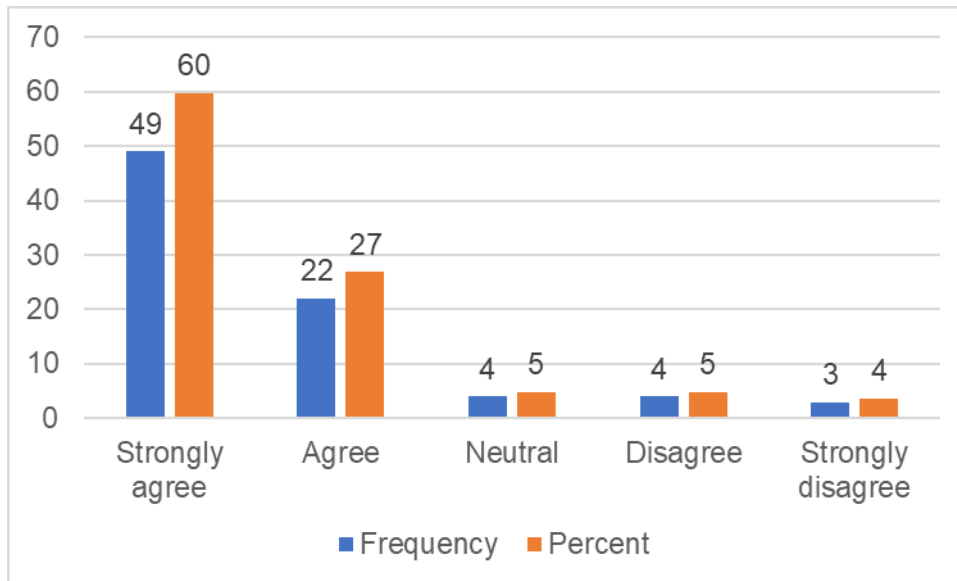


**Figure 5-28: Job significance**

Figure 5.28 demonstrates that the majority of 27 (33 percent) and 25 (30 percent) of the respondents strongly disagreed and disagreed, respectively, with the statement that job significance affects the IRS operation, while 15 (18 percent) were neutral, and eight (ten percent) and seven (nine percent) agreed and strongly agreed, respectively, with the statement. Hackman and Oldham (1976: 252) posit that job significance has a direct link with employees' responses to their work.

#### **5.7.10 Academic workload**

When asked whether academic workload affects the IRS operation, a considerable percentage of the respondents showed a similar response, as shown in Figure 5.29.

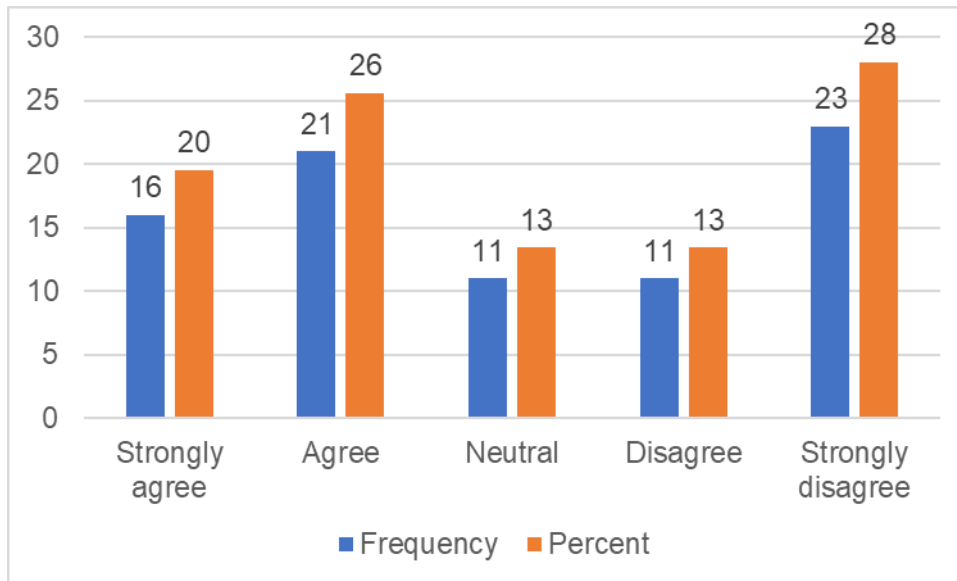


**Figure 5-29: Academic workload**

Figure 5.29 illustrates that the majority of 49 (60 percent) and 22 (27 percent) of the respondents strongly agreed and agreed, respectively, with the statement that academic workload affects the IRS operation, while four (five percent) were neutral, and four (five percent) and three (four percent) disagreed and strongly disagreed, respectively, with the statement. According to Albu and Toader (2012: 164) and Kumar and Eyono Obono (2013: 34), the present academic workload is too much, considering the full spectrum of work commitment of academic staff and, therefore, the academic load should be adjusted.

#### **5.7.11 Decentralisation of research administration into academic departments**

When asked whether decentralisation of research administration into academic departments affects the IRS operation, a considerable percentage of the respondents showed a similar response, as shown in Figure 5.30.

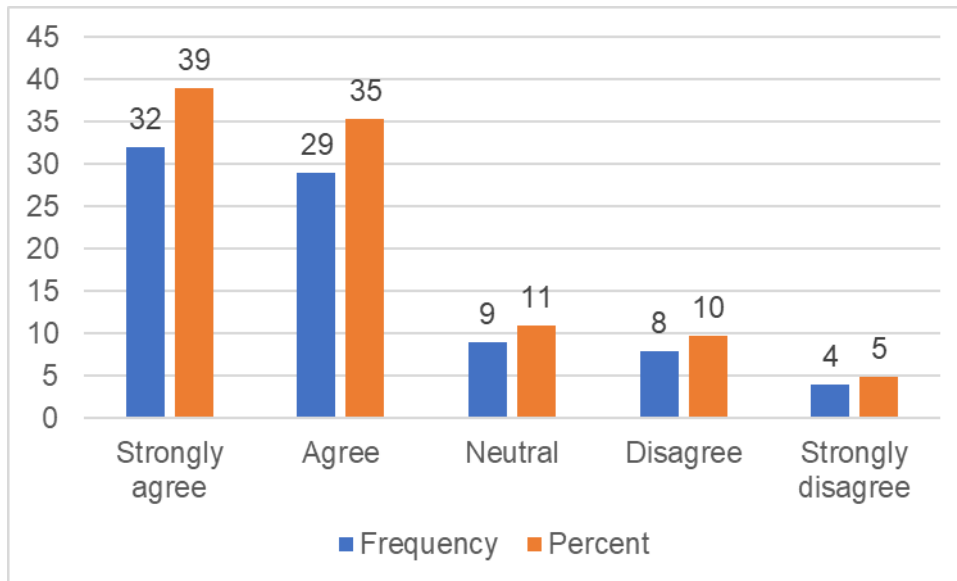


**Figure 5-30: Decentralisation of research administration into academic departments**

Figure 5.30 demonstrates that the majority of 23 (28 percent) and 11 (13 percent) of the respondents strongly disagreed and disagreed, respectively, with the statement that the decentralisation of research administration into academic departments has an effect on the IRS operation, while 11 (13 percent) were neutral, and 21 (26 percent) and 16 (20 percent) agreed and strongly agreed, respectively, with the statement. The results show that research administration is not decentralised into accountancy academic departments and, as a result, IRS goals are hard to achieve. Ngibe (2015: iii) is of the view that research administration in public universities is not decentralised into academic departments, thus experiences poor research support by academic staff.

#### **5.7.12 Decentralisation of research administration into faculties**

When asked whether decentralisation of research administration into faculties affects the IRS operation, a considerable percentage of the respondents showed a similar response, as shown in Figure 5.31.

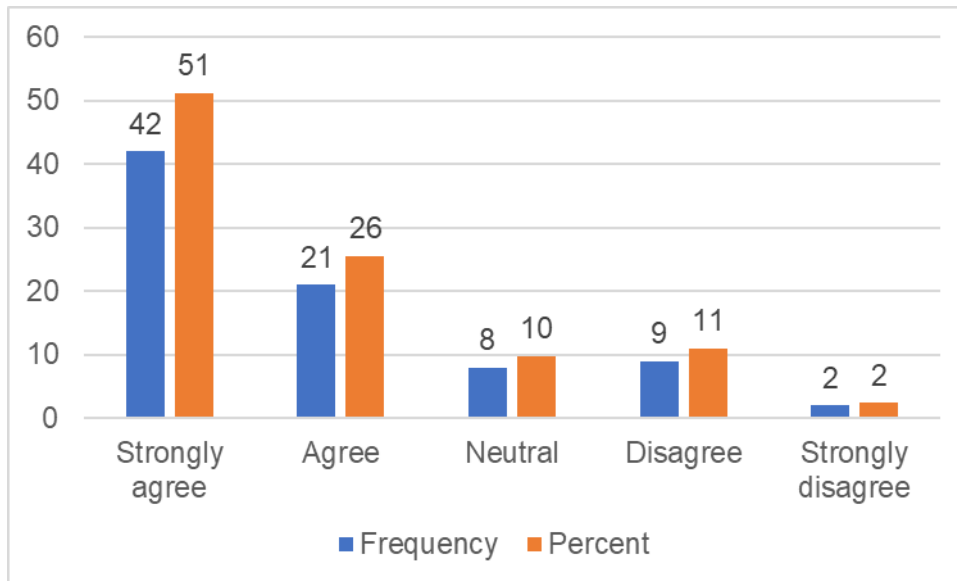


**Figure 5-31: Decentralisation of research administration into faculties**

Figure 5.31 reveals that the majority of 32 (39 percent) and 29 (35 percent) of the respondents strongly agreed and agreed, respectively, with the statement that decentralisation of research administration into faculties has an effect on the IRS operation, while nine (11 percent) were neutral, and eight (ten percent) and four (five percent) disagreed and strongly disagreed, respectively, with the statement. This decentralization results to accountancy academics to perceive IRS as something far away from their responsibility. According to Mutula (2011), research administration differs from one university to another, with some having research structures decentralised into academic departments, whereas others are only centralised into faculties.

### **5.7.13 Academic staff attitude towards research**

When asked whether the academic staff attitude towards research affects the IRS operation, a considerable percentage of the respondents showed a similar response, as shown in Figure 5.32.

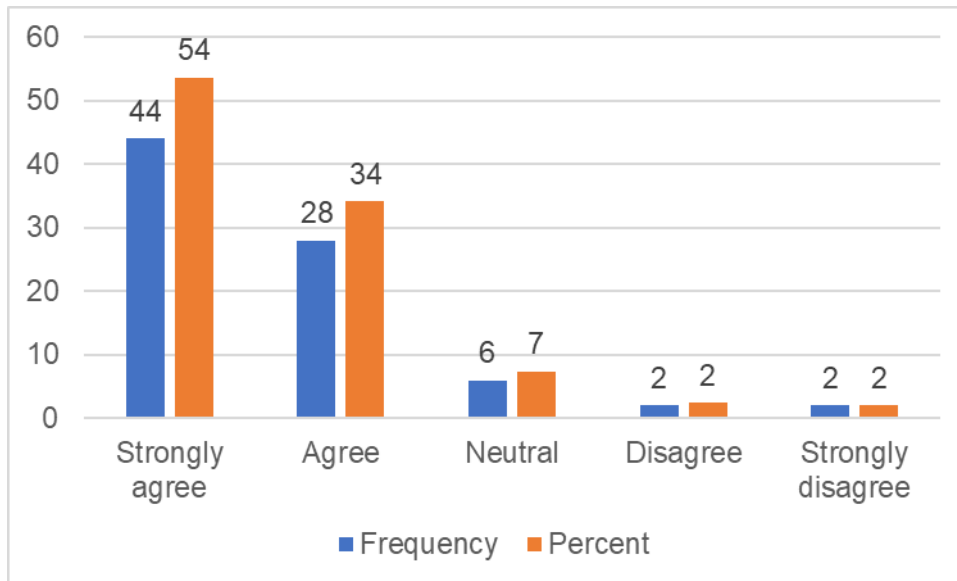


**Figure 5-32: Academic staff attitude towards research**

The results of the findings show that the majority of 42 (51 percent) and 21 (26 percent) of the respondents strongly agreed and agreed, respectively, with the statement that academic staff attitude towards research affects the IRS operation, while eight (ten percent) were neutral, and nine (11 percent) and two (two percent) disagreed and strongly disagreed, respectively, with the statement (Figure 5.32). In line with these results, Zheng (2010) asserts the attitude of individuals influences performance in the organisation.

#### **5.7.14 Research decision-making**

When asked whether research decision-making affects the IRS operation, a considerable percentage of the respondents showed a similar response, as shown in Figure 5.33.

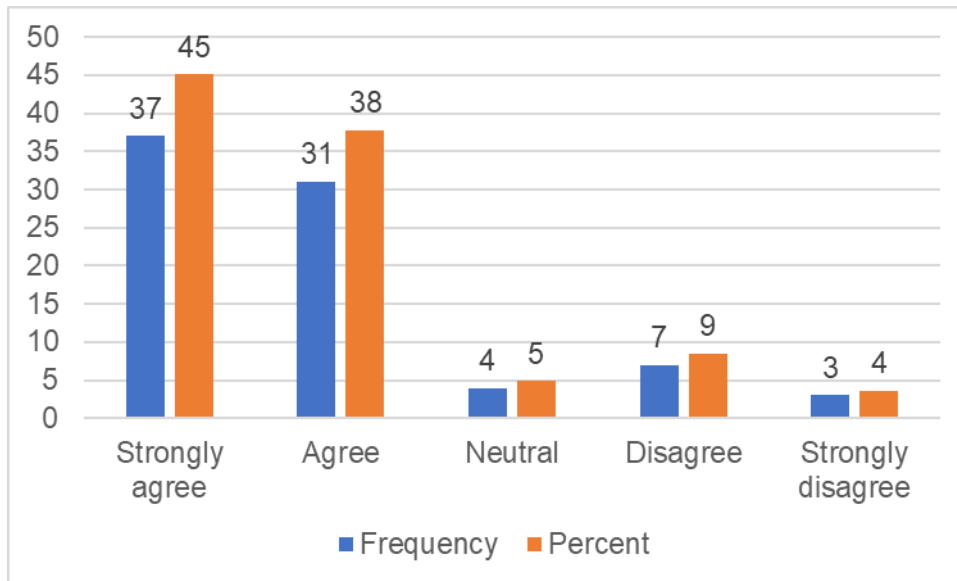


**Figure 5-33: Research decision making**

The results in Figure 5.33 show the majority of 44 (54 percent) and 28 (34 percent) of the respondents strongly agreed and agreed, respectively, with the statement that research decision-making in the department has an effect on IRS, while six (seven percent) were neutral, and two (percent) respectively disagreed and strongly disagreed, with the statement. Johannes *et al.* (2012: 440) maintain that public universities should involve qualified and experienced academic staff in decision-making processes.

#### **5.7.15 Research incentives**

When asked whether research incentives affect the IRS operation, a considerable percentage of the respondents showed a similar response, as shown in Figure 5.34.

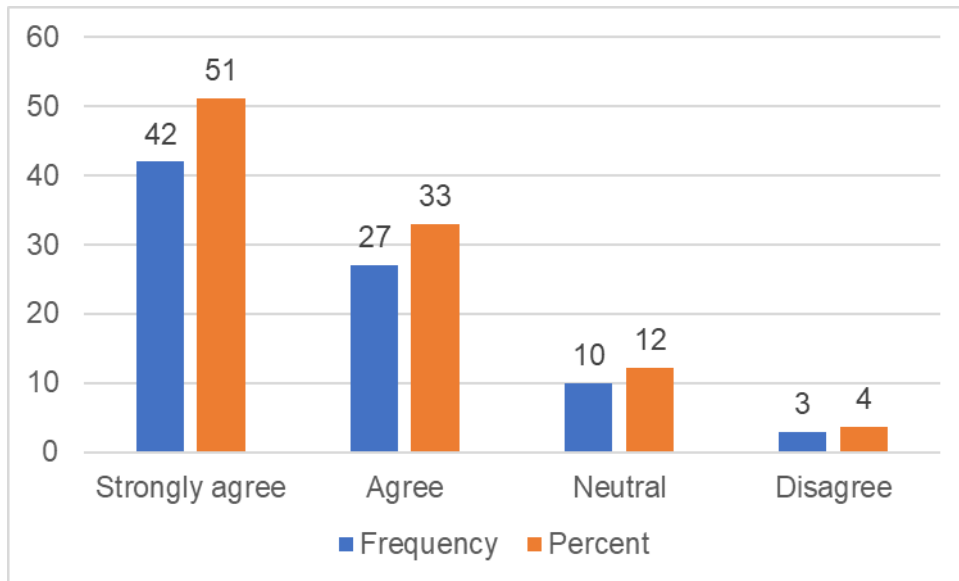


**Figure 5-34: Research incentives**

The results in Figure 5.34 show that the majority of 37 (45 percent) and 31 (38 percent) of the respondents strongly agreed and agreed, respectively, with the statement that research incentives affect the IRS operation while four (five percent) were neutral, and seven (nine percent) and three (four percent) disagreed and strongly disagreed, respectively, with the statement. Zhang (2014: i) and Ongori (2007) write that the extent to which staff are committed to their work depends on compensation for their services.

#### **5.7.16 University location**

When asked whether university location affects the IRS operation, a considerable percentage of the respondents showed a similar response, as shown in Figure 5.35.

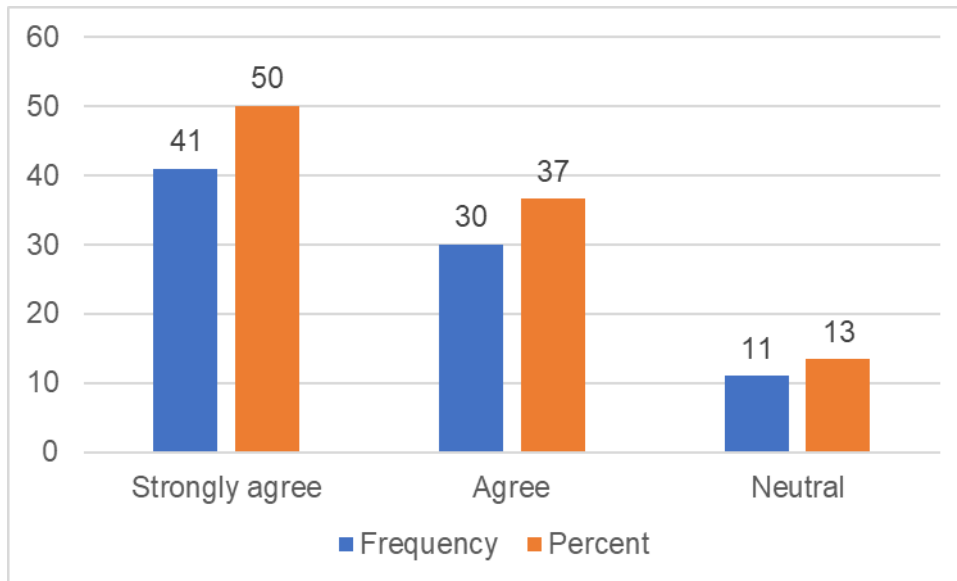


**Figure 5-35: University location**

The results in Figure 5.35 show the majority of 42 (51 percent) and 27 (33 percent) of the respondents strongly agreed and agreed, respectively, with the statement that university location affects the IRS operation, while ten (12 percent) were neutral, and three (four percent) and none of the respondents respectively disagreed and strongly disagreed with the statement. Goodfellow (2014) indicates that due to the lack of highly skilled staff and slow internet speeds, rural universities find it hard to overcome challenges to compete with their metropolitan counterparts.

#### **5.7.17 Staff career**

When asked whether an academic staff career affects the IRS operation, a considerable percentage of the respondents showed a similar response, as shown in Figure 5.36.

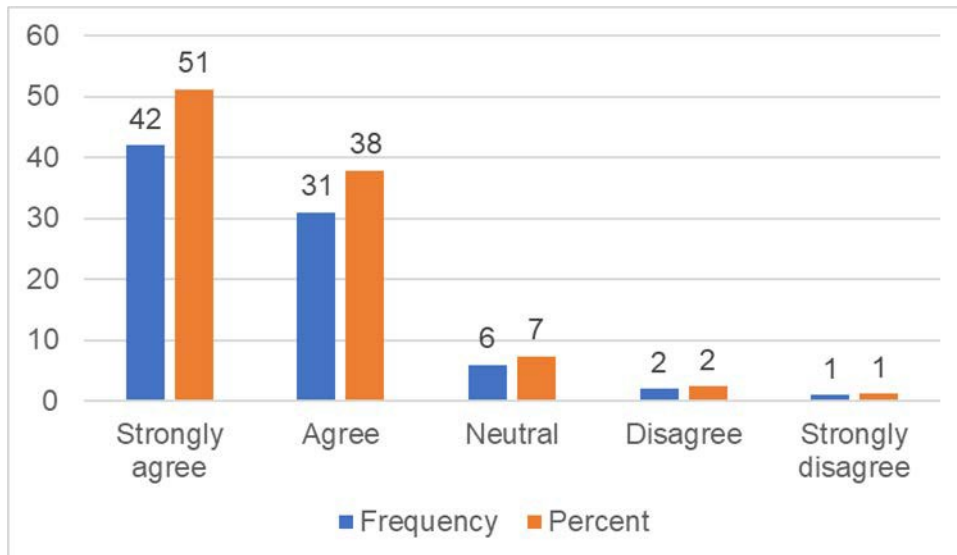


**Figure 5-36: Staff career**

The results in Figure 5.36 show the majority of 41 (50 percent) and 30 (37 percent) of respondents strongly agreed and agreed, respectively, with the statement that an accountancy career affects the IRS operation, while ten (12 percent) were neutral, and three (four percent) and none of the respondents respectively disagreed and strongly disagreed with the statement. Various authors (Lubbe, 2013: 110; SAIPA, 2018; IRBA, 2016; CIMA, 2018; SAICA, 2018) state that the career of accountants is somehow removed from academia.

#### **5.7.18 Academic staff with industry experience**

When asked whether academic staff with industry experience affects the IRS operation, a considerable percentage of the respondents showed a similar response, as shown in Figure 5.37.

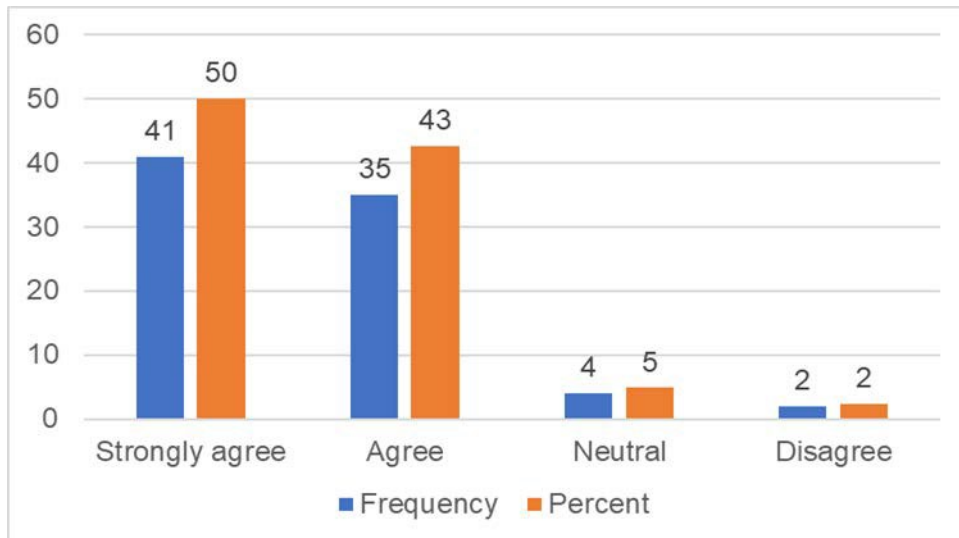


**Figure 5-37: Academic staff with industry experience**

This study set out to investigate whether academic staff with industry experience is an issue in KZN public universities. The majority of respondents, 42 (51 percent) and 31 (38 percent) strongly agreed and agreed with the statement that academic staff with industry experience affect the IRS operation, while six (seven percent) were neutral, and two (two percent) and one (one percent) respectively disagreed and strongly disagreed (Figure 5.37). Lubbe (2013: 110) and Pouris (2012: 30) are of the view that the reluctance of accountants regarding research is affected by the perception that new knowledge in accountancy is created in industries or by professional bodies and not within the academic sector.

#### **5.7.19 Research planning**

When asked whether research planning affects the IRS operation in KZN public universities, a considerable percentage of the respondents indicated a similar response, as shown in Figure 5.38.

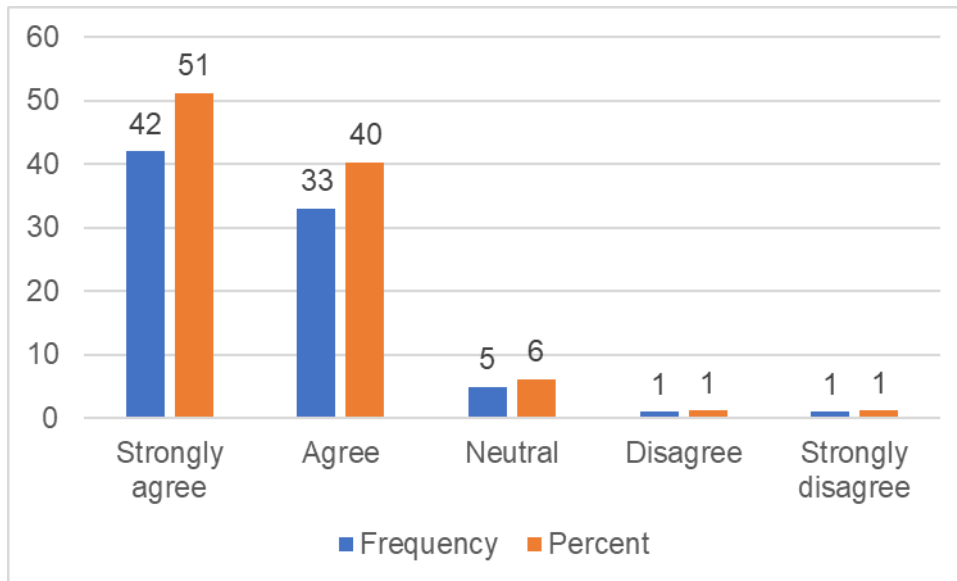


**Figure 5-38: Research planning**

The majority of respondents, 41 (50 percent) and 35 (43 percent) strongly agreed and agreed with the statement that research planning has an effect on the IRS operation, while four (five percent) were neutral, and two (two percent) and none of the respondents respectively disagreed and strongly disagreed (Figure 5.38). The general crisis that has crippled research is due to the failure of research planning (Al Hinai and Bajracharya, 2014: 17).

#### **5.7.20 Organisational culture**

When asked whether organisational culture affects the IRS operation in KZN public universities, a considerable percentage of the respondents showed a similar response, as shown in Figure 5.39.

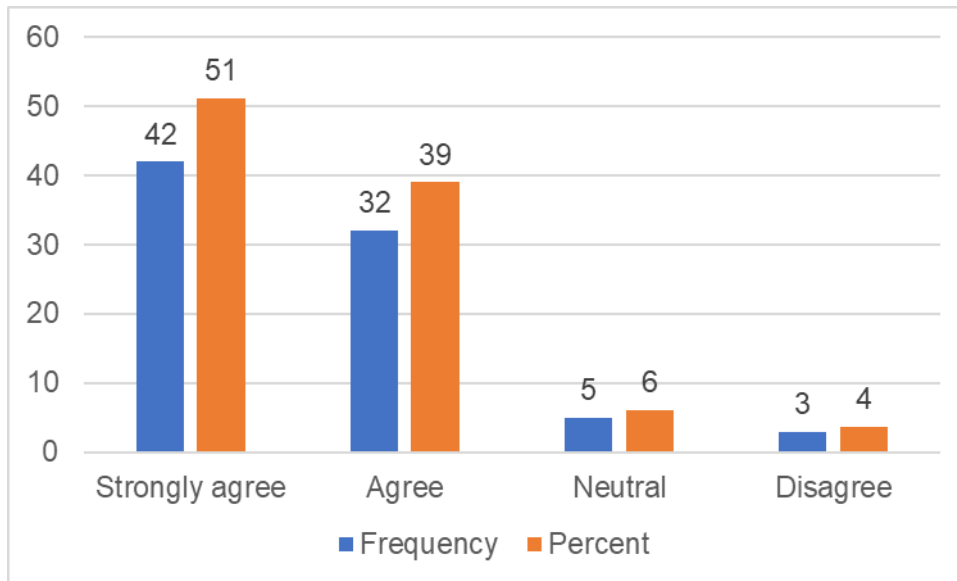


**Figure 5-39: Organisational culture**

This study set out to investigate whether this is an issue in public universities of KZN. The majority of respondents, 42 (51 percent) and 33 (40 percent) strongly agreed and agreed with the statement that the organisational culture has an effect on the IRS operation, while five (six percent) were neutral, and one (percent) respectively disagreed and strongly disagreed (Figure 5.39). North *et al.* (2011: 1416) observe that organisational culture has a huge impact on the overall operation.

#### **5.7.21 Research leadership**

When asked whether research leadership affects the IRS operation, a considerable percentage of the respondents showed a similar response, as shown in Figure 5.40.

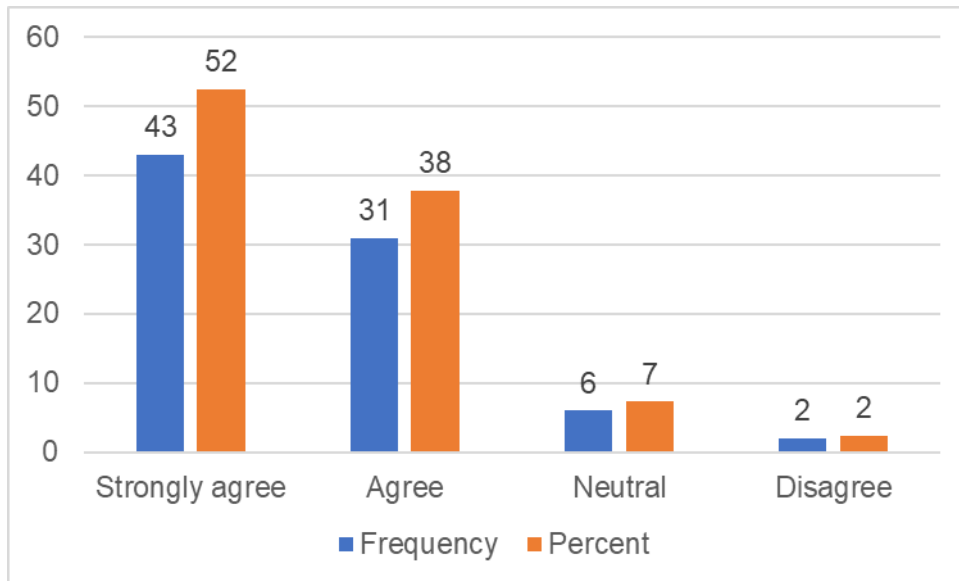


**Figure 5-40: Research leadership**

This study set out to investigate whether research leadership is an issue in KZN public universities. The majority of respondents, 42 (51 percent) and 32 (39 percent) strongly agreed and agreed with the statement that research leadership affects the IRS operation, while five (six percent) were neutral, and three (four percent) and none of the respondents respectively disagreed and strongly disagreed (Figure 5.40). Henrekson and Jakobsson (2012: 212) state that research leadership is an important factor in driving research in an institution.

#### **5.7.22 Academic staff promotion policy**

When asked whether academic staff promotion policy affects the IRS operation, a considerable percentage of the respondents showed a similar response, as shown in Figure 5.41.

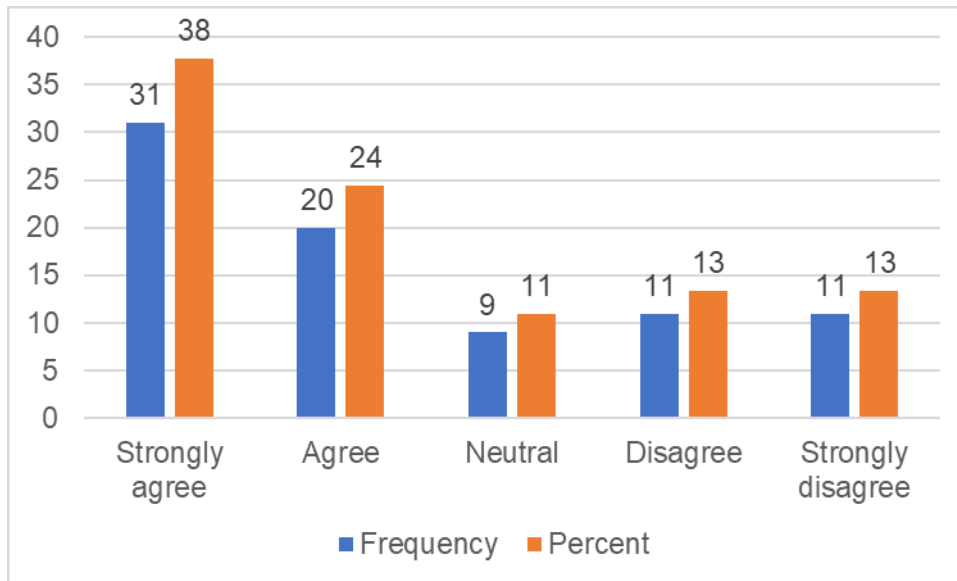


**Figure 5-41: Academic staff promotion policy**

This study set out to investigate whether academic staff promotion policy is an issue in KZN public universities. The majority of respondents, 43 (52 percent) and 31 (38 percent) strongly agreed and agreed with the statement that the promotion policy of accountancy academic staff effects the IRS operation, while six (seven percent) were neutral, and two (two percent) and none of the respondents respectively disagreed and strongly disagreed (Figure 5.41). Authors such as Nieuwoudt and Wilcocks (2005) and Dundar and Lewis (1998) found that staff promotion criteria are a significant predictor of their productivity.

### **5.7.23 Job security**

When asked whether academic staff job security affects the IRS operation, a considerable percentage of the respondents showed a similar response, as shown in Figure 5.42.

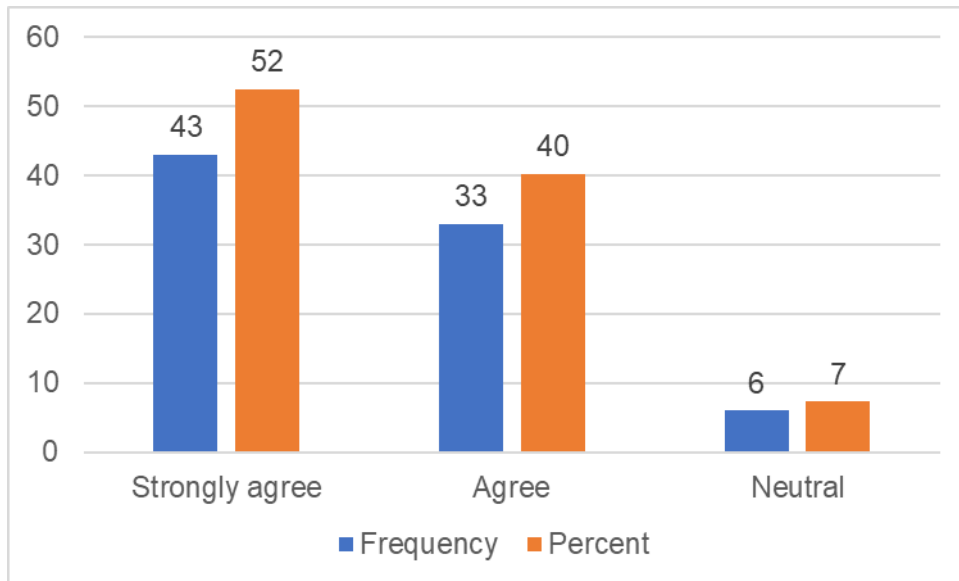


**Figure 5-42: Job security**

This study set out to investigate whether job security is an issue in KZN public universities. The majority of respondents, 31 (38 percent) and 20 (24 percent) strongly agreed and agreed with the statement that job security affects the IRS operation, while nine (11 percent) were neutral, and 11 (13 percent) and 11 (13 percent) disagreed and strongly disagreed, respectively (Figure 5.42). Esuh *et al.* (2013: 64) established that poor job security for employees influences organisational performance.

#### **5.7.24 Information Technology**

When asked whether IT affects the IRS operation, a considerable percentage of the respondents showed a similar response, as shown in Figure 5.43.

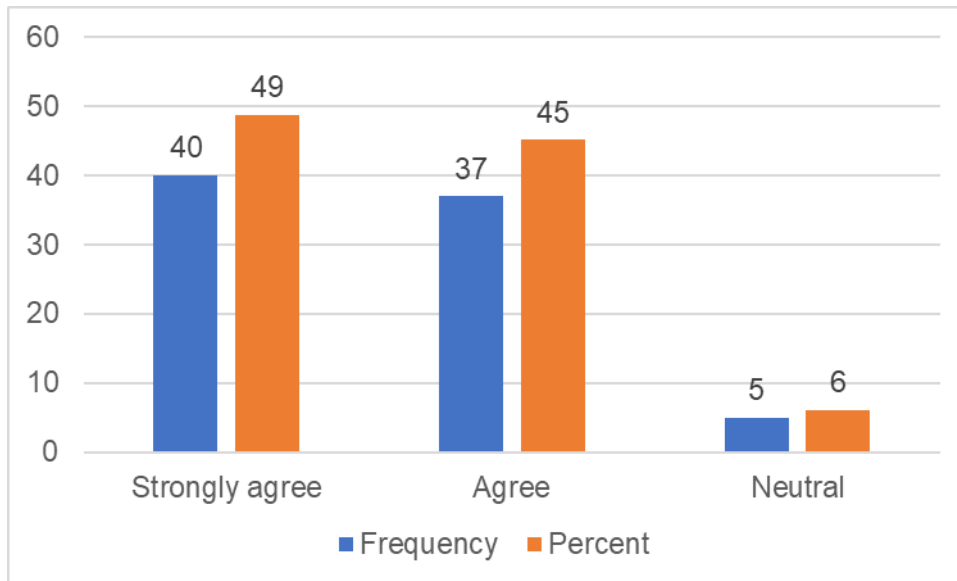


**Figure 5-43: Information technology**

The majority of respondents 43 (52 percent) and 33 (40 percent) strongly agreed and agreed with the statement that IT affects the IRS operation, while six (seven percent) of the respondents were neutral with regard to the statement. None of the respondents respectively disagreed or strongly disagreed with the statement (Figure 5.43). Several authors (Jawad *et al.*, 2014: 270; Hadjinicola and Soteriou, 2005: 1) found that IT has an effect on research productivity.

#### **5.7.25 Status of the university**

When asked whether the status of the university affects the IRS operation, a considerable percentage of the respondents showed a similar response, as shown in Figure 5.44.

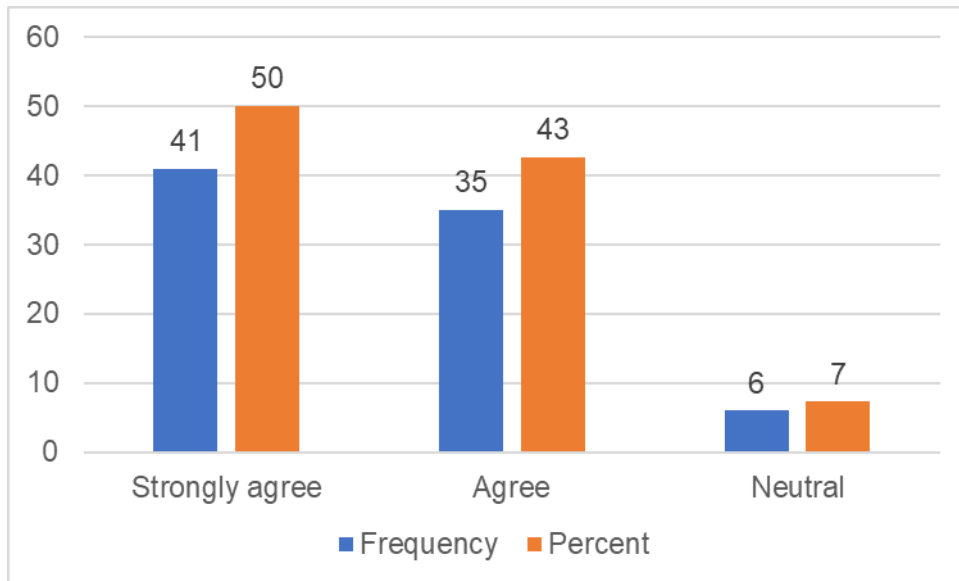


**Figure 5-44: Status of the university**

Most respondents indicated that the status of the university affects the IRS operation, with 40 (49 percent) and 37 (45 percent) respondents that strongly agreed and agreed, respectively, while five (six percent) respondents were neutral with regards to the statement. No respondents disagreed or disagreed with the statement (Figure 5.44). The survival of universities depends on their status and their ability to take full advantage of available resources (Adeagbo, 2016; Ismail *et al.*, 2014:307).

#### **5.7.26 Research management**

When asked whether research management affects the IRS operation, a considerable percentage of the respondents showed a similar response, as shown in Figure 5.45.

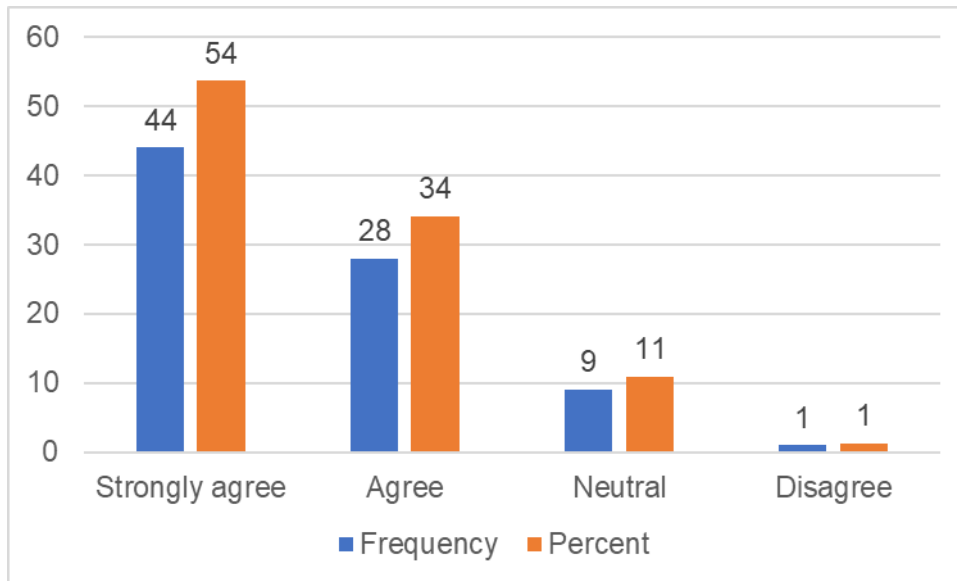


**Figure 5-45: Research management**

This study set out to investigate whether research management is an issue in KZN public universities. The majority of respondents, 41 (50 percent) and 35 (43 percent), strongly agreed and agreed with the statement that research management affects the IRS operation, while six (seven percent) were neutral. No respondents disagreed or strongly disagreed with the statement (Figure 5.45). Ngibe (2015: iv) proposes that research is limited by the scope of managerial resources, specifically the ability to coordinate capabilities and introduce new people into it.

#### **5.7.27 Institutional infrastructure**

When asked whether institutional infrastructure affects the IRS operation, a considerable percentage of the respondents showed a similar response, as shown in Figure 5.46.

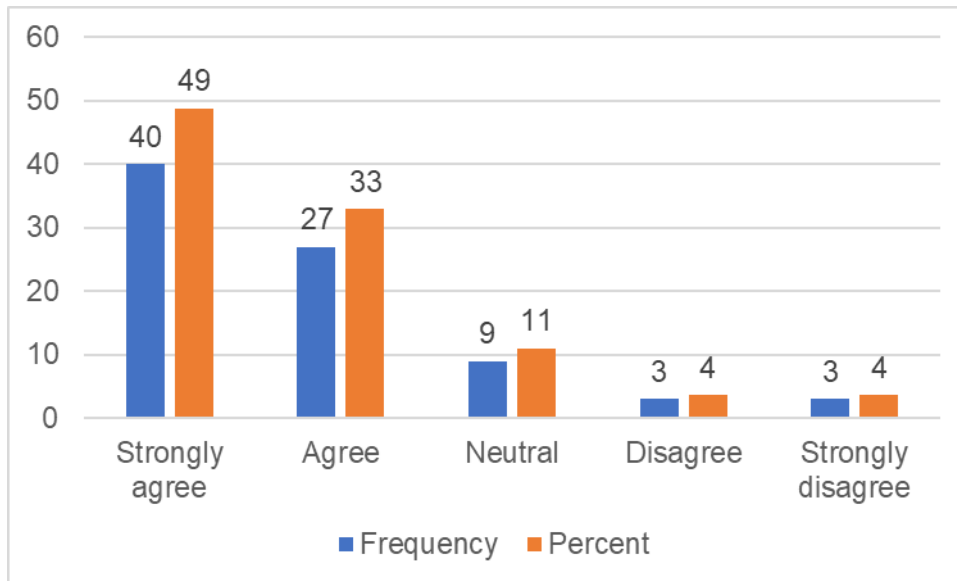


**Figure 5-46: Institutional infrastructure**

This study set out to investigate whether institutional infrastructure influences the IRS operation in KZN public universities. The majority of respondents, 44 (54 percent) and 28 (34 percent), strongly agreed and agreed with the statement that institutional infrastructure affects the IRS operation, while nine (11 percent) were neutral, and one (one percent) and no one respectively disagreed and strongly disagreed (Figure 5.46). Estache and Garsous (2012: 1) are of the view that better quantity and quality of infrastructure has the potential to directly raise the productivity in the workplace.

#### **5.7.28 Research communication**

When asked whether research communication affects the IRS operation, a considerable percentage of the respondents showed a similar response, as shown in Figure 5.47.

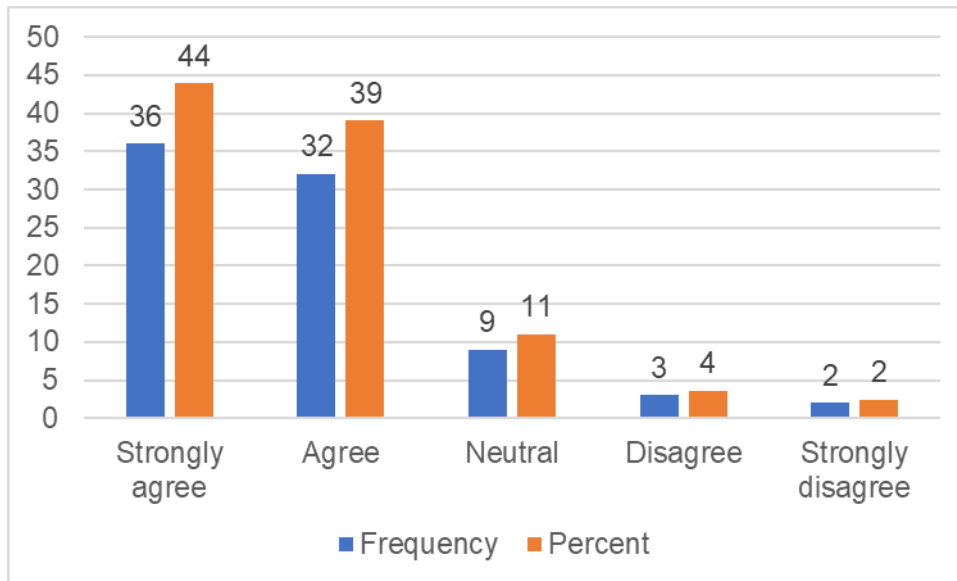


**Figure 5-47: Research communication**

The majority of respondents, 40 (49 percent) and 27 (33 percent), strongly agreed and agreed with the statement that research communication affects the IRS operation, while nine (11 percent) were neutral, and three (four percent) and three (four percent) disagreed and strongly disagreed, respectively (Figure 5.47). According to Ngibe (2015: iv), communication plays an important role in improving research services within a university.

#### **5.7.29 Global university recognition**

When asked whether global university recognition affects the IRS operation, a considerable percentage of the respondents showed a similar response, as shown in Figure 5.48.

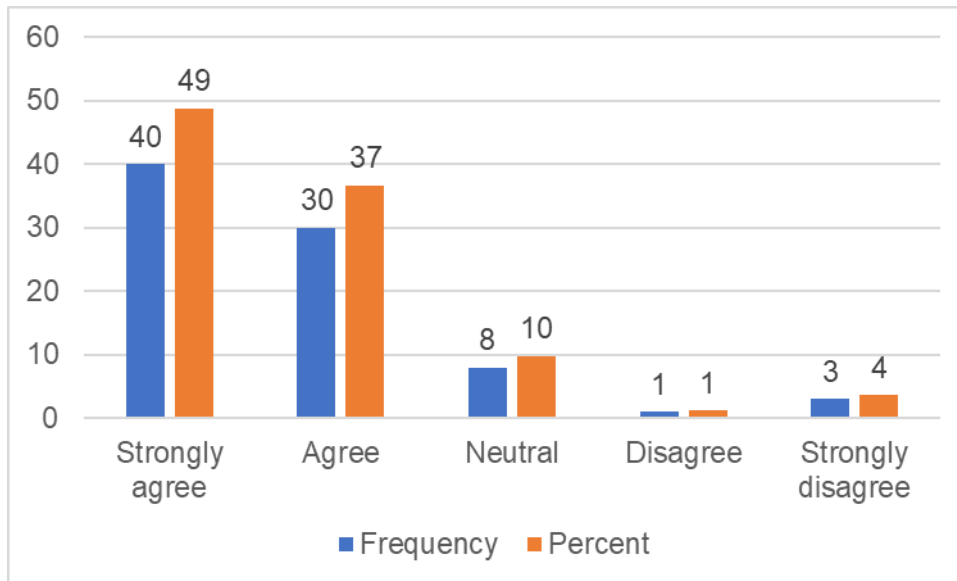


**Figure 5-48: University global recognition**

This study set out to investigate whether global university recognition is an issue in KZN public universities. The majority of respondents, 36 (44 percent) and 32 (39 percent), strongly agreed and agreed with the statement that their university global recognition affects the IRS operation, while nine (11 percent) were neutral, and three (four percent) and two (two percent) disagreed and strongly disagreed, respectively (Figure 5.48). International collaborations are important to widen the scope of university research (Johannes *et al.*, 2012: 440).

### **5.7.30 Institutional research governance**

When asked whether institutional research governance affects the IRS operation, a considerable percentage of the respondents showed a similar response, as shown in Figure 5.49.

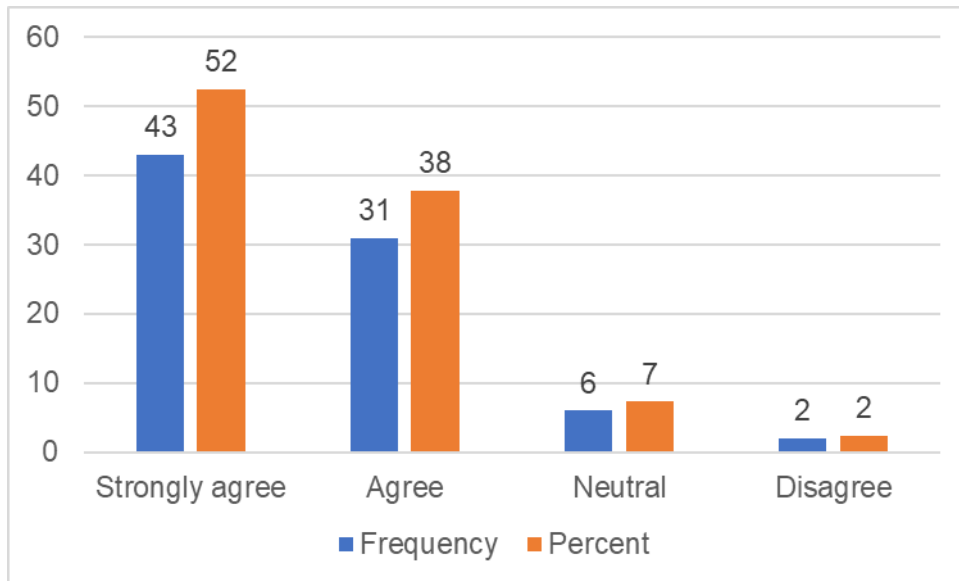


**Figure 5-49: Institutional research governance**

The majority of respondents, 40 (49 percent) and 30 (37 percent), strongly agreed and agreed with the statement that institutional research governance affects the IRS operation, while eight (ten percent) were neutral, and one (one percent) and three (four percent) disagreed and strongly disagreed, respectively (Figure 5.49). Olum (2014: 14) states that institutional governance ensures the university achieves its objects.

### **5.7.31 Staff commitment**

When asked whether staff commitment affects the IRS operation, a considerable percentage of the respondents showed a similar response, as shown in Figure 5.50.

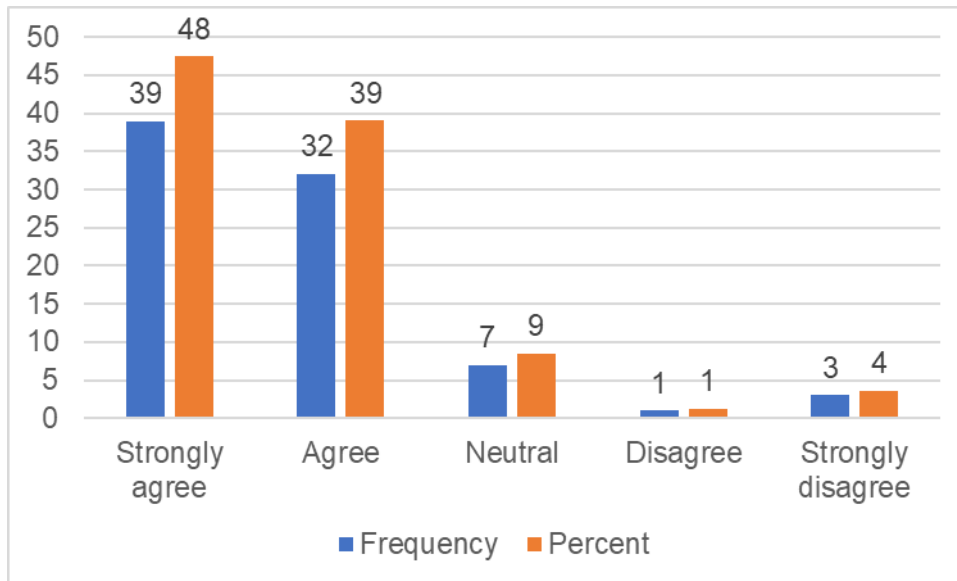


**Figure 5-50: Staff commitment**

This study set out to investigate whether staff commitment is an issue in KZN public universities. The majority of respondents, 43 (52 percent) and 31 (38 percent), strongly agreed and agreed with the statement that staff commitment to research affects the IRS operation, while six (seven percent) were neutral, and two (two percent) and none of the respondents disagreed and strongly disagreed, respectively (Figure 5.50). Zheng (2010) and Zhang (2014: i) found that staff commitment has a serious impact on organisational success.

### **5.7.32 Staff working against the research power structure**

When asked whether to have staff working against the research power structure affects the IRS operation, a considerable percentage of the respondents showed a similar response, as shown in Figure 5.51.

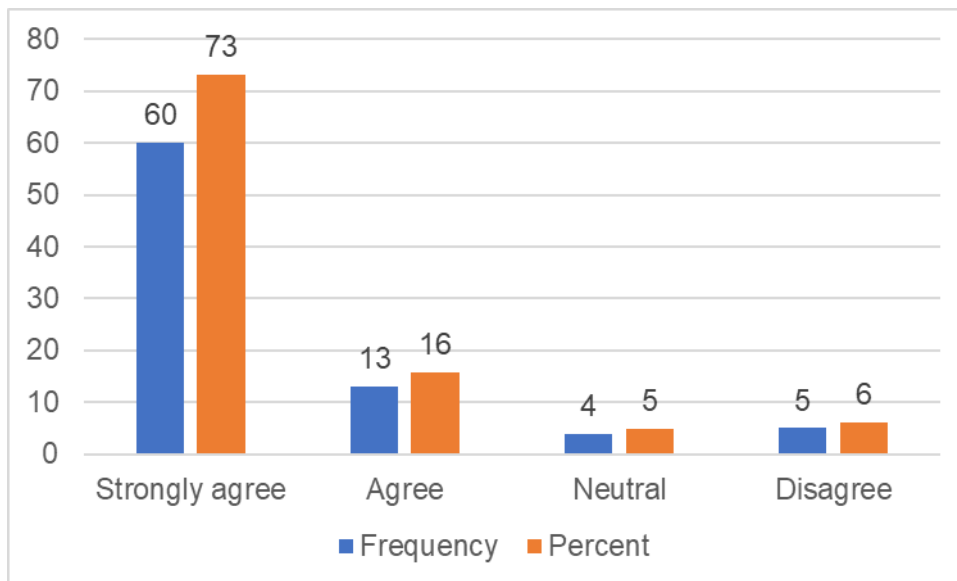


**Figure 5-51: Staff working against the power structure**

This study set out to investigate whether staff working against the research power structure is an issue in KZN public universities. The majority of respondents, 39 (48 percent) and 32 (39 percent), strongly agreed and agreed with the statement that staff working against the power structure affects the IRS operation, while seven (nine percent) were neutral, and one (one percent) and three (four percent) disagreed and strongly disagreed, respectively (Figure 5.51). Sambumbu (2013: 47) explains it is imperative for any strategy to gain support from those affected by it because it will not be successful when it produces resistance from those in power and from those whose support is required.

### **5.7.33 Research feedback**

When asked whether research feedback affects the IRS operation, a considerable percentage of the respondents showed a similar response, as shown in Figure 5.52.



**Figure 5-52: Research feedback**

This study set out to investigate whether research feedback has an influence on the IRS operation. The majority of respondents, 60 (73 percent) and 13 (16 percent), strongly agreed and agreed with the statement that research feedback affects the IRS operation, while four (five percent) were neutral, and five (six percent) and none of the respondents disagreed and strongly disagreed, respectively (Figure 5.52). Previous research studies have shown that management feedback on staff performance is an important factor in improving performance (Gil *et al.*, 2008: 922; Churchill *et al.*, 1976: 323; Becherer *et al.*, 1982).

## **5.8 OBJECTIVE 3: ACCOUNTANCY ACADEMIC STAFF PERCEPTIONS**

Objective 3 of the study sought to examine accountancy academic staff perceptions on the extent to which the internal and external factors affect IRS at an operational level in KZN public universities. The relevant questions of this objective appeared in section D of the questionnaire. This section intends to discuss the findings with regard to this objective based on the following questions: 65 to 75. The questions were formulated using four options: 1 = extreme, 2 = moderate, 3 = low, 4 = don't know.

### **5.8.1 Accountancy academic staff perceptions on the extent to which internal and external factors affect IRS at an operational level**

When asked about their perceptions on the extent to which external and internal factors affect IRS at an operational level, a considerable percentage of the respondents showed a similar response, as shown in Table 5.8.

**Table 5-8: The extent to which external and internal factors affect IRS operation**

Statements	Extremely	Moderate	Low	Don't know
Government support	63%	16%	15%	6%
Accountancy academics who are professional graduates from accountancy bodies	70%	18%	7%	5%
Academic staff commitment	82%	10%	6%	2%
University support	72%	18%	5%	5%
Academic staff skills	71%	18%	6%	5%
Research communication	70%	22%	5%	4%
Research planning	74%	18%	5%	2%
Research administration	74%	16%	6%	4%
Research leadership	68%	10%	15%	7%
Industry support	73%	16%	5%	6%

Table 5.8 shows that of the 82 respondents, 82 percent rated staff commitment (internal factor) as having an extreme effect on the IRS operation, with 70 percent rating accountancy bodies (external factor) as having an extreme effect on the IRS operation. Eight of the ten remaining factors were rated at around 70 percent of participants as having an extreme effect on the IRS operation.

**Table 5-9: Government support**

Crosstab							
							Total
			DUT	MUT	UKZN	UNIZUL	
Extremely	Count		18	8	21	5	52
		% within Government support	34,6%	15,4%	40,4%	9,6%	100,0%
		% within Please indicate the name of the university at which you work	45,0%	100,0%	77,8%	71,4%	63,4%
		% of Total	22,0%	9,8%	25,6%	6,1%	63,4%
	Moderate	Count	10	0	1	2	13
		% within Government support	76,9%	0,0%	7,7%	15,4%	100,0%
		% within Please indicate the name of the university at which you work	25,0%	0,0%	3,7%	28,6%	15,9%
		% of Total	12,2%	0,0%	1,2%	2,4%	15,9%
	Low	Count	9	0	3	0	12
		% within Government support	75,0%	0,0%	25,0%	0,0%	100,0%
		% within Please indicate the name of the university at which you work	22,5%	0,0%	11,1%	0,0%	14,6%
		% of Total	11,0%	0,0%	3,7%	0,0%	14,6%
	Don't know	Count	3	0	2	0	5
		% within Government support	60,0%	0,0%	40,0%	0,0%	100,0%
		% within Please indicate the name of the university at which you work	7,5%	0,0%	7,4%	0,0%	6,1%
		% of Total	3,7%	0,0%	2,4%	0,0%	6,1%
Total	Count	40	8	27	7	82	
	% within Government support	48,8%	9,8%	32,9%	8,5%	100,0%	
	% within Please indicate the name of the university at which you work	100,0%	100,0%	100,0%	100,0%	100,0%	
	% of Total	48,8%	9,8%	32,9%	8,5%	100,0%	

A combined comparison between the UoTs (DUT and MUT) against universities (UKZN and UNIZULU) found respondents' perceptions on the importance of government support is on a 50:50 basis (Table 5.9). Therefore, it is apparent that both UoTs and universities from KZN are highly deprived of government support systems.

**Table 5-10: Professional membership of accountancy academics**

Crosstab								
							Total	
			DUT	MUT	UKZN	UNIZUL		
Extremely	Count		26	7	17	7	57	
	% within Accountancy professional bodies		45,6%	12,3%	29,8%	12,3%	100,0%	
	% within Please indicate the name of the university at which you work		65,0%	87,5%	63,0%	100,0%	69,5%	
	% of Total		31,7%	8,5%	20,7%	8,5%	69,5%	
	Moderate	Count		8	1	6	0	15
		% within Accountancy professional bodies		53,3%	6,7%	40,0%	0,0%	100,0%
		% within Please indicate the name of the university at which you work		20,0%	12,5%	22,2%	0,0%	18,3%
		% of Total		9,8%	1,2%	7,3%	0,0%	18,3%
	Low	Count		5	0	1	0	6
		% within Accountancy professional bodies		83,3%	0,0%	16,7%	0,0%	100,0%
		% within Please indicate the name of the university at which you work		12,5%	0,0%	3,7%	0,0%	7,3%
		% of Total		6,1%	0,0%	1,2%	0,0%	7,3%
Don't know	Count		1	0	3	0	4	
	% within Accountancy professional bodies		25,0%	0,0%	75,0%	0,0%	100,0%	
	% within Please indicate the name of the university at which you work		2,5%	0,0%	11,1%	0,0%	4,9%	
	% of Total		1,2%	0,0%	3,7%	0,0%	4,9%	
Total	Count		40	8	27	7	82	
	% within Accountancy professional bodies		48,8%	9,8%	32,9%	8,5%	100,0%	
	% within Please indicate the name of the university at which you work		100,0%	100,0%	100,0%	100,0%	100,0%	
	% of Total		48,8%	9,8%	32,9%	8,5%	100,0%	

All seven (100 percent) respondents from UNIZULU indicated that the professional membership of accountancy academics strongly affects the IRS operation (Table 5.10). Other respondents at MUT, DUT, and UKZN, had seven (87.5 percent), 26 (65 percent), and 17 (63 percent), respectively, which indicated that this variable strongly affects the IRS operation. Thus, the perception of the UNIZULU respondents on this variable is very high compared to other institutions. A combined comparison between the UoTs and universities revealed the effect of professional membership of accountancy academics is uneven between the set of two universities at 57.9 percent and 42.1 percent, respectively. The results suggest the UoTs are under pressure or

failing to engage their academics (who have the professional qualifications in accountancy) in research activities.

**Table 5-11: Academic staff commitment**

Crosstab							
						Total	
		DUT	MUT	UKZN	UNIZUL		
Academic	Extremely	Count	32	7	22	6	67
		% within Academic staff commitment	47,8%	10,4%	32,8%	9,0%	100,0%
		% within Please indicate the name of the university	80,0%	87,5%	81,5%	85,7%	81,7%
		% of Total	39,0%	8,5%	26,8%	7,3%	81,7%
	Moderate	Count	4	0	3	1	8
		% within Academic staff commitment	50,0%	0,0%	37,5%	12,5%	100,0%
		% within Please indicate the name of the university	10,0%	0,0%	11,1%	14,3%	9,8%
		% of Total	4,9%	0,0%	3,7%	1,2%	9,8%
	Low	Count	4	1	0	0	5
		% within Academic staff commitment	80,0%	20,0%	0,0%	0,0%	100,0%
		% within Please indicate the name of the university	10,0%	12,5%	0,0%	0,0%	6,1%
		% of Total	4,9%	1,2%	0,0%	0,0%	6,1%
	Don't know	Count	0	0	2	0	2
		% within Academic staff commitment	0,0%	0,0%	100,0%	0,0%	100,0%
		% within Please indicate the name of the university	0,0%	0,0%	7,4%	0,0%	2,4%
		% of Total	0,0%	0,0%	2,4%	0,0%	2,4%
Total	Count	40	8	27	7	82	
	% within Academic staff commitment	48,8%	9,8%	32,9%	8,5%	100,0%	
	% within Please indicate the name of the university	100,0%	100,0%	100,0%	100,0%	100,0%	
	% of Total	48,8%	9,8%	32,9%	8,5%	100,0%	

As far as academic staff commitment is concerned, seven (87.5 percent) of the respondents from MUT indicated that they perceive that this variable has an extreme effect on the IRS operation (Table 5.11). Perceptions amongst UNIZULU, UKZN, and DUT respondents of extreme effect were six (85.7 percent), 22 (81.5 percent) and 32 (80 percent), respectively. Indeed, staff commitment is a crippling factor at MUT followed by UNIZULU. This means that there is no consensus between the academic staff members on the issues around research activities. On the other hand, a combined comparison between the UoTs and universities found that the effect of staff commitment is uneven across the two sets of universities at 58.2 percent and 41.8 percent, respectively. This means that when UoTs are compared with universities, they suffer more from lack of staff commitment. In other words, they lack internal

research collaborations; perhaps this is because there is no framework or policy within which they can operate.

**Table 5-12: University support**

			Crosstab				
							Total
			DUT	MUT	UKZN	UNIZUL	
	Extremely	Count	25	7	21	6	59
		% within University support	42,4%	11,9%	35,6%	10,2%	100,0%
		% within Please indicate the name of the university at which you work	62,5%	87,5%	77,8%	85,7%	72,0%
		% of Total	30,5%	8,5%	25,6%	7,3%	72,0%
	Moderate	Count	10	0	4	1	15
		% within University support	66,7%	0,0%	26,7%	6,7%	100,0%
		% within Please indicate the name of the university at which you work	25,0%	0,0%	14,8%	14,3%	18,3%
		% of Total	12,2%	0,0%	4,9%	1,2%	18,3%
	Low	Count	4	0	0	0	4
		% within University support	100,0%	0,0%	0,0%	0,0%	100,0%
		% within Please indicate the name of the university at which you work	10,0%	0,0%	0,0%	0,0%	4,9%
		% of Total	4,9%	0,0%	0,0%	0,0%	4,9%
	Don't know	Count	1	1	2	0	4
		% within University support	25,0%	25,0%	50,0%	0,0%	100,0%
		% within Please indicate the name of the university at which you work	2,5%	12,5%	7,4%	0,0%	4,9%
		% of Total	1,2%	1,2%	2,4%	0,0%	4,9%
Total	Count	40	8	27	7	82	
	% within University support	48,8%	9,8%	32,9%	8,5%	100,0%	
	% within Please indicate the name of the university at which you work	100,0%	100,0%	100,0%	100,0%	100,0%	
	% of Total	48,8%	9,8%	32,9%	8,5%	100,0%	

Seven (87.5 percent) respondents from MUT indicated that university support has an extreme effect on the IRS operation (Table 5.12). The second highest in rank is UNIZULU with six (85.7 percent) respondents. UKZN and DUT had 21 (77.8 percent) and 25 (62.5 percent) respondents who also had the perception of an extreme effect on the IRS operation. From these results, this study finds that MUT and UNIZULU are the most affected institutions in terms of poor university support on research activities, leading to lower research outputs and staff demotivation. Research presented in the SITE and gender round table (2017: 4) and CHE (2010: 22-23) indicate that DUT and UNIZULU are struggling to support their researchers, but the current study finds

UNIZULU is most affected in this regard. A combined comparison between the UoTs and universities found that the effect of university support is uneven across the two sets of universities at 54.3 percent and 45.7 percent, respectively. This shows that UoTs suffer the most from the poor university support factor. These results confirm that UKZN has a commendable academic promotions policy that seeks to support and appreciate the academic roles played by its staff (CHE, 2017: 7).

**Table 5-13: Academic staff skills**

			Crosstab				
							Total
			DUT	MUT	UKZN	UNIZUL	
Extremely	Count		26	7	19	6	58
	% within Academic staff skills		44,8%	12,1%	32,8%	10,3%	100,0%
	% within Please indicate the name of the university at which you work		65,0%	87,5%	70,4%	85,7%	70,7%
	% of Total		31,7%	8,5%	23,2%	7,3%	70,7%
Moderate	Count		9	0	5	1	15
	% within Academic staff skills		60,0%	0,0%	33,3%	6,7%	100,0%
	% within Please indicate the name of the university at which you work		22,5%	0,0%	18,5%	14,3%	18,3%
	% of Total		11,0%	0,0%	6,1%	1,2%	18,3%
Low	Count		5	0	0	0	5
	% within Academic staff skills		100,0%	0,0%	0,0%	0,0%	100,0%
	% within Please indicate the name of the university at which you work		12,5%	0,0%	0,0%	0,0%	6,1%
	% of Total		6,1%	0,0%	0,0%	0,0%	6,1%
Don't know	Count		0	1	3	0	4
	% within Academic staff skills		0,0%	25,0%	75,0%	0,0%	100,0%
	% within Please indicate the name of the university at which you work		0,0%	12,5%	11,1%	0,0%	4,9%
	% of Total		0,0%	1,2%	3,7%	0,0%	4,9%
Total	Count		40	8	27	7	82
	% within Academic staff skills		48,8%	9,8%	32,9%	8,5%	100,0%
	% within Please indicate the name of the university at which you work		100,0%	100,0%	100,0%	100,0%	100,0%
	% of Total		48,8%	9,8%	32,9%	8,5%	100,0%

Seven (87.5 percent) respondents from MUT had the perception that academic staff skills have an extreme effect on the IRS operation (Table 5.13). This perception of

respondents at UNIZULU, UKZN and DUT were six (85.7 percent), 19 (70.4 percent) and 26 (65 percent), respectively. These results show that the skills of accountancy academic staff are the most problematic variable in almost every public university in KZN with MUT being the most affected. These results are in line with the DUT research strategic plan (2018: 2), MUT annual report (2015: 16) and UNIZULU (2016: 8-16), in that DUT, MUT and UNIZULU have academics who are less experienced in research areas. A combined comparison between the UoTs and universities revealed the effect of the skills of the academic staff are uneven across the two sets of universities at 56.9 percent and 43.1 percent, respectively. This is illustrative of how UoTs have been deprived of employing highly skilled academics when compared to universities.

**Table 5-14: Research communication**

Crosstab							
							Total
			DUT	MUT	UKZN	UNIZUL	
	Extremely	Count	26	7	17	7	57
		% within Communication	45,6%	12,3%	29,8%	12,3%	100,0%
		% within Please indicate the name of the university at which you work	65,0%	87,5%	63,0%	100,0%	69,5%
		% of Total	31,7%	8,5%	20,7%	8,5%	69,5%
	Moderate	Count	11	0	7	0	18
		% within Communication	61,1%	0,0%	38,9%	0,0%	100,0%
		% within Please indicate the name of the university at which you work	27,5%	0,0%	25,9%	0,0%	22,0%
		% of Total	13,4%	0,0%	8,5%	0,0%	22,0%
	Low	Count	3	1	0	0	4
		% within Communication	75,0%	25,0%	0,0%	0,0%	100,0%
		% within Please indicate the name of the university at which you work	7,5%	12,5%	0,0%	0,0%	4,9%
		% of Total	3,7%	1,2%	0,0%	0,0%	4,9%
	Don't know	Count	0	0	3	0	3
		% within Communication	0,0%	0,0%	100,0%	0,0%	100,0%
		% within Please indicate the name of the university at which you work	0,0%	0,0%	11,1%	0,0%	3,7%
		% of Total	0,0%	0,0%	3,7%	0,0%	3,7%
Total	Count	40	8	27	7	82	
	% within Communication	48,8%	9,8%	32,9%	8,5%	100,0%	
	% within Please indicate the name of the university at which you work	100,0%	100,0%	100,0%	100,0%	100,0%	
	% of Total	48,8%	9,8%	32,9%	8,5%	100,0%	

As far as research communication is concern, seven (100 percent) respondents from UNIZULU indicated the perception that research communication has an extreme effect on the IRS operation (Table 5.14). Similar perceptions from MUT, DUT and UKZN were seven (87.5 percent), 26 (65 percent) and 17 (63 percent), respectively. Without a doubt, research communication on research matters is the most crippling factor for UNIZULU, MUT, DUT and UKZN. This means poor communication on research related matters is one of the causes of failure of the IRS operation, leading to poor staff participation in research activities.

The study results correspond with UNIZULU (2016: 8-16), which indicates that UNIZULU suffers from poor research leadership. A combined comparison between the UoTs and universities revealed that the effect of poor research communication is uneven across the two sets of universities at 57.9 percent and 42.1 percent, respectively. This is expressive of how badly the UoTs are structured compared to universities.

**Table 5-15: Research planning**

Crosstab							
							Total
			DUT	MUT	UKZN	UNIZUL	
Extremely	Count		27	7	21	6	61
	% within Planning		44,3%	11,5%	34,4%	9,8%	100,0%
	% within Please indicate the name of the university at which you work		67,5%	87,5%	77,8%	85,7%	74,4%
	% of Total		32,9%	8,5%	25,6%	7,3%	74,4%
	Moderate	Count		9	1	4	1
% within Planning			60,0%	6,7%	26,7%	6,7%	100,0%
% within Please indicate the name of the university at which you work			22,5%	12,5%	14,8%	14,3%	18,3%
% of Total			11,0%	1,2%	4,9%	1,2%	18,3%
Low		Count		4	0	0	0
	% within Planning		100,0%	0,0%	0,0%	0,0%	100,0%
	% within Please indicate the name of the university at which you work		10,0%	0,0%	0,0%	0,0%	4,9%
	% of Total		4,9%	0,0%	0,0%	0,0%	4,9%
	Don't know	Count		0	0	2	0
% within Planning			0,0%	0,0%	100,0%	0,0%	100,0%
% within Please indicate the name of the university at which you work			0,0%	0,0%	7,4%	0,0%	2,4%
% of Total			0,0%	0,0%	2,4%	0,0%	2,4%
Total		Count		40	8	27	7
	% within Planning		48,8%	9,8%	32,9%	8,5%	100,0%
	% within Please indicate the name of the university at which you work		100,0%	100,0%	100,0%	100,0%	100,0%
	% of Total		48,8%	9,8%	32,9%	8,5%	100,0%

Seven (87.5 percent) respondents from MUT perceived that research planning has an extreme effect on the IRS operation (Table 5.15). The next in rank is UNIZULU with six (85.7 percent) UKZN and DUT with 21 (77.8 percent) and 27 (67.5 percent), respectively. A combined comparison between the UoTs and universities revealed that the effect of research planning is uneven across the two sets of universities at 55.8 percent and 44.2 percent, respectively. This is again expressive of how poorly the UoTs have been regulated compared to universities. These results confirmed what the DUT research strategic plan (2018: 2) and UNIZULU (2016: 8-16) reported regarding a poor research culture in these universities.

**Table 5-16: Research administration**

Crosstab							
							Total
			DUT	MUT	UKZN	UNIZUL	
Extremely	Count		28	6	21	6	61
		% within Research administration	45,9%	9,8%	34,4%	9,8%	100,0%
		% within Please indicate the name of the university at which you work	70,0%	75,0%	77,8%	85,7%	74,4%
		% of Total	34,1%	7,3%	25,6%	7,3%	74,4%
	Moderate	Count	7	2	3	1	13
		% within Research administration	53,8%	15,4%	23,1%	7,7%	100,0%
		% within Please indicate the name of the university at which you work	17,5%	25,0%	11,1%	14,3%	15,9%
		% of Total	8,5%	2,4%	3,7%	1,2%	15,9%
	Low	Count	5	0	0	0	5
		% within Research administration	100,0%	0,0%	0,0%	0,0%	100,0%
		% within Please indicate the name of the university at which you work	12,5%	0,0%	0,0%	0,0%	6,1%
		% of Total	6,1%	0,0%	0,0%	0,0%	6,1%
	Don't know	Count	0	0	3	0	3
		% within Research administration	0,0%	0,0%	100,0%	0,0%	100,0%
		% within Please indicate the name of the university at which you work	0,0%	0,0%	11,1%	0,0%	3,7%
		% of Total	0,0%	0,0%	3,7%	0,0%	3,7%
Total	Count	40	8	27	7	82	
	% within Research administration	48,8%	9,8%	32,9%	8,5%	100,0%	
	% within Please indicate the name of the university at which you work	100,0%	100,0%	100,0%	100,0%	100,0%	
	% of Total	48,8%	9,8%	32,9%	8,5%	100,0%	

Regarding research administration, respondents from UNIZULU, UKZN, MUT and DUT who perceived that the variable had an extreme effect on the IRS operation were six (85.7 percent), 21 (77.8 percent), six (75 percent), and 28 (70 percent), respectively (Table 5.16). This means that UNIZULU is highly dysfunctional in respect of research administration compared to UKZN, MUT and DUT. When comparing these results with those of research planning above, it is evident that, of the institutions surveyed, MUT respondents had the highest proportion of perceptions of extreme effect of both these variables on the IRS operation. Reports (CHE, 2010: 22-23; UNIZULU, 2016: 8-16; CHE, 2016: 9-30; CHE, 2017: 7) have confirmed that MUT, DUT, UKZN, and UNIZULU all suffer from poor research governance, including research planning.

A combined comparison between the UoTs and universities revealed that the effect of poor research administration is uneven across the two sets of universities at 55.7 percent and 44.3 percent, respectively. This is again expressive of how poorly the UoTs are structured compared to universities.

**Table 5-17: Research leadership**

Crosstab							
							Total
			DUT	MUT	UKZN	UNIZUL	
Extremely	Count		22	7	21	6	56
	% within Leadership		39,3%	12,5%	37,5%	10,7%	100,0%
	% within Please indicate the name of the university at which you work		55,0%	87,5%	77,8%	85,7%	68,3%
	% of Total		26,8%	8,5%	25,6%	7,3%	68,3%
Moderate	Count		4	0	3	1	8
	% within Leadership		50,0%	0,0%	37,5%	12,5%	100,0%
	% within Please indicate the name of the university at which you work		10,0%	0,0%	11,1%	14,3%	9,8%
	% of Total		4,9%	0,0%	3,7%	1,2%	9,8%
Low	Count		11	1	0	0	12
	% within Leadership		91,7%	8,3%	0,0%	0,0%	100,0%
	% within Please indicate the name of the university at which you work		27,5%	12,5%	0,0%	0,0%	14,6%
	% of Total		13,4%	1,2%	0,0%	0,0%	14,6%
Don't know	Count		3	0	3	0	6
	% within Leadership		50,0%	0,0%	50,0%	0,0%	100,0%
	% within Please indicate the name of the university at which you work		7,5%	0,0%	11,1%	0,0%	7,3%
	% of Total		3,7%	0,0%	3,7%	0,0%	7,3%
Total	Count		40	8	27	7	82
	% within Leadership		48,8%	9,8%	32,9%	8,5%	100,0%
	% within Please indicate the name of the university at which you work		100,0%	100,0%	100,0%	100,0%	100,0%
	% of Total		48,8%	9,8%	32,9%	8,5%	100,0%

Seven (87.5 percent) respondents from MUT perceived that research leadership has an extreme effect on the IRS operation (Table 5.17). The next in rank is UNIZULU with six (85.7 percent) respondents with the same perception, followed by UKZN with 21 (77.8 percent) and DUT with 22 (55 percent). It is therefore evident that both the MUT and UNIZULU are suffering from poor research leadership. Moreover, DUT and UKZN share the same experience because more than a half of their respondents indicated research leadership to be a bottleneck.

**Table 5-18: Industry support**

			Crosstab					
							Total	
			DUT	MUT	UKZN	UNIZUL		
Extremely	Count		25	7	22	6	60	
	% within Industry support		41,7%	11,7%	36,7%	10,0%	100,0%	
	% within Please indicate the name of the university at which you work		62,5%	87,5%	81,5%	85,7%	73,2%	
	% of Total		30,5%	8,5%	26,8%	7,3%	73,2%	
	Moderate	Count		9	1	2	1	13
		% within Industry support		69,2%	7,7%	15,4%	7,7%	100,0%
		% within Please indicate the name of the university at which you work		22,5%	12,5%	7,4%	14,3%	15,9%
		% of Total		11,0%	1,2%	2,4%	1,2%	15,9%
	Low	Count		4	0	0	0	4
		% within Industry support		100,0%	0,0%	0,0%	0,0%	100,0%
		% within Please indicate the name of the university at which you work		10,0%	0,0%	0,0%	0,0%	4,9%
		% of Total		4,9%	0,0%	0,0%	0,0%	4,9%
	Don't know	Count		2	0	3	0	5
		% within Industry support		40,0%	0,0%	60,0%	0,0%	100,0%
		% within Please indicate the name of the university at which you work		5,0%	0,0%	11,1%	0,0%	6,1%
		% of Total		2,4%	0,0%	3,7%	0,0%	6,1%
Total	Count		40	8	27	7	82	
	% within Industry support		48,8%	9,8%	32,9%	8,5%	100,0%	
	% within Please indicate the name of the university at which you work		100,0%	100,0%	100,0%	100,0%	100,0%	
	% of Total		48,8%	9,8%	32,9%	8,5%	100,0%	

Table 5.18 shows a perception from the MUT and UNIZULU respondents of seven (87.5 percent) and six (85.7 percent), respectively, regarding the extreme impact of industry support on their IRS operation, followed by UKZN at 22 (81.5 percent) and DUT at 25 (62.5 percent). A combined comparison between the UoTs and universities revealed the effect of industry support is uneven across the two sets of universities at 53.4 percent and 46.6 percent, respectively. This is expressive of how accountancy academic staff from the UoTs are being neglected by industries, with most industry focus being on universities.

## 5.8.2 Open-ended data analysis

The purpose of this section is to state the findings obtained from the open-ended questions (76; 77; and 78) from the respondents, to substantiate the quantitative data

presented in the earlier sections. The intention of this activity was to give respondents room to express their views on issues covered in detail under the two subthemes, in section B and C of the questionnaire. There are three broad questions in this section. These are individually analysed by considering common assertions made by respondents on each of the questions.

- Question 1: What other possible effects do you think that IRS has in research? (Appendix 3: Questionnaire question 76).

To this question, the respondents indicated various responses which have been categorised as follows.

#### **Government intervention:**

Some respondents indicated that the IRS is informed and enforced through government policies. The feelings of these respondents make it apparent that the KZN public universities do not have full ownership over their research strategies and therefore are somehow failing to address and resolve issues from the internal operations.

#### **Self-development:**

This category of respondents was of the view that the university provides researchers with resources they need, which opens up self-development opportunities, including academic promotions. This means, a well-structured and fully funded IRS has the opportunity to equip researchers with all the necessary research skills required.

- Question 2: What do you think needs to be done to improve the IRS operation in your university? (Appendix 3: Questionnaire question 77).

#### **Industry relations:**

Respondents were of the view that their universities need to create strong research relations with the rest of industries so that, ultimately, they can produce academic work that is understandable and recommendable for use by industries. This would help to widen the categories of the research areas.

#### **Research workshops:**

Respondents suggested that more research workshops need to be conducted in order to improve research communications and create awareness about the importance of

research in public universities. These workshops will also help to equip and inform academics with regard to available research support systems, including the benefits of being a researcher.

### **Research resources:**

Some respondents proposed an increase of research resources. This finding makes it clear that KZN public universities have long been desperate for a strong financial support system, including staff skills and proper academic facilities such as, but not limited to, buildings, IT and equipment.

### **Incorporate research into teaching:**

Even though the majority of accountancy academic staff are not research oriented, there were suggestions that research should be incorporated into teaching. This initiative would make accountancy research more relevant to the day-to-day life of the academic accountant staff.

### **Research leadership:**

Reinforcing research leadership is one of the most prominent suggestions made by respondents. Leadership is helpful to ensure research targets are met and research administration problems in the university are reduced to a minimum. Research leadership can also help to motivate and provide support to staff involved in research.

### **Academic workload:**

Some respondents shared that the academic workload needs to be revisited because it is too much. Once the academic workload is sorted out no one will have the excuse of not being active in research.

- Question 3: As far as your department is concerned, please list any other factors that are affecting the IRS operation. This question had two sub-questions: external factors and internal factors. (Appendix 3: Questionnaire questions 78.1 and 78.2).

## **1. External factors**

### **Usage of academic research:**

Respondents were of the opinion that external users do not make use of academic research findings as intended. The possibility is that academic research is misunderstood and therefore misinterpreted and used wrongly.

**Financial support:**

There is poor financial support. This may be a result of the poor relations between these institutions and private industry. Their source of funding is largely government grants.

**Government policies:**

Respondents were of the view that government policies had somehow deprived their universities of autonomy, especially when it comes to academic matters. The truth is that government is a major funder of public universities and has recently reprimanded all university lecturers to produce a normative, weighted, average research output of at least 0.5 units per annum. This decision is therefore not owned by the universities, but by government.

**Accounting professional bodies:**

Respondents were of the view that they are required to align their subject content with the syllabus of the professional bodies of accountants, and should they disregard the profession's requirements, their programmes will be disqualified by these professions resulting in fewer student registrations as course choices are normally reliant on whether the programme is SAICA, CIMA, IRBA, and SAIPA accredited.

**2. Internal factors****Research is for the younger academics:**

Some respondents were of the view that research is for younger academics and not for older academics. This makes it clear that research is perceived by older academics as just a tick-box exercise to gain incentives and promotions.

**Accounting research versus practice:**

This group of respondents expressed that there is no balance between accounting research and accounting practice in industries. Other respondents shared that accountancy is quantitative rather than qualitative, therefore, it does not require research because it is applied in practice. This finding shows that accounting research is somehow far removed from reality.

**Research planning:**

Poor research planning has been revealed to be a major factor affecting IRS operation in KZN public universities. Lack of planning is the cause of staff reluctance to

undertake research because there is no research-related performance standard review at the end of the year.

### **Staff career planning:**

The study further found staff career planning affects IRS operation in KZN public universities. Some academic staff members have career plans far removed from research careers, such as becoming a CA and as good as these plans are they do not speak to the needs of research.

In summary, this section analysed the qualitative data pertaining to the effect of IRS, sentiments by respondents on what can be done to improve the IRS function, and factors influencing the IRS operation in their respective universities.

### **5.8.3 Structural equation model**

The model is a multivariate statistical tool that was obtained using structural relationships, applying a combination of factor analysis and multiple regression analysis techniques. It was used to analyse the structural relationship between measured variables and latent constructs. The study variables were labeled as “Bs” in the mode and table 5.19 describes these variables.

**Table 5-19: Description of variables measured**

<b>B14.</b> IRS allows for research engagement	<b>B15.</b> IRS promotes global research recognised by accountancy bodies
<b>B16.</b> IRS advances accountancy research	<b>B17.</b> IRS delivers innovative research to industry
<b>B18.</b> IRS delivers innovative solutions to community	<b>B19.</b> IRS builds financial strength for the department
<b>B20.</b> IRS promotes high-quality research	<b>B21.</b> IRS exposes accountancy academics to global research level
<b>B22.</b> IRS provides continuous improvement to research staff	<b>B23.</b> IRS nurtures postgraduates to be future researchers and innovation leaders
<b>B24.</b> IRS attracts talents of researchers	<b>B25.</b> IRS attracts workforce to work for accountancy departments
<b>B26.</b> IRS promotes productive academic activities	<b>B27.</b> IRS promotes unified and shared educational experiences
<b>B28.</b> IRS increases quality and extent of research collaboration	<b>B29.</b> IRS enriches individual academics

<b>B30.</b> IRS enables a research training	<b>B31.</b> IRS has a potential to expose the department to research infrastructure
<b>B32.</b> IRS builds research leadership within the department	

a. Dependent Variable: **C45:** Academic staff attitude towards research

“Academic staff attitude towards research” as a dependent variable was labelled as C45. The latent constructs in the model in figure 5.53 are labelled A, B and C.

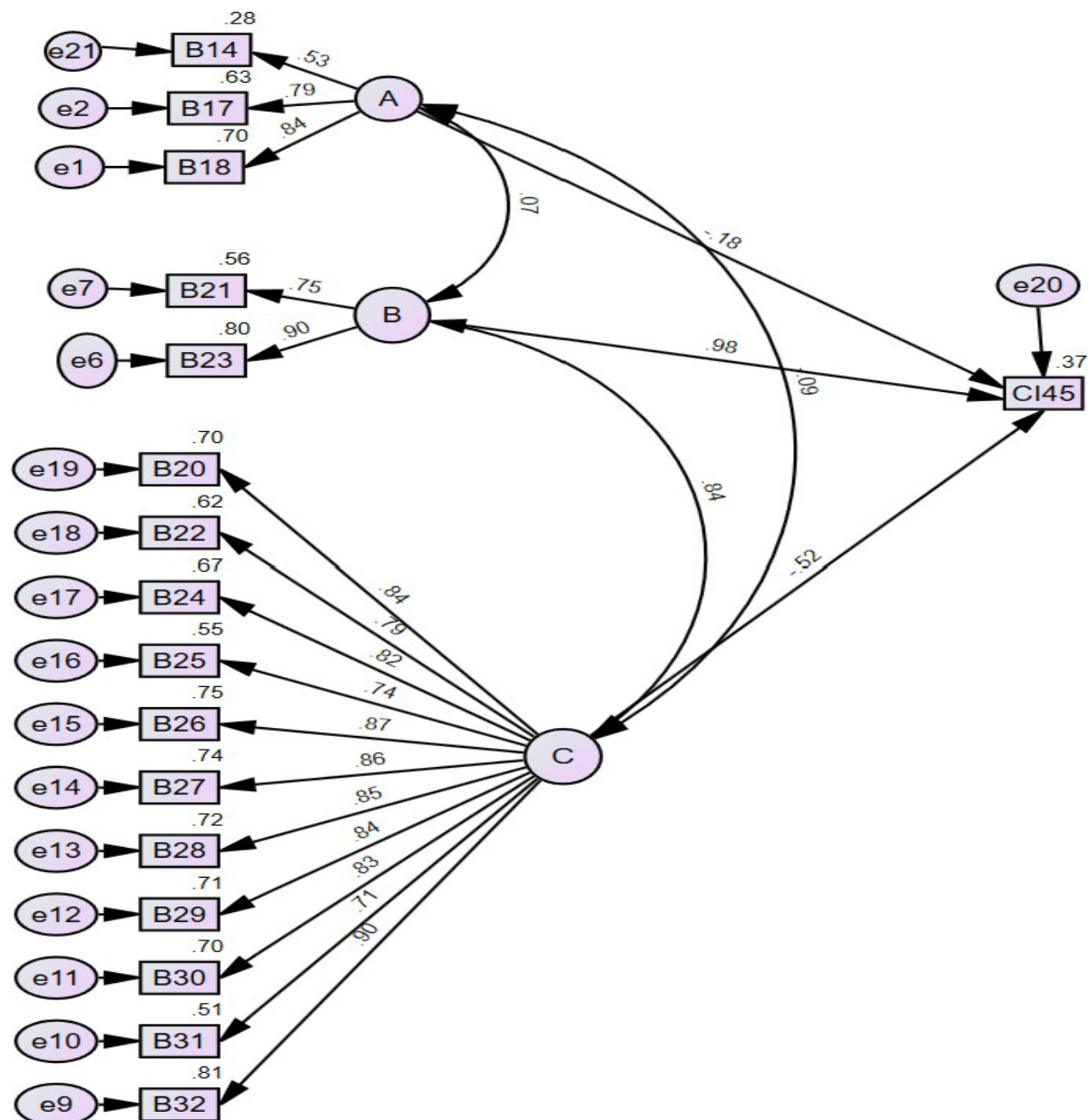


Figure 5-53: Figure 5.53: Structural equation model

The results of the structural equation model in figure 5.53 illustrates that most of the study hypotheses were null and were rejected. In this model, the chi square p-value < 0.001. The result default model showed that the minimum was achieved: Chi-square = 261.854, Degrees of freedom = 114, and Probability level = .000. Positive values indicate a directly proportional relationship between the variables and a negative value indicates an inverse relationship.

The study accepted the following hypotheses:

- Ha 1.8 There is a correlation between IRS exposing accountancy academics to global research level with the attitude of academics towards research engagement
- Ha 1.10 There is a correlation between IRS nurturing postgraduates to be future researchers and innovation leaders with the attitude of academics towards research engagement

The maximum likelihood estimates for the model is shown below:

**Table 5-20: Regression weights: (Group number 1 - Default model)**

			Estimate	S.E.	C.R.	P	Label
B18	<---	A	1.000				
B17	<---	A	.947	.190	4.997	***	par_1
B23	<---	B	1.000				
B21	<---	B	1.027	.132	7.781	***	par_2
B32	<---	C	1.000				
B31	<---	C	.906	.112	8.094	***	par_3
B30	<---	C	.871	.081	10.783	***	par_4
B29	<---	C	.901	.082	11.011	***	par_5
B28	<---	C	.901	.081	11.136	***	par_6
B27	<---	C	.967	.084	11.557	***	par_7
B26	<---	C	1.035	.088	11.764	***	par_8
B25	<---	C	.829	.096	8.616	***	par_9
B24	<---	C	.984	.095	10.390	***	par_10
B22	<---	C	.751	.079	9.561	***	par_11
B20	<---	C	.823	.076	10.849	***	par_12
CI45	<---	B	1.316	.454	2.896	.004	par_13
CI45	<---	A	-.175	.125	-1.403	.161	par_17
CI45	<---	C	-.599	.358	-1.673	.094	par_18
B14	<---	A	.401	.095	4.203	***	par_19

The variables loaded strongly along their various factors (significant p-values indicated by \*\*\*  $p < 0.001$ ). The relationships between sections A and C, and the dependent are not significant.

**Table 5-21: Standardized regression weights: (Group number 1 - Default model)**

	Estimate
B18 <--- A	.837
B17 <--- A	.792
B23 <--- B	.896
B21 <--- B	.745
B32 <--- C	.903
B31 <--- C	.714
B30 <--- C	.834
B29 <--- C	.842
B28 <--- C	.846
B27 <--- C	.860
B26 <--- C	.867
B25 <--- C	.742
B24 <--- C	.819
B22 <--- C	.786
B20 <--- C	.836
CI45 <--- B	.979
CI45 <--- A	-.177
CI45 <--- C	-.515
B14 <--- A	.531

Variables that had poor loading coefficients ( $< 0.60$  on the standardized weights table) were omitted from the model. (The suggested value is  $0.70$ .) The parameters are estimated by maximum likelihood (ML) methods, which (is an iterative procedure that) attempts to maximize the likelihood that obtained values of the criterion variable will be correctly predicted. It is observed that most of the first order weights are greater than  $0.70$ .

**Table 5-22: Correlations: (Group number 1 - Default model)**

	Estimate
A <--> B	.065
C <--> B	.843
C <--> A	-.090

The correlations are strong and positive between B and C, but not significant between the other two relationships.

The suggested acceptable value for relative chi-square, CMIN/DF should not be greater than 5 which are used to reduce dependency on sample size. However, the cut-off points for TLI, CFI, NFI and IFI is between zero to one. A good model is indicated by RMSEA value of less than or equal to 0.05.

**Table 5-23: CMIN**

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	56	261.854	114	.000	2.297
Saturated model	170	.000	0		
Independence model	34	1252.212	136	.000	9.207

CMIN is a Chi-square statistic comparing the tested model and the independence model to the saturated model. The ratio, CMIN/DF, the relative chi-square, is an index of how much the fit of data to model has been reduced by dropping one or more paths. The CMIN/DF is less than the acceptable value of 5 (2.297). This meets the CMIN condition.

**Table 5-24: Baseline Comparisons**

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.791	.751	.870	.842	.868
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

This goodness of fit indices compares the model to the independence model rather than to the saturated model. The Normed Fit Index (NFI) is simply the difference between the two models' chi-squares divided by the chi-square for the independence model. For this data, the NFI is 0.869, which is only marginally lower than recommended value of 0.9 for a good fit. The Comparative Fit Index (CFI) uses a similar approach (with a noncentral chi-square) and is said to be a good index for use even with small samples. It ranges from 0 to 1, like the NFI, and 0.95 (or 0.9 or higher) indicates good fit. The CFI value is 0.868.

**Table 5-25: Parsimony-Adjusted Measures**

Model	PRATIO	PNFI	PCFI
Default model	.838	.663	.727
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

PRATIO is the ratio of how many paths are dropped to how many that could have been dropped (all of them). The Parsimony Normed Fit Index (PNFI) is the product of NFI and PRATIO, and PCFI is the product of the CFI and PRATIO. The PNFI and PCFI are intended to reward those whose models are parsimonious (contain few paths). A value greater than 0.900 is considered acceptable. This model has a value slightly less than the recommended (.838).

**Table 5-26: RMSEA**

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.127	.106	.147	.000
Independence model	.318	.302	.335	.000

The Root Mean Square Error of Approximation (RMSEA) estimates lack of fit compared to the saturated model. RMSEA of .05 or less indicates good fit, and between .05 and .08 an adequate fit. LO 90 and HI 90 are the lower and upper ends of a 90% confidence interval on this estimate. The model is not adequate; the PCLOSE p value that tests the null that RMSEA is no greater than .05, is significant. The RMSEA value is 0.127.

Figure 5-54: Structural Model on the factors affecting IRS operation

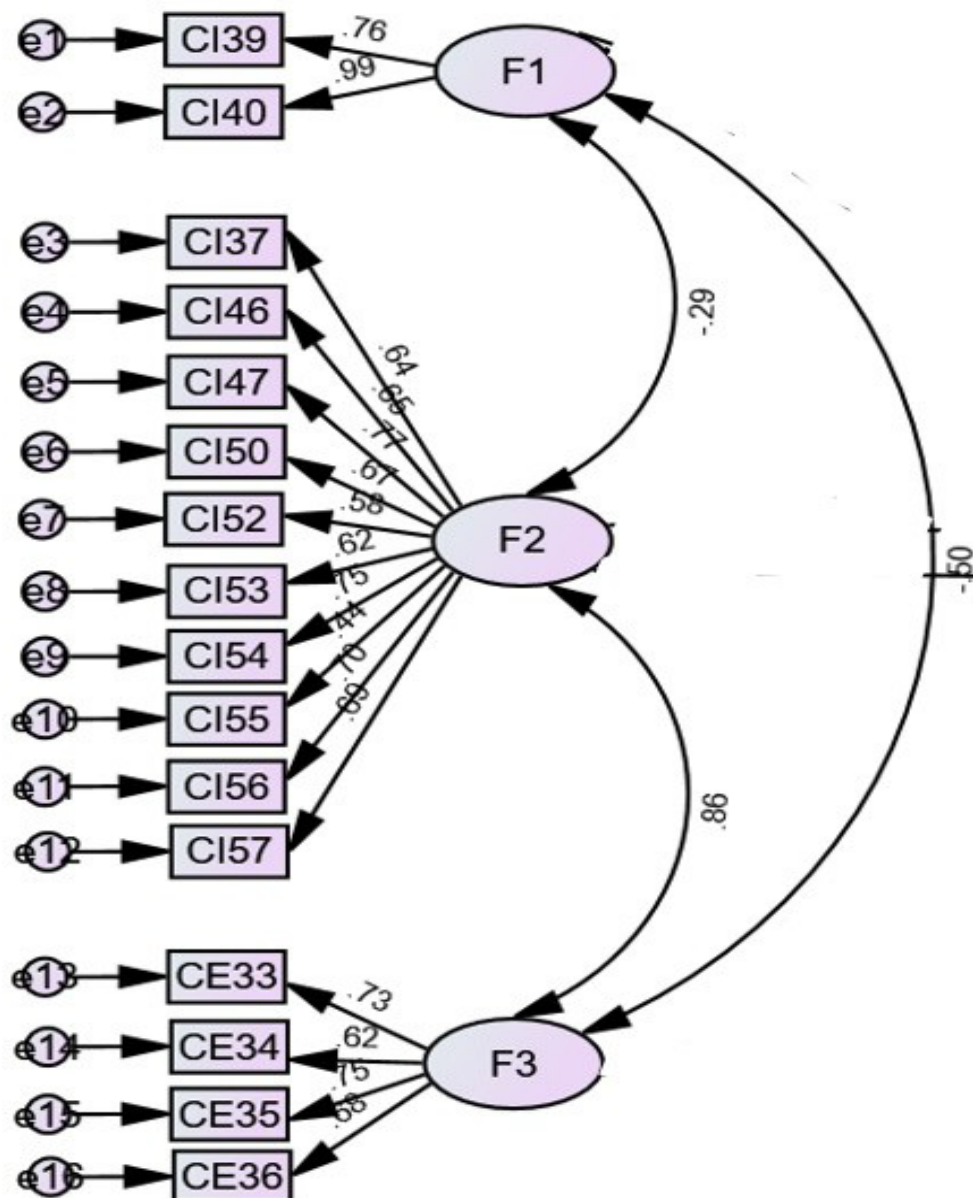


Figure 5-54 demonstrates that the latent factors are labelled as F1, F2, and F3. F1 factors can be named as 'personal factors', F2 is 'organisational factors', and F3 is 'external factors'. The results show that F1 versus F2 and F3 have a negative relationship at -.29 and -.50 respectively. F2 and F3 on the other hand show a positive relationship at .86. This means that the external factors are influential on the internal research operations of the KZN public universities.

**Table 5-27: Regression Weights on the factors affecting IRS operation**

			Estimate	S.E.	C.R.	P	Label
(C139) Academic staff knowledge	<--- F1		1.000				
(I45) Academic staff skills	<--- F1		1.449	.278	5.214	***	par_1
(C140) Research administration	<--- F2		1.000				
(C137) Research decision making	<--- F2		.863	.170	5.092	***	par_2
(C146) Staff incentives	<--- F2		1.319	.227	5.811	***	par_3
(C147) Academics with industry experience	<--- F2		.880	.168	5.237	***	par_4
(C150) Organisational culture	<--- F2		.703	.153	4.602	***	par_5
(C152) Research leadership	<--- F2		.754	.154	4.895	***	par_6
(C153) Staff promotion policy	<--- F2		.871	.153	5.687	***	par_7
(C154) Job security for staff	<--- F2		1.018	.280	3.630	***	par_8
(C155) Information technology	<--- F2		.707	.130	5.431	***	par_9
(C156) Status of the university	<--- F2		.673	.125	5.374	***	par_10
(C157) Government research policies	<--- F3		1.000				
(CE33) Professional membership	<--- F3		.956	.181	5.286	***	par_11
(CE34)...External research funding	<--- F3		.775	.122	6.371	***	par_12
(CE35)...Publishing in research journals	<--- F3		.548	.095	5.754	***	par_13
(CE36) Decentralization of research admin into faculties	<--- F1		.011	.181	.060	.952	par_20
(CI45) Academic staff attitude towards research	<--- F3		-.055	.667	-.082	.934	par_21
(CI45) Academic staff attitude towards research	<--- F2		.920	.611	1.505	.132	par_23

Table 5-27 shows that the variables loaded strongly along their various factors (significant p-values indicated by \*\*\*  $p < 0.001$ ).

As an alternative, bivariate correlation was performed on the IRS factors. The results indicate a directly proportional relationship between the variables and a negative value indicates an inverse relationship. All significant relationships are indicated by a \* or \*\*. The results are shown in table 5-28.

Table 5-28: Correlations		F1	F2	F3
F1	Pearson Correlation	1		
	Sig. (2-tailed)			
	N	82		
F2	Pearson Correlation	.748**	1	
	Sig. (2-tailed)	.000		
	N	82	82	
F3	Pearson Correlation	-.362**	-.227*	1
	Sig. (2-tailed)	.001	.040	
	N	82	82	82

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

The correlation value between “F1” and “F2” is 0.748 and significant at 0.000 level. This is a directly related proportionality. That is, an increase in the organisational factors results in an increase in the personal factors. Link between F1 and F3 is - .362 and it confirms similar results in figure 5-54 of the structural model. That is, an increase in the external factors results in a decrease in the personal factors.

## **5.9 CONCLUSION**

This chapter presented, interpreted and discussed the analysis of the data collected in the research study. It has applied open-ended analysis and different methods of quantitative analysis to obtain both descriptive and inferential statistics. It was found that most of the respondents indicated that external and internal factors strongly affect the IRS operation. The issue of dysfunctionality of IRS at MUT was found to be highly connected with poor government support, poor university support, lack of academic staff skills, poor research planning, poor research leadership, and poor industry support, including its dictatorship approach over academic accountancy.

Furthermore, it was evident that UNIZULU was extremely disabled by the influence of accountancy professional bodies over graduates, poor research communication, and poor research administration. DUT and UKZN were also affected by these factors but not as much as the other two public universities. The Pearson’s correlation tests, regression tests and ANOVA tests were conducted to test the proposed conceptual model for the effect of IRS on the attitude of academics towards research engagement.

The following chapter will discuss the key findings arising from the analysis of the findings.

## **CHAPTER SIX: CONCLUSIONS AND RECOMMENDATIONS**

### **6.1 INTRODUCTION**

The previous chapter presented the findings resulting from the survey questionnaire administered to public universities in KZN, with specific reference to accountancy academics. The focus of this chapter is to summarise and discuss the findings of the study in relation to the literature review in chapters 2 and 3. The literature review was used as a source of information for questionnaire development, with objectives set to answer these research questions. Empirical data was broadly analysed with the help of data analyst specialists and all variables in the questionnaire were considered. The analyses of results were presented in bar graphs and tables, indicating high and low percentages per variable. In the following sections, percentages are used to compare the empirical findings with what has been indicated in the literature chapters.

### **6.2 ACHIEVEMENT OF RESEARCH OBJECTIVES**

Based on the findings of the study, it is imperative to present details on how the research objectives were accomplished.

#### **6.2.1 Objective 1: To investigate the effect of IRS on the attitude of accountancy academic staff towards research engagement**

According to Mbaka and Mugambi (2014: 63), the success of research is dependent on the IRS ability to allow for staff to engage in research. This was confirmed by the findings of this study with most respondents, 34 (41 percent) and 24 (29 percent) that agreed and strongly agreed that IRS allows staff to engage in research. The Centre for Leadership in Research Development (2012: 2-3) and Todtling (2014) perceive that public universities' IRS, especially those operating in disadvantaged community areas, lack innovation, resulting in poor global research exposure. This view was confirmed by the findings of this study, with 66 percent of respondents highlighting IRS as important for their universities to create a platform for international collaboration and research development.

The findings showed 78 percent of respondents agreed that IRS seeks to advance accountancy education. Consequently, the majority (51 percent) of the respondents agreed that IRS delivers innovative solutions to the wider community. This finding is

confirmed by the literature review, which found that research and community engagement provide a coherent framework for understanding peoples' social life (Deegan and Unerman, 2006: 4). According to Kumar and Eyono Obono (2013: 34), the primary task of IRS is to promote research in the university. Eighty-four percent of the respondents agree with the view that IRS promotes a departmental culture, which recognises and supports development of the widest possible range of high-quality research.

Lubbe (2013: 111) claims IRS delivers innovative solutions to industries and this was supported by the majority of respondents (49 percent). However, the correlation results of the study revealed a negative relationship between the ability of IRS to deliver innovative solutions to industries and the attitude of accountancy academics towards research engagement. The results mean that though the university-industry affiliation is positive, however, the behaviour of accountancy academics towards research is not influenced by the university and industry relations, their research engagement is about fulfilling their personal desires. This proves there is still a disparity of ideas between academics, universities and industry practitioners.

Ofori and Atiogbe (2012: 68) state that IRS offers a financial advantage to the university. In this regard, 31 (38 percent) and 25 (30 percent) of respondents strongly agreed and agreed with this claim. According to Kumar and Eyono Obono (2013: 34), policy is central to promoting a particular culture in the organisation. There was strong agreement (40: 49 percent) and agreement (29: 35 percent) by the respondents that IRS promotes a departmental culture that recognises and supports the development of the widest possible range of high-quality research

Seventeen, 34 (41 percent) and 28 (34 percent) of respondents strongly agreed and agreed with the statement that IRS helps accountancy academics to establish themselves as key partners of choice for research collaborations at a global level. Likewise, Randall *et al.* (2014: 149) state that IRS is a gateway for researchers to academic collaborations. Gopalkrishna (2010) shares the view that IRS empowers the creative autonomy of individuals so they can find spaces to lead the global research agenda across the world.

The results of the study were further confirmed, with 37 (45 percent) and 33 (40 percent) of the respondents who strongly agreed and agreed that IRS provides for a

continuous improvement of research staff. On whether IRS nurtures postgraduate researchers to become the next generation of accountancy research and innovation leaders, the statement was strongly agreed and agreed to by 36 (44 percent) and 34 (41 percent) of the respondents, respectively. Likewise, the UJ (2016: 8) and Toolsee (2011: 49-51) find that IRS investment includes nurturing and grooming postgraduate students to become the next generation of research leaders.

Of the respondents, 33 (40 percent) and 27 (33 percent) strongly agreed and agreed, on the one hand, with the statement that IRS attracts a talented workforce to the field of accountancy. On the other hand, 36 (44 percent) and 30 (37 percent) of respondents agreed and strongly agreed that IRS attracts a diverse workforce to the university. Similarly, the Centre for Leadership in Research Development (2012: 2-3) states that IRS must attract highly qualified people, “the best and brightest” to universities to enhance their human capital. James and Guthrie (2011) and Mainoma and Aruwa (2008: 1) propose that IRS is vital to help academics become productive in their core academic activities. This was confirmed by 30 (37 percent) and 24 (29 percent) of the respondents that strongly agreed and agreed that IRS is important to enhance academic activities. There are 35 (43 percent) and 24 (29 percent) of the respondents who strongly agreed and agreed that IRS promotes a more unified and shared educational experience among academics.

These results are supported by Toolsee (2011: 50-51) who states that IRS plays a major role in promoting academic staff cohesiveness and shared educational experiences. Northcott and Linacre (2013) report that IRS should inspire academics to engage in ambitious research projects. In this regard, 33 (40 percent) and 29 (35 percent) of respondents strongly agreed and agreed that IRS increases the quality and extent of research collaboration in the university’s RFAs. On the statement whether IRS enriches individual academics, 32 (39 percent) and 31 (38 percent) of the respondents strongly agreed and agreed with the statement. In this regard, the UJ (2016: 8) shares similar sentiments that IRS has the potential to financially benefit researchers.

There were 34 (41 percent) and 31 (38 percent) of the respondents that agreed and strongly agreed that IRS enables a research training environment by blending research, teaching and service. These results are in line with Chan (2015) who

determined that IRS enables research training opportunities for academics such as workshops, conferences and seminars. Regarding whether IRS has the potential to provide the accountancy department with access to a world-class research infrastructure, 30 (37 percent) and 23 (28 percent) of the respondents agreed and strongly agreed with the statement. Oxford University (2017) and Ofori and Atiogbe (2012: 68) are also in agreement that IRS must be able to generate sufficient financial muscle to sustain the university's global research infrastructure and other research activities. There are 34 (41 percent) and 27 (33 percent) of the respondents that agreed and strongly agreed that IRS builds research leadership within the department. These results are in line with the Ministry of Education (2004) stating that IRS should maintain originality, significance, and rigour in research. This means the university does not decide what needs to be researched; it is a matter for individual researchers or research groups to decide on projects to be undertaken.

Open-ended statements results are as follows:

On the question 'what other possible effects do you think IRS has', some respondents mentioned that IRS is informed and enforced through government policies. The feelings of these respondents make it apparent that the effect of IRS is characterised by external forces. These results confirmed the theory of Perkmann *et al.* (2013: 427) and Kathleen and Henning (2010: 29) that the institutional theory has three factors, namely individuals' characteristics, organisational context and institutional context.

Some of the respondents shared that the university supports them with needed research resources, which opens up self-development opportunities, including academic promotions. The results confirmed the institutional theory proposed by Kathleen and Henning (2010: 29) and Brinkschroder (2014: 2) that the internal content of the organisation includes factors such as staff requirements.

Moreover, there respondents were asked what they think needs to be done to improve the IRS operation in their university. The respondents' answers varied according to their experiences. These include to create industry relations, research workshops, research resources, and incorporate research into teaching, along with research leadership, and revision of the academic workload to incorporate research loads.

## **6.2.2 Objective 2: To investigate factors affecting IRS at an operational level in KZN public universities**

### **6.2.2.1 External factors**

According to Syed and Veronica (2015: 117) and Brenton (2011), government research policies have a strong influence over public university research. The empirical findings of this study support this, with 82 percent of respondents agreeing that government research policies have a strong impact on the IRS operation. In addition, 82 percent of respondents agreed that professional membership of accountancy academics has an impact on the IRS operation. These results are in line with the findings by Lubbe (2013: 111), in that the content desired by the professional bodies of accountancy has a strong influence over university education.

Teisman and Klijn (2011: 297) expose that the availability of research funding plays a major role in university research activities. The study found similar results, with 93 percent of respondents agreeing that research funding affects the IRS operation. Imhonopi and Urim (2014: 1) indicate that the requirements for publishing in research journals have an impact on academic staff participation in research activities. This was supported by 98 percent of the respondents from the current study.

### **6.2.2.2 Internal factors**

Public universities that were previously disadvantaged by the apartheid system in SA are still affected by poor administration systems (Rosentreter, 2012: iii; Nieuwoudt and Wilcocks, 2005). This was confirmed by 84 percent of respondents that agreed research administration affects the IRS operation. However, 41 percent of the respondents disagreed that the decentralisation of research administration into academic departments affects the IRS operation. These results are contrary to the findings of Ngibe (2015: iii), who found that research administration in the public universities affects research operations.

Job significance has an influence on employees' performance (Irawanto, 2015: 159; Zainnudin and Isa, 2011: 641). However, the findings in this study reveal that 63 percent of respondents disagreed that job significance affects the IRS operation. The majority (88 percent) of respondents agreed that research decision-making affects the IRS operation. Johannes *et al.* (2012: 440) state that public universities should involve qualified and well-experienced academic staff in the decision-making processes.

Mutula (2011) claims that strategy is affected by the fact that top management has delegated major research responsibilities into faculties other than academic departments. The results also reveal a large number (71 percent) of the respondents agree that decentralisation of research into faculties affects the IRS operation.

A study conducted by Esuh *et al.* (2013: 64) found that poor employee job security results in poor organisational performance. In the current study, 62 percent of respondents agreed that job security affects the IRS operation. Literature reveals a link between accountants' reluctance to do research and a belief that new knowledge in accountancy is created in industry and not by the universities (Lubbe, 2013: 110; and Pouris, 2012: 30). The study also found that 89 percent of respondents agreed that academic staff with industry experience affect the IRS operation.

Estache and Garsous (2012: 1) are of the view that the quantity and quality of infrastructure have an influence on the productivity in the workplace. This was supported by 88 percent of respondents from this study that agreed institutional infrastructure affects the IRS operation. Institutional research governance was also investigated and 86 percent of the respondents agreed it affected the IRS operation. Olum (2014: 14) is of the opinion that institutional research governance needs to ensure the university has exemplary research leadership.

Lubbe (2013: 110), Nieuwoudt and Wilcocks (2005) and Dundar and Lewis (1998) are of the view that the promotion policy related to academic staff is a predictor of their performance. Similarly, in the current study, the majority (90 percent) of respondents agreed the accountancy academics' promotion policy adopted by the university affects the IRS operation. Regarding the location of the university, 84 percent of respondents agreed IRS operation is affected by the location of the university. The results are in line with Goodfellow (2014), who also established that rural universities find it difficult to overcome challenges in competing with their metropolitan counterparts.

#### **Open-ended statements results are as follows:**

On the question as to 'what other possible factors do you think affect IRS operation in your university', respondents mentioned eight critical factors. These include the usability or applicability of academic research, access to financial support, government policies, and research perception by accounting professional bodies, along with

research being for younger academics, accounting research versus practice, and research planning, as well as staff career planning.

### **6.2.3 Objective 3: To assess accountancy academic staff perceptions regarding the extent to which these challenges affect IRS at an operational level in KZN public universities**

Respondents perceived that external and internal factors affected the IRS operation in KZN public universities. For example, 82 percent of the respondents rated staff commitment (internal factor) as extremely affecting IRS operation, and 70 percent rated professional accountancy bodies (external factor) as also having an extreme effect on the IRS operation. Almost 70 percent of respondents rated government support, university support, academic staff skills, and research communication, in addition to research planning, research administration, research leadership, and industry support, as factors that extremely affect the IRS operation. Many authors considered in the literature review support the results that external and internal factors have a strong effect on the success of the institutional operation (Brenton, 2011; Lubbe, 2013: 111; Drennan and Clarke, 2009: 484; Rosentreter, 2012: 6; Al Hinai and Bajracharya, 2014: 17; Henrekson and Jakobsson, 2012: 212; Ngibe, 2015: iv).

## **6.3 CONCLUSIONS REGARDING OBJECTIVES**

This section presents conclusions reached based on the findings of the study, (analysed in Chapter 5) for each of the supporting objectives of the study. These conclusions are based on a statistical analysis of the empirical findings and hypotheses tested, as indicated in the next section. The discussions on the conclusions of these objectives cover variables included in the questionnaire of this study that were identified from the literature review and based on the three study objectives. The questionnaire was distributed to the target respondents in order to gather primary data. It is concluded that the IRS is important where the attitude of accountancy academic staff towards research engagement is concerned.

### **6.3.1 Sub-objective 1 – Effect of IRS on the attitude of accountancy academics towards research engagement**

This objective seeks to assess the effect of the existing IRS on the attitudes of accountancy academics towards research engagement. Based on the respondents'

feedback, it is noted that there was a high level of agreement with the following statements:

- IRS creates a space within which academic staff can engage in research activities.
- IRS has the potential to promote globally recognised research.
- IRS delivers innovative solutions to industry and to the wider community.
- IRS is perceived to financially benefit only the academic departments rather than the researchers.
- IRS fosters a departmental culture that recognises and supports the development of the widest possible range of high-quality research.
- IRS is helpful to accountancy academics to establish themselves as key partners of choice for research collaborations.
- IRS nurtures postgraduate researchers to become the next generation of accountancy research and innovation leaders.
- IRS attracts a talented workforce to service the departments of accountancy.
- IRS is a wing of the academic departments used to achieve a high level of productivity in the core academic activities.
- IRS promote a unified and shared educational experience among the academics.
- IRS builds research leadership and increases the quality and extent of research collaboration in a university's RFAs.
- IRS provides academic departments with access to a world-class research infrastructure.

The use of the proposed conceptual model in this study has help the researcher to answer the critical question, if whether IRS affects attitudes of the accountancy academic staff towards research enagement. In this regard, testing the model has exposed important associations between these variables and results are shown in section 6.3.4 below.

### **6.3.2 Sub-objective 2 – Factors affecting IRS operation**

With regard to the challenges or factors affecting the IRS operation, it was clear that both the internal and external environmental factors are heavily crippling the IRS operation in KZN public universities.

With regard to the external factors it is concluded that:

- External factors, such as government research policies, professional membership of accountancy academics, availability of external research funding, and requirements for journal article publication, have strong and significant effects on the IRS operation. It is, therefore, concluded that these variables remain a challenge for accountancy academics in KZN public universities.

With regard to the internal factors it is concluded that:

- Internal factors affecting accountancy academics can be divided into two categories: intrinsic and extrinsic factors. Intrinsic factors include academic staff skills, knowledge and understanding, and academic staff career. Extrinsic factors include organisational support and staff incentive policy, academic workload, job characteristics, and research decision-making, along with IT, institutional infrastructure, research communication and feedback, as well as job security, university promotion policy for accountancy academics, university status, and research administration. In addition, other extrinsic factors are research planning, university culture, research management and leadership, and staff gender and age, as well as academic staff commitment, staff working against the power structure, and location of the university. It is concluded that both the intrinsic and extrinsic factors are significant factors affecting the IRS operation in KZN public universities, with specific reference to accountancy academics.

### **6.3.3 Sub-objective 3 – The accountancy academic staff perceptions on the extent to which the internal and external factors affect IRS operation**

- With reference to the respondents' degree of perception on the extent to which the internal and external factors affect the IRS operation, it is concluded that government support, professional membership of accountancy academics, academic staff commitment, university support, academic staff skills, research communication, research planning, research administration, research leadership, and industry support extremely affect the IRS operation in the public universities in KZN.
- A cross-tabulation test revealed that the perception of the extent to which government support affects IRS operation was similar in both the UoTs and

universities. Therefore, it is concluded that both the UoTs and universities from KZN are highly deprived of government research support.

#### **6.3.4 Sub-objective 4: Propose a conceptual model on the effect of IRS on the attitude of academics towards research engagement**

Chapter 4 of the study discussed available institutional theories, including the theory of planned behaviour. The combination of the aforementioned theories was aimed at determining whether a theory for the effect of IRS on the attitudes of academics towards research engagement is available in the body of knowledge. A gap regarding this knowledge was identified, forming the subject matter of this study. This section covers conclusions regarding the relationship(s) between the variables in 'the effect of IRS' and 'attitude of accountancy academics towards research'. A bivariate correlation was performed on the (ordinal) data. The results are found in the structural model in figure 5.53 (Chapter 5). The following hypotheses have been accepted.

- Ha 1.8 There is a correlation between IRS exposing accountancy academics to global research level with the attitude of academics towards research engagement; and
- Ha 1.10 There is a correlation between IRS nurturing postgraduates to be future researchers and innovation leaders with the attitude of academics towards research engagement.

Moreover, the null hypotheses were found on the following variables:

The attitude of accountancy academics towards research engagement had no correlation with:

- Ha 1.1 IRS allowing for research engagement;
- Ha 1.2 IRS promoting global research recognised by accountancy bodies;
- Ha 1.3 IRS advancing accountancy research;
- Ha 1.4 IRS to deliver innovative research to industry.
- Ha 1.5 IRS to deliver innovative solutions to the community;
- Ha 1.6 IRS building financial strength for the department;
- Ha 1.7 IRS promoting high-quality research;
- Ha 1.9 IRS providing continuous improvement to research staff;
- Ha 1.11 IRS attracting talents of researchers;

- Ha 1.12 IRS attracting workforce to work for the department;
- Ha 1.13 IRS promoting productive academic activities;
- Ha 1.14 IRS promoting unified and shared educational experiences;
- Ha 1.15 IRS increasing quality and extent of research collaboration;
- Ha 1.16 IRS enriching individual academics;
- Ha 1.17 IRS enabling research training;
- Ha 1.18 IRS having a potential to expose the department to global research infrastructure; and
- Ha 1.19 IRS building research leadership within the department.

## **6.4 IMPLICATIONS**

The proposition of this study is twofold: contribution to theory and to KZN public universities.

### **6.4.1 Implications of IRS theory**

The intent of this study is to contribute to the body of knowledge and has proposed a conceptual model on the effect of IRS on the attitude of accountancy academic staff towards research engagement. There is no study that has previously developed a conceptual model of this nature.

### **6.4.2 Implications for public universities practice**

Practically, this study will contribute to an understanding of the various challenges facing the IRS operation in KZN public universities. These challenges include external factors, such as: government research policies, accountancy bodies, external research funding, and publication requirements for research journal. The internal factors include: academic staff skills, knowledge and understanding, and academic staff career, in addition to organisational support and staff incentives, academic workload, job characteristics, and research decision making, as well as IT, institutional infrastructure, research communication and feedback, and job security, along with university promotion policy for accountancy academics, university status, research administration, and research planning. Other internal factors are: university culture, research management and leadership, staff gender and age, as well as academic staff commitment, along with staff working against the power structure, and location of the university. The gathered information from this study can be used to draw up a plan of

action to improve university research strategy, with specific reference to accountancy academic departments.

## **6.5 RECOMMENDATIONS OF THE STUDY BASED ON THE FINDINGS**

The recommendations for this study are based on the empirical findings or hypotheses of the study to assist in understanding the effect of IRS and factors affecting the IRS operation in the accountancy academic departments in public universities in KZN. The recommendations are presented in two parts: for the public universities and for further research.

### **6.5.1 Expose accountancy academics to international research platforms**

- It is recommended that academics be exposed to different research exchange programmes. For instance, exchanging academic staff with other international tertiary institutions. This initiative has the potential to increase the scope of academic staff engagement in research through collaborative research publications and other research means.
- The faculty, with assistance of its academic departments, must consider developing a multi-disciplinary team of faculty members from multiple departments. This approach can be a mechanism for leveraging department strengths and sharing limited resources, while providing greater international opportunities for academics.

### **6.5.2 Nurture postgraduates to be future researchers and innovation leaders**

- Academic staff need to collaborate with post-graduate students in their research activities, to allow for more publications and continuity of research engagement in the department.
- More supervision of postgraduate students is encouraged with reduced other loads.

### **6.5.3 Addressing perilous factors on IRS operation**

- Public universities are encouraged to exercise their autonomy in setting their own research policies without any pressure from government. However, policy makers must be cognisant of the government research grant implications in their decision-making process.

- An annual academic performance review is a normal activity at almost all institutions of higher education. Therefore, it is recommended that the academic accountancy departments must assess research outputs annually or semi-annually. The departments should also undertake follow-ups on staff engagement in research activities. In doing this, the departments must develop an ongoing strategic research planning process that defines quantifiable targets and establishes clearly stated actions and responsibilities. Any possible and identified problem must be well attended to and necessary adjustments made, in order to ensure IRS continues with as few obstacles as possible. However, a few matters must be considered when dealing with IRS performance evaluation. Firstly, the institution must be clear whether IRS attracts both government and industrial support. Secondly, whether IRS seeks to produce significant numbers of PhD and master's students. Thirdly, whether IRS seeks to train undergraduate students. Fourthly, whether IRS performs bottom-up or top-down goal-oriented research. Lastly, whether it focuses on theoretical research or applied research.
- Accountancy academics must take ownership of the performance plan and agree on the terms and conditions of the performance plan. They must hold the principal responsibility for the quality, amount and type of research results.
- Top management should ensure that there are research workshops to educate academic staff on the national research vision, focus areas, targets and how to attain those targets.
- It is recommended that research must be included in the job description of accountancy academics.
- Promotion policy for accountancy academics into senior positions must consider, among other aspects, the postgraduate degrees and research contributions.
- Top management should offer research training and development that is relevant and aimed at building the research skills of accountancy academics, such as how to prepare journal articles for publication, conference presentations, how to do supervision, and write books or chapters in books.
- It is recommended that institutions must employ multi-skilled academic staff that includes qualified doctors, professors and post-doctoral fellows, with some having

industry experience and others academic experience. However, these individuals must have a passion for research and want to grow as academics.

- It is recommended that adequate research administration processes must be established, such as support services (research centres) and the administration of research grants. This may include improvement of research infrastructures.
- Researchers must be recognised, motivated, encouraged, and monetarily compensated for their research outputs. It is suggested that each university should set its own policy to administer its reward process. For example, the researcher must be given a certain amount of cash for the first three (or whatever number seems appropriate) papers published in a year. This policy will help to ensure a balance between research and teaching because when researchers are compensated for every research paper published, the quality of teaching and learning might be compromised.
- Top management must improve or create a properly designed academic workload that will allow for academics' engagement in research.
- Top management should ensure there is gender and race balance when recruiting academic staff.
- The study recommends that KZN public universities establish strong and proper channels of research communication with the institution.
- The use of research workshops and focus groups is recommended as forms of communication. In this regard, academic staff, including HODs, must be dedicated to address communication research obstacles wherever they may be found.
- Public universities in KZN should ensure that there are proper IT systems in place to allow for IRS operation. These may include availability of up to date statistical research systems, access to the internet, and academic staff training to use these facilities.
- Academic accountancy departments should develop key RFAs aimed at addressing issues of accountancy in education.

## **6.6 LIMITATIONS OF THE STUDY**

Firstly, the key limitation of this research is that it is confined to accountancy academic departments from KZN public universities, and those previously disadvantaged by an apartheid legacy. Secondly, the results cannot be generalised, as there is a need to conduct this research in other SA provinces, to further endorse the study findings'

reliability prior to any generalisation being claimed. Another limitation of the study is the withdrawal of some academics from participating in the study, as they deemed it fit to not continue taking part in the study. There were no interviews conducted, although there was space provided on the questionnaire for respondents to express their ideas beyond the Likert-scaled statements, which helped to obtain some qualitative data. Nevertheless, the Ethical Clearance letter and the researcher's identification details were used to prove the intent of the study and to request support of the respondents. Moreover, the study did not consider academics that were not from the schools of accountancy.

## **6.7 RECOMMENDATIONS FOR FURTHER RESEARCH**

This study set out to explore the effect of IRS and factors affecting its operation in KZN public universities, with specific reference to accountancy academics. Based on the findings of this research, it is recommended that further research in accountancy be conducted to explore:

- The effect of IRS and factors affecting its operation, with large samples, and different methodologies, at other institutions of higher education, both public and private, particularly on the African continent.
- Further research should assess the institutional research policy design and implementation challenges. This will aid in gaining a more in-depth understanding as to why public universities are often the last to implement changes.
- Research on resource-based monitoring of SA public universities.
- A qualitative study on the effect of the collapse of IRS in KZN public universities.
- The role of government in promoting proper research governance and research efficiency of SA public universities.

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# APPENDICES

## APPENDIX 1: Introductory Letter



Faculty of Management Sciences  
Department of Public Management & Economics

Date:

Dear Participant,

I am currently undertaking a research project titled **“The effect of institutional research strategy on the attitudes of accountancy academics towards research engagement: a case study of Higher Education Institutions in KwaZulu-Natal”**. The study aims to explore the effect of the existing IRS and factors affecting its operation in the public institutions of higher education in KZN.

Your participation in this study will be greatly appreciated. The research will be self-conducted by the researcher using a questionnaire which you will need to complete and hand it back to me. Participation is voluntary and you are free to withdraw from the study at any time. The information that you give will only be used for research purposes, and your identity and individual answers will be kept totally confidential. Should you wish to discuss this further, please feel free to contact me or my supervisor Dr LM Lekhanya.

Your assistance will be much appreciated.

Yours faithfully,

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**Student**

Contact Details

Name: Mr Zwelihle Nzuza

Cell Number: 076 444 2110

E-mail Add: [zwnzuza@gmail.com](mailto:zwnzuza@gmail.com)

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**Supervisor / Promoter**

Contact Details

Name: Dr LM Lekhanya

E-mail Add: [lawrencel@dut.ac.za](mailto:lawrencel@dut.ac.za)

## APPENDIX 2: IREC Letter of Information



### LETTER OF INFORMATION

Dear participant

**Title of the Research Study:** The effect of institutional research strategy on the attitudes of accountancy academics towards research engagement: a case study of Higher Education Institutions in KwaZulu-Natal.

**Principal Investigator/s/researcher:** Mr. Zwelihle Wiseman Nzuza, Master's degree in CMA

**Co-Investigator/s/supervisor/s:** Dr LM Lekhanya, D Tech: Marketing, PhD MGT

**Brief Introduction and Purpose of the Study:** This study seeks to investigate the effect of institutional research strategy on the attitudes of accountancy academics towards research engagement in the universities of KwaZulu-Natal. The final results of the study will assist public institutions of higher education to respond to the research needs of accountancy academics so that their participation in research activities becomes more fruitful.

**Outline of the Procedures:** Filling in the questionnaire will take approximately 15 minutes and there will be no interviews.

**Risks or Discomforts to the Participant:** There are no risks to you. Information divulged in the questionnaire will be kept confidential. The name of your organisation will be given a code during the publication of findings of this study.

**Benefits:** There are no financial benefits for you to participate in this study. However, it may contribute to improve inventory controls.

**Reason/s why the Participant May Be Withdrawn from the Study:** Participating in this study is voluntary. You have a right to withdrawal from the study if you feel uncomfortable or for any other reason that may deem you unfit to continue with the study.

**Remuneration/ Costs of the Study:** Kindly note that there is no remuneration for participating in this study.

**Confidentiality:** Your identity will not be disclosed in this study.

**Research-related Injury:** There will be no injuries and this study does not involve any medication or body exercise.

**Persons to Contact in the Event of Any Problems or Queries:** Supervisor: Dr. LM Lekhanya at 031 373 5835 or Mr ZW Nzuza (Researcher) on 076 444 2110 or the Institutional Research Ethics Administrator on 031 373 2375. Complaints can be reported to the Director: Research and Postgraduate Support, Prof S Moyo on 031 373 2577 or [moyos@dut.ac.za](mailto:moyos@dut.ac.za)



## CONSENT

### Statement of Agreement to Participate in the Research Study:

- I hereby confirm that I have been informed by the researcher, \_\_\_\_\_ (name of researcher), about the nature, conduct, benefits and risks of this study - Research Ethics Clearance Number: \_\_\_\_\_,
- I have also received, read and understood the above written information (Participant Letter of Information) regarding the study.
- I am aware that the results of the study, including personal details regarding my sex, age, date of birth, initials and diagnosis will be anonymously processed into a study report.
- In view of the requirements of research, I agree that the data collected during this study can be processed in a computerised system by the researcher.
- I may, at any stage, without prejudice, withdraw my consent and participation in the study.
- I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study.
- I understand that significant new findings developed during the course of this research which may relate to my participation will be made available to me.

\_\_\_\_\_  
**Full Name of Participant Date  
Thumbprint**

\_\_\_\_\_  
**Time**

\_\_\_\_\_  
**Signature/Right**

I, \_\_\_\_\_ (name of researcher) herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

\_\_\_\_\_  
**Full Name of Researcher**

\_\_\_\_\_  
**Date**

\_\_\_\_\_  
**Signature**

\_\_\_\_\_  
**Full Name of Witness (If applicable)      Date**

\_\_\_\_\_  
**Signature**

\_\_\_\_\_  
**Full Name of Legal Guardian (If applicable)      Date**

\_\_\_\_\_  
**Signature**

***Please note the following:***

Research details must be provided in a clear, simple and culturally appropriate manner and prospective participants should be helped to arrive at an informed decision by use of appropriate language (grade 10 level - use Flesch Reading Ease Scores on Microsoft Word), selecting of a non-threatening environment for interaction and the availability of peer counselling (Department of Health, 2004)

If the potential participant is unable to read/illiterate, then a right thumb print is required and an impartial witness, who is literate and knows the participant e.g. parent, sibling, friend, pastor, etc. should verify in writing, duly signed that informed verbal consent was obtained (Department of Health, 2004).

If anyone makes a mistake completing this document e.g. wrong date or spelling mistake a new document has to be completed. The incomplete original document has to be kept in the participant file and not thrown away and copies thereof must be issued to the participant.

**References:**

Department of Health: 2004. *Ethics in Health Research: Principles, Structures and Processes*  
<http://www.doh.gov.za/docs/factsheets/guidelines/ethnics/>

Department of Health. 2006. *South African Commendable Clinical Practice Guidelines*. 2nd Ed.  
Available at: [http://www.nhrec.org.za/?page\\_id=14](http://www.nhrec.org.za/?page_id=14)

### APPENDIX 3: The research instrument – Questionnaire

**Title: The effect of institutional research strategy on the attitudes of accountancy academics towards research engagement: a case study of Higher Education Institutions in KwaZulu-Natal.**

## SECTION A: Biographical Information

Mark the appropriate box with a cross (x)

**1. Please indicate the name of the university at which you work.**

DUT	MUT	UKZN	UNIZULU
1	2	3	4

**2. Your gender.**

Male	1
Female	2

**3. Your race**

Indian	Black	White	Coloured	Other
1	2	3	4	5

**4. Your nationality**

South African	Nigerian	Sotho	Zimbabwean	Other
1	2	3	4	5

5. Your age.		6. Your job title.	
20 – 30 years	1	Assistant Lecturer	1
31 – 40 years	2	Junior Lecturer	2
41 – 50 years	3	Lecturer	3
51 – 60 years	4	Senior Lecturer	4
61 + years	5	Associate Professor	5
		Full Professor	6
		Senior Professor	7

		Extraordinary Professor	8
		Other	9
<b>7. Your years of academic experience in the university.</b>		<b>8. Your departmental responsibility.</b> <i>Multiple answers possible</i>	
More than 20 years	1	Lecturing	1
15 – 20 years	2	Supervision	2
10 – 15 years	3	Research	3
5 – 10 years	4	Other	4
0 – 5 years	5		
<b>9. Your highest qualification in accountancy.</b>		<b>10. Your profession.</b> Multiple answers possible	
Lower than a master's degree	1	Chartered Accountant (SAICA)	1
Master's degree	2	Professional Accountant (SAIPA)	2
Doctorate degree	3	Chartered Institute of Management Accounting (CIMA)	3
<b>11. Your condition of employment.</b>		Certified Internal Auditor (CIA)/relevant	4
Permanent	1	SAAA member	5
Contract	2	None	6
Probation	3	Other	7
<b>12. Please indicate your department in which you work.</b>		<b>13. Please indicate the committee in which you serve.</b>	
Financial accounting	1	Faculty	1
Management accounting	2	Executive committee (EXCO)	2
Taxation	3	Council	3
Auditing	4	Senate	4
		None	5

## SECTION B:

### The effect of IRS

Please indicate your choice with a cross (X) in the appropriate column

	<b>Strongly agree 1</b>	<b>Agree 2</b>	<b>Neutral 3</b>	<b>Disagree 4</b>	<b>Strongly disagree 5</b>
<b>14.</b> IRS allows me to engage in research.					
<b>15.</b> IRS promotes a global research that is recognised by accountancy bodies.					
<b>16.</b> IRS advances research in accountancy education.					
<b>17.</b> IRS delivers innovative research to industry.					
<b>18.</b> IRS delivers innovative solutions to our partners in the wider community.					
<b>19.</b> IRS builds the financial strength of my department.					
<b>20.</b> IRS promote a departmental culture that recognises and supports the development of the widest possible range of high-quality research.					
<b>21.</b> IRS helps accountancy academics to establish themselves as key partners of choice for research collaborations at a global level.					
<b>22.</b> IRS provides for a continuous improvement of staff research profile.					
<b>23.</b> IRS nurtures postgraduate researchers to become the next generation of accountancy research and innovation leaders.					
<b>24.</b> IRS attracts talented workforce to service the school of accountancy.					
<b>25.</b> IRS attracts a diverse workforce to service the accountancy departments.					
<b>26.</b> IRS helps my department to be productive in its core academic activities.					

27. IRS promotes a more unified and shared educational experience among accountancy academics.					
28. IRS increases the quality and extent of research collaboration in the university's research focus areas.					
29. IRS seeks to enrich individual academics.					
30. IRS enables a research training environment by blending research, teaching and service.					
31. IRS has a potential to provide my department with access to a world-class research infrastructure.					
32. IRS builds research leadership in the in my department.					

## SECTION C: Factors affecting the IRS operation.

Please indicate your choice with a cross (X) in the appropriate column

	<b>Strongly agree</b> 1	<b>Agree</b> 2	<b>Neutral</b> 3	<b>Disagree</b> 4	<b>Strongly disagree</b> 5
<b>EXTERNAL FACTORS</b>					
33. Government research policies have an impact on the IRS operation.					
34. Professional membership of accountancy academics affects the IRS operation.					
35. Availability of external research funding has an impact on the IRS operation.					
36. Requirements for publishing in research journals have an impact on the IRS operation.					
<b>INTERNAL FACTORS</b>					
37. Research administration affects the IRS operation.					
38. Research impact assessment affects the IRS operation.					
39. Academic staff knowledge and understanding affect the IRS operation.					
40. Academic staff skills affects the IRS operation.					
41. Job characteristics affects the IRS operation.					
42. Academic workload affects the IRS.					
43. Decentralization of research admin into academic departments affects the IRS operation.					

<b>44.</b> Decentralization of research admin into faculties affects the IRS operation.					
<b>45.</b> Academic staff attitude towards research affects the IRS operation.					
<b>46.</b> Research decision making affects the IRS operation.					
<b>47.</b> Staff incentives affect the IRS operation.					
<b>48.</b> Staff participating in research affects the IRS operation.					
<b>49.</b> Academic staff careers affect the IRS operation.					
<b>50.</b> Academic staff with industry experience other than academic, affects the IRS operation.					
<b>51.</b> Research planning affects the IRS operation.					
<b>52.</b> Organisational culture affects the IRS operation.					
<b>53.</b> Research leadership affects the IRS operation.					
<b>54.</b> Staff promotion policy affects the IRS operation.					
<b>55.</b> Job security for staff affects the IRS operation.					
<b>56.</b> Information technology affects the IRS operation.					
<b>57.</b> Status of the university affects the IRS operation.					
<b>58.</b> Research management affects the IRS operation.					
<b>59.</b> Infrastructure affects the IRS operation.					
<b>60.</b> Research communication affects the IRS operation.					
<b>61.</b> University global recognition affect the IRS operation.					
<b>62.</b> Institutional research governance affects the IRS operation.					
<b>63.</b> Staff commitment affects the IRS operation.					
<b>64.</b> Staff working against the power structure affects the IRS operation.					
<b>65.</b> Research feedback affects the IRS operation.					

## SECTION D: The extent to which the external and internal factors affect the IRS operation

Please indicate your choice with a cross (X) in the appropriate column

	<b>Extremely</b>	<b>Moderate</b>	<b>Low</b>	<b>Don't know</b>
	1	2	3	4
66. Government support				
67. Professional membership of accountancy academics affects the IRS operation.				
68. Academic staff commitment				
69. University support				
70. Academic staff skills				
71. Research communication				
72. Research planning				
73. Research administration				
74. Research leadership				
75. Industry support				

76. What other possible effects do you think IRS has on the attitudes of accountancy academics towards research engagement?

.....  
 .....

77. What do you think needs to be done to improve IRS operation in your university?

.....  
 .....

78. As far as your department is concerned, please list any other factors that are affecting the IRS operation.

78.1 External factors

.....  
 .....

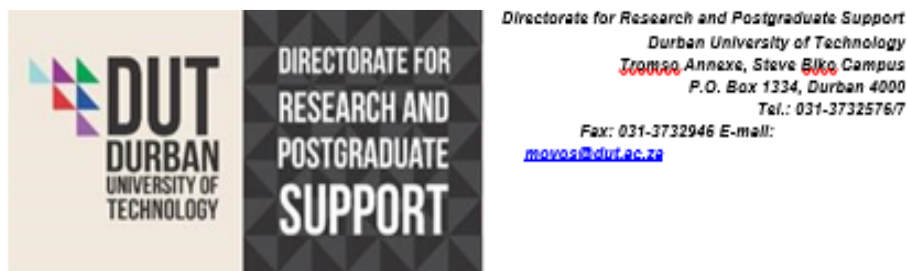
78.2 Internal factors

.....  
 .....

**The end**

**Thank you veritably much for your participation...**

#### APPENDIX 4: Gatekeepers permission - DUT



6<sup>th</sup> March 2017

Mr Zwelihle Wiseman Nzuza  
c/o Department of Public Management and Economics  
Faculty of Management Sciences  
Durban University of Technology

Dear Mr Nzuza

#### PERMISSION TO CONDUCT RESEARCH AT THE DUT

Your email correspondence in respect of the above refers. I am pleased to inform you that the Institutional Research Committee (IRC) has granted permission for you to conduct your research "The effect of institutional research strategy on the attitudes of accountancy academics towards research engagement: a case study of Higher Education Institutions in KwaZulu-Natal" at the Durban University of Technology.

The DUT may impose any other condition it deems appropriate in the circumstances having regard to nature and extent of access to and use of Information requested.

We would be grateful if a summary of your key research findings can be submitted to the IRC on completion of your studies.

Kindest regards.  
Yours sincerely

**PROF. S. MOYO**  
**DIRECTOR: RESEARCH AND POSTGRADUATE SUPPORT**

## APPENDIX 5: Gatekeepers permission - MUT



**Mangosuthu**  
**University of Technology**

**UMLAZI - KWAZULU NATAL**

P.O. Box 12363 Jacobs 4026 Durban Tel: 031 907 7111 Fax: 031 907 2892

07 July, 2017

Dear Mr ZW Nzuza

Durban University of Technology

It is my pleasure to inform you that permission to conduct project titled: "The Effects of Institutional Research Strategy on the attitudes of accountancy academics towards research engagement: A case study of Higher Education Institution in KwaZulu-Natal" among MUT academics, has been granted.

Permission to conduct the project is granted on the condition that any changes to the project must be brought to the attention of the MUT Research Ethics Committee as soon as possible.

Good luck with your research.

Yours faithfully,

Prof. K Shale

Director: Research (Acting)

031 9077354/7450

[Karabo.shale@mut.ac.za](mailto:Karabo.shale@mut.ac.za)

## APPENDIX 6: Gatekeepers permission - UKZN



6 October 2017

Mr Zwelihle Wiseman Nzuza  
Faculty of Management Sciences  
Durban University of Technology  
Email: [zwelihlen@dut.ac.za](mailto:zwelihlen@dut.ac.za) [lawrencel@dut.ac.za](mailto:lawrencel@dut.ac.za)

Dear Mr Msosa

### RE: PERMISSION TO CONDUCT RESEARCH

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

*"The effect of institutional research strategy on the attitudes of accountancy academics towards research engagement: a case study of Higher Education Institutions in KwaZulu-Natal"*

It is noted that you will be constituting your sample by handing out questionnaires to Accountancy academic staff on the all Westville campus.

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

- 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.

Yours sincerely

**MR SS'MOKOENA**  
**REGISTRAR**

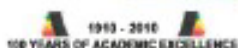
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#### Office of the Registrar

Postal Address: Private Bag X54001, Durban, South Africa

Telephone: +27 (0) 31 260 8056/2206 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 7: Gatekeepers permission - UNIZULU



University of Zululand, Private Bag X1001, KwaDlangezwa, 3886

W: [www.unizulu.ac.za](http://www.unizulu.ac.za)

T: +27 35 802 6887 F: +27 86 616 7707 E: [MangelaS@unizulu.ac.za](mailto:MangelaS@unizulu.ac.za)

*Deputy Vice-Chancellor: Research and Innovation Office*

Mr Zwelihle Wiseman Nzuza  
Department of Public Management & Economics  
Faculty of Management Sciences  
Durban University of Technology

Per email: [zwelihlen@dut.ac.za](mailto:zwelihlen@dut.ac.za)

23 March 2017

Dear Mr Nzuza

REQUEST FOR PERMISSION TO CONDUCT RESEARCH AT UNIZULU "THE EFFECT OF INSTITUTIONAL RESEARCH STRATEGY ON THE ATTITUDES OF ACCOUNTANCY ACADEMICS TOWARDS RESEARCH ENGAGEMENT: A CASE STUDY OF HIGHER EDUCATION INSTITUTIONS IN KWAZULU NATAL"

Your letter to me, dated 16 March 2017, refers.

I hereby grant approval for you to conduct part of your research at UNIZULU, as per the methodologies stated in your research proposal and in terms of the data collection instruments that you have submitted. I note also that the Durban University of Technology, has issued an ethical clearance certificate and having read the documentation, I am happy to accept that certificate.

You may use this letter as authorization when you approach the appropriate persons. Please note that permission is based on the documentation that you have submitted. Should you revise your research instruments, or use additional instruments, you must submit those to us as well.

I wish you well in your research.

Yours sincerely,

Professor Gideon De Wet

Chairperson: University of Zululand Research Ethics Committee

Deputy Vice-Chancellor: Research and Innovation

cc: Mr. D Van Benschurg- Registrar

cc: Mr. M. Mkhosana - Deputy Registrar Secretariat & Policy Development

RESTRUCTURED FOR RELEVANCE

## APPENDIX 8: Ethical clearance letter



10 May 2017

IREC Reference Number: **REC 150/16**

Mr Z W Nzuza  
577 Mahatma Gandhi Road  
Seaboard Towers  
Room 706  
Durban  
4001

Dear Mr Nzuza

**The effect of institutional research strategy on the attitudes of accountancy academics towards research engagement: a case study of Higher Education Institutions in KwaZulu-Natal**

Your provisional approval letter dated 01 February 2017 refers.

Please be advised that ethics clearance has been granted for a period of 2 years, before the expiry of which you are required to apply for safety monitoring and annual recertification.

Please use the Safety Monitoring and Annual Recertification form to apply for recertification, this form can be found on [http://www.dut.ac.za/research/institutional\\_research\\_ethics/](http://www.dut.ac.za/research/institutional_research_ethics/)

Please note that this form must be submitted to the IREC 3 months before ethics approval for the study expires.

Yours Sincerely

Professor J K Adam  
Chairperson: IREC



## APPENDIX 9: Frequency tables

### Your gender

		Frequency	Percent	Valid%	Cumulative%
Valid	Male	40	48,8	48,8	48,8
	Female	42	51,2	51,2	100,0
	Total	82	100,0	100,0	

### Your race

		Frequency	Percent	Valid%	Cumulative%
Valid	Indian	34	41,5	41,5	41,5
	Black	31	37,8	37,8	79,3
	White	13	15,9	15,9	95,1
	Coloured	4	4,9	4,9	100,0
	Total	82	100,0	100,0	

### Your nationality

		Frequency	Percent	Valid%	Cumulative%
Valid	South African	77	93,9	93,9	93,9
	Nigerian	2	2,4	2,4	96,3
	Zimbabwean	2	2,4	2,4	98,8
	Other	1	1,2	1,2	100,0
	Total	82	100,0	100,0	

### Your age

		Frequency	Percent	Valid%	Cumulative%
Valid	20 - 30	20	24,4	24,4	24,4
	31 - 40	26	31,7	31,7	56,1
	41 - 50	22	26,8	26,8	82,9
	51 - 60	12	14,6	14,6	97,6
	61+	2	2,4	2,4	100,0
	Total	82	100,0	100,0	

### Your job title

		Frequency	Percent	Valid%	Cumulative%
--	--	-----------	---------	--------	-------------

Valid	Assistant Lecturer	3	3,7	3,7	3,7
	Junior Lecturer	9	11,0	11,0	14,6
	Lecturer	56	68,3	68,3	82,9
	Senior Lecturer	11	13,4	13,4	96,3
	Associate Professor	1	1,2	1,2	97,6
	Other	2	2,4	2,4	100,0
	Total	82	100,0	100,0	

#### Your years of academic experience in the university

		Frequency	Percent	Valid%	Cumulative%
Valid	0 - 5	19	23,2	23,2	23,2
	5 - 10	23	28,0	28,0	51,2
	10 - 15	13	15,9	15,9	67,1
	15 - 20	16	19,5	19,5	86,6
	> 20 (years)	11	13,4	13,4	100,0
	Total	82	100,0	100,0	

#### Your highest qualification in accountancy

		Frequency	Percent	Valid%	Cumulative%
Valid	Lower than a master's degree	49	59,8	59,8	59,8
	Master's degree	27	32,9	32,9	92,7
	Doctorate degree	6	7,3	7,3	100,0
	Total	82	100,0	100,0	

#### Your condition of employment

		Frequency	Percent	Valid%	Cumulative%
Valid	Permanent	64	78,0	78,0	78,0
	Contract	17	20,7	20,7	98,8
	Probation	1	1,2	1,2	100,0
	Total	82	100,0	100,0	

#### Please indicate your department in which you work

		Frequency	Percent	Valid%	Cumulative%
Valid	Financial Accounting	30	36,6	36,6	36,6

Management Accounting & Finance	24	29,3	29,3	65,9
Taxation	9	11,0	11,0	76,8
Auditing	19	23,2	23,2	100,0
Total	82	100,0	100,0	

**IRS allows staff to engage in research.**

		Frequency	Percent	Valid%	Cumulative%
Valid	Strongly agree	24	29,3	29,3	29,3
	Agree	34	41,5	41,5	70,7
	Neutral	20	24,4	24,4	95,1
	Disagree	4	4,9	4,9	100,0
	Total	82	100,0	100,0	

**IRS promotes a global research that is recognised by accountancy bodies.**

		Frequency	Percent	Valid%	Cumulative%
Valid	Strongly agree	27	32,9	33,3	33,3
	Agree	27	32,9	33,3	66,7
	Neutral	14	17,1	17,3	84,0
	Disagree	10	12,2	12,3	96,3
	Strongly disagree	3	3,7	3,7	100,0
	Total	81	98,8	100,0	
Missing	System	1	1,2		
Total		82	100,0		

**IRS advances accountancy education.**

		Frequency	Percent	Valid%	Cumulative%
Valid	Strongly agree	34	41,5	41,5	41,5
	Agree	30	36,6	36,6	78,0
	Neutral	12	14,6	14,6	92,7
	Disagree	5	6,1	6,1	98,8
	Strongly disagree	1	1,2	1,2	100,0
	Total	82	100,0	100,0	

**IRS delivers innovative solutions to our partners in industry.**

		Frequency	Percent	Valid%	Cumulative%
Valid	Strongly agree	13	15,9	15,9	15,9
	Agree	27	32,9	32,9	48,8

Neutral	12	14,6	14,6	63,4
Disagree	16	19,5	19,5	82,9
Strongly disagree	14	17,1	17,1	100,0
Total	82	100,0	100,0	

**IRS delivers innovative solutions to our partners in the wider community.**

		Frequency	Percent	Valid%	Cumulative%
Valid	Strongly agree	15	18,3	18,3	18,3
	Agree	27	32,9	32,9	51,2
	Neutral	13	15,9	15,9	67,1
	Disagree	14	17,1	17,1	84,1
	Strongly disagree	13	15,9	15,9	100,0
	Total	82	100,0	100,0	

**IRS builds the financial strength of my department.**

		Frequency	Percent	Valid%	Cumulative%
Valid	Strongly agree	25	30,5	30,5	30,5
	Agree	31	37,8	37,8	68,3
	Neutral	19	23,2	23,2	91,5
	Disagree	6	7,3	7,3	98,8
	Strongly disagree	1	1,2	1,2	100,0
	Total	82	100,0	100,0	

**IRS fosters a departmental culture that recognises and supports the development of the widest possible range of high-quality research**

		Frequency	Percent	Valid%	Cumulative%
Valid	Strongly agree	29	35,4	35,4	35,4
	Agree	40	48,8	48,8	84,1
	Neutral	4	4,9	4,9	89,0
	Disagree	8	9,8	9,8	98,8
	Strongly disagree	1	1,2	1,2	100,0
	Total	82	100,0	100,0	

**IRS helps accountancy academics to establish themselves as key partners of choice for research collaborations at a global level**

		Frequency	Percent	Valid%	Cumulative%
Valid	Strongly agree	34	41,5	41,5	41,5

Agree	28	34,1	34,1	75,6
Neutral	7	8,5	8,5	84,1
Disagree	10	12,2	12,2	96,3
Strongly disagree	3	3,7	3,7	100,0
Total	82	100,0	100,0	

**IRS provides for a continuous improvement of staff research profile**

		Frequency	Percent	Valid%	Cumulative%
Valid	Strongly agree	37	45,1	45,1	45,1
	Agree	33	40,2	40,2	85,4
	Neutral	4	4,9	4,9	90,2
	Disagree	8	9,8	9,8	100,0
	Total	82	100,0	100,0	

**IRS nurtures postgraduate researchers to become the next generation of accountancy research**

		Frequency	Percent	Valid%	Cumulative%
Valid	Strongly agree	36	43,9	43,9	43,9
	Agree	34	41,5	41,5	85,4
	Neutral	5	6,1	6,1	91,5
	Disagree	6	7,3	7,3	98,8
	Strongly disagree	1	1,2	1,2	100,0
	Total	82	100,0	100,0	

**IRS attracts talented workforce to service the school of accountancy**

		Frequency	Percent	Valid%	Cumulative%
Valid	Strongly agree	33	40,2	40,2	40,2
	Agree	27	32,9	32,9	73,2
	Neutral	7	8,5	8,5	81,7
	Disagree	13	15,9	15,9	97,6
	Strongly disagree	2	2,4	2,4	100,0
	Total	82	100,0	100,0	

**IRS attracts a diverse workforce to service the school of accountancy**

		Frequency	Percent	Valid%	Cumulative%
Valid	Strongly agree	30	36,6	36,6	36,6
	Agree	36	43,9	43,9	80,5
	Neutral	3	3,7	3,7	84,1
	Disagree	11	13,4	13,4	97,6
	Strongly disagree	2	2,4	2,4	100,0
	Total	82	100,0	100,0	

**IRS helps my department to be productive in its core academic activities**

		Frequency	Percent	Valid%	Cumulative%
Valid	Strongly agree	30	36,6	36,6	36,6
	Agree	24	29,3	29,3	65,9
	Neutral	12	14,6	14,6	80,5
	Disagree	15	18,3	18,3	98,8
	Strongly disagree	1	1,2	1,2	100,0
	Total	82	100,0	100,0	

**IRS promotes a more unified and shared educational experience among accountancy academics**

		Frequency	Percent	Valid%	Cumulative%
Valid	Strongly agree	35	42,7	42,7	42,7
	Agree	24	29,3	29,3	72,0
	Neutral	12	14,6	14,6	86,6
	Disagree	10	12,2	12,2	98,8
	Strongly disagree	1	1,2	1,2	100,0
	Total	82	100,0	100,0	

**IRS increases the quality and extent of research collaboration in the university's research focus areas**

		Frequency	Percent	Valid%	Cumulative%
Valid	Strongly agree	33	40,2	40,2	40,2
	Agree	29	35,4	35,4	75,6
	Neutral	9	11,0	11,0	86,6
	Disagree	11	13,4	13,4	100,0
	Total	82	100,0	100,0	

**IRS seeks to enrich individual academics**

		Frequency	Percent	Valid%	Cumulative%
Valid	Strongly agree	31	37,8	37,8	37,8
	Agree	32	39,0	39,0	76,8
	Neutral	10	12,2	12,2	89,0
	Disagree	7	8,5	8,5	97,6
	Strongly disagree	2	2,4	2,4	100,0
	Total	82	100,0	100,0	

**IRS enables a research training environment by blending research, teaching and service**

		Frequency	Percent	Valid%	Cumulative%
Valid	Strongly agree	31	37,8	37,8	37,8
	Agree	34	41,5	41,5	79,3
	Neutral	7	8,5	8,5	87,8
	Disagree	9	11,0	11,0	98,8
	Strongly disagree	1	1,2	1,2	100,0
	Total	82	100,0	100,0	

**IRS provides my department with access to a world-class research infrastructure**

		Frequency	Percent	Valid%	Cumulative%
Valid	Strongly agree	30	36,6	36,6	36,6
	Agree	23	28,0	28,0	64,6
	Neutral	15	18,3	18,3	82,9
	Disagree	9	11,0	11,0	93,9
	Strongly disagree	5	6,1	6,1	100,0
	Total	82	100,0	100,0	

**IRS builds research leadership in the department**

		Frequency	Percent	Valid%	Cumulative%
Valid	Strongly agree	27	32,9	32,9	32,9
	Agree	34	41,5	41,5	74,4
	Neutral	9	11,0	11,0	85,4
	Disagree	10	12,2	12,2	97,6
	Strongly disagree	2	2,4	2,4	100,0

Total		82	100,0	100,0	
<b>Government research policies</b>					
		Frequency	Percent	Valid%	Cumulative%
Valid	Strongly agree	39	47,6	47,6	47,6
	Agree	28	34,1	34,1	81,7
	Neutral	10	12,2	12,2	93,9
	Disagree	5	6,1	6,1	100,0
	Total	82	100,0	100,0	

**Professional membership of accountancy academics**

		Frequency	Percent	Valid%	Cumulative%
Valid	Strongly agree	40	48,8	48,8	48,8
	Agree	27	32,9	32,9	81,7
	Neutral	7	8,5	8,5	90,2
	Disagree	7	8,5	8,5	98,8
	Strongly disagree	1	1,2	1,2	100,0
	Total	82	100,0	100,0	

**Availability of funding for researchers**

		Frequency	Percent	Valid%	Cumulative%
Valid	Strongly agree	49	59,8	59,8	59,8
	Agree	27	32,9	32,9	92,7
	Neutral	5	6,1	6,1	98,8
	Disagree	1	1,2	1,2	100,0
	Total	82	100,0	100,0	

### Requirements for publishing in research journals

	Frequency	Percent	Valid%	Cumulative%
Valid Strongly agree	30	36,6	36,6	36,6
Agree	50	61,0	61,0	97,6
Neutral	2	2,4	2,4	100,0
Total	82	100,0	100,0	

### Research administration

	Frequency	Percent	Valid%	Cumulative%
Valid Strongly agree	43	52,4	52,4	52,4
Agree	26	31,7	31,7	84,1
Neutral	7	8,5	8,5	92,7
Disagree	4	4,9	4,9	97,6
Strongly disagree	2	2,4	2,4	100,0
Total	82	100,0	100,0	

### Research impact assessment

	Frequency	Percent	Valid%	Cumulative%
Valid Strongly agree	38	46,3	46,3	46,3
Agree	21	25,6	25,6	72,0
Neutral	16	19,5	19,5	91,5
Disagree	4	4,9	4,9	96,3
Strongly disagree	3	3,7	3,7	100,0
Total	82	100,0	100,0	

### Academic staff knowledge and understanding

	Frequency	Percent	Valid%	Cumulative%
Valid Strongly agree	5	6,1	6,1	6,1
Agree	14	17,1	17,1	23,2
Neutral	10	12,2	12,2	35,4
Disagree	27	32,9	32,9	68,3
Strongly disagree	26	31,7	31,7	100,0
Total	82	100,0	100,0	

### Academic staff skills

	Frequency	Percent	Valid%	Cumulative%
Valid Strongly agree	7	8,5	8,5	8,5
Agree	20	24,4	24,4	32,9
Neutral	5	6,1	6,1	39,0
Disagree	22	26,8	26,8	65,9
Strongly disagree	28	34,1	34,1	100,0
Total	82	100,0	100,0	

### Job characteristics

	Frequency	Percent	Valid%	Cumulative%
Valid Strongly agree	7	8,5	8,5	8,5
Agree	8	9,8	9,8	18,3
Neutral	15	18,3	18,3	36,6
Disagree	25	30,5	30,5	67,1
Strongly disagree	27	32,9	32,9	100,0
Total	82	100,0	100,0	

### Academic workload

	Frequency	Percent	Valid%	Cumulative%
Valid Strongly agree	49	59,8	59,8	59,8
Agree	22	26,8	26,8	86,6
Neutral	4	4,9	4,9	91,5
Disagree	4	4,9	4,9	96,3
Strongly disagree	3	3,7	3,7	100,0
Total	82	100,0	100,0	

### Decentralisation of research admin into departments

	Frequency	Percent	Valid%	Cumulative%
Valid Strongly agree	16	19,5	19,5	19,5
Agree	21	25,6	25,6	45,1
Neutral	11	13,4	13,4	58,5
Disagree	11	13,4	13,4	72,0
Strongly disagree	23	28,0	28,0	100,0
Total	82	100,0	100,0	

### Decentralisation of research admin into faculties

	Frequency	Percent	Valid%	Cumulative%
Valid Strongly agree	32	39,0	39,0	39,0
Agree	29	35,4	35,4	74,4
Neutral	9	11,0	11,0	85,4
Disagree	8	9,8	9,8	95,1
Strongly disagree	4	4,9	4,9	100,0
Total	82	100,0	100,0	

### Academic staff attitude

		Frequency	Percent	Valid%	Cumulative%
Valid	Strongly agree	42	51,2	51,2	51,2
	Agree	21	25,6	25,6	76,8
	Neutral	8	9,8	9,8	86,6
	Disagree	9	11,0	11,0	97,6
	Strongly disagree	2	2,4	2,4	100,0
	Total	82	100,0	100,0	

### Research decision making

		Frequency	Percent	Valid%	Cumulative%
Valid	Strongly agree	44	53,7	54,3	54,3
	Agree	28	34,1	34,6	88,9
	Neutral	6	7,3	7,4	96,3
	Disagree	2	2,4	2,5	98,8
	Strongly disagree	1	1,2	1,2	100,0
	Total	81	98,8	100,0	
Missing System		1	1,2		
Total		82	100,0		

### Staff being needs

		Frequency	Percent	Valid%	Cumulative%
Valid	Strongly agree	37	45,1	45,1	45,1
	gree	31	37,8	37,8	82,9
	Neutral	4	4,9	4,9	87,8
	Disagree	7	8,5	8,5	96,3
	Strongly disagree	3	3,7	3,7	100,0
	Total	82	100,0	100,0	

### Staff participation in research

		Frequency	Percent	Valid%	Cumulative%
Valid	Strongly agree	42	51,2	51,2	51,2
	Agree	27	32,9	32,9	84,1
	Neutral	10	12,2	12,2	96,3
	Disagree	3	3,7	3,7	100,0
	Total	82	100,0	100,0	

### Staff career

		Frequency	Percent	Valid%	Cumulative%
Valid	Strongly agree	41	50,0	50,0	50,0
	Agree	30	36,6	36,6	86,6
	Neutral	11	13,4	13,4	100,0
	Total	82	100,0	100,0	

### Industry experience

		Frequency	Percent	Valid%	Cumulative%
Valid	Strongly agree	42	51,2	51,2	51,2
	Agree	31	37,8	37,8	89,0
	Neutral	6	7,3	7,3	96,3
	Disagree	2	2,4	2,4	98,8
	Strongly disagree	1	1,2	1,2	100,0
	Total	82	100,0	100,0	

### Research planning

		Frequency	Percent	Valid%	Cumulative%
Valid	Strongly agree	41	50,0	50,0	50,0
	Agree	35	42,7	42,7	92,7
	Neutral	4	4,9	4,9	97,6
	Disagree	2	2,4	2,4	100,0
	Total	82	100,0	100,0	

### Organisational culture

		Frequency	Percent	Valid%	Cumulative%
Valid	Strongly agree	42	51,2	51,2	51,2
	Agree	33	40,2	40,2	91,5
	Neutral	5	6,1	6,1	97,6
	Disagree	1	1,2	1,2	98,8
	Strongly disagree	1	1,2	1,2	100,0
	Total	82	100,0	100,0	

### Research leadership

		Frequency	Percent	Valid%	Cumulative%
Valid	Strongly agree	42	51,2	51,2	51,2
	Agree	32	39,0	39,0	90,2
	Neutral	5	6,1	6,1	96,3
	Disagree	3	3,7	3,7	100,0
	Total	82	100,0	100,0	

### Academic staff promotion policy

	Frequency	Percent	Valid%	Cumulative%
Valid Strongly agree	43	52,4	52,4	52,4
Agree	31	37,8	37,8	90,2
Neutral	6	7,3	7,3	97,6
Disagree	2	2,4	2,4	100,0
Total	82	100,0	100,0	

### Job security

	Frequency	Percent	Valid%	Cumulative%
Valid Strongly agree	31	37,8	37,8	37,8
Agree	20	24,4	24,4	62,2
Neutral	9	11,0	11,0	73,2
Disagree	11	13,4	13,4	86,6
Strongly disagree	11	13,4	13,4	100,0
Total	82	100,0	100,0	

### Information Technology

	Frequency	Percent	Valid%	Cumulative%
Valid Strongly agree	43	52,4	52,4	52,4
Agree	33	40,2	40,2	92,7
Neutral	6	7,3	7,3	100,0
Total	82	100,0	100,0	

### Status of the university

	Frequency	Percent	Valid%	Cumulative%
Valid Strongly agree	40	48,8	48,8	48,8
Agree	37	45,1	45,1	93,9

Neutral	5	6,1	6,1	100,0
Total	82	100,0	100,0	

#### Research management

	Frequency	Percent	Valid%	Cumulative%
Valid Strongly agree	41	50,0	50,0	50,0
Agree	35	42,7	42,7	92,7
Neutral	6	7,3	7,3	100,0
Total	82	100,0	100,0	

#### Infrastructure

	Frequency	Percent	Valid%	Cumulative%
Valid Strongly agree	44	53,7	53,7	53,7
Agree	28	34,1	34,1	87,8
Neutral	9	11,0	11,0	98,8
Disagree	1	1,2	1,2	100,0
Total	82	100,0	100,0	

#### Research communication

	Frequency	Percent	Valid%	Cumulative%
Valid Strongly agree	40	48,8	48,8	48,8
Agree	27	32,9	32,9	81,7
Neutral	9	11,0	11,0	92,7
Disagree	3	3,7	3,7	96,3
Strongly disagree	3	3,7	3,7	100,0
Total	82	100,0	100,0	

### University global recognition

	Frequency	Percent	Valid%	Cumulative%
Valid Strongly agree	36	43,9	43,9	43,9
Agree	32	39,0	39,0	82,9
Neutral	9	11,0	11,0	93,9
Disagree	3	3,7	3,7	97,6
Strongly disagree	2	2,4	2,4	100,0
Total	82	100,0	100,0	

### Institutional research governance

	Frequency	Percent	Valid%	Cumulative%
Valid Strongly agree	40	48,8	48,8	48,8
Agree	30	36,6	36,6	85,4
Neutral	8	9,8	9,8	95,1
Disagree	1	1,2	1,2	96,3
Strongly disagree	3	3,7	3,7	100,0
Total	82	100,0	100,0	

### Staff commitment

	Frequency	Percent	Valid%	Cumulative%
Valid Strongly agree	43	52,4	52,4	52,4
Agree	31	37,8	37,8	90,2
Neutral	6	7,3	7,3	97,6
Disagree	2	2,4	2,4	100,0
Total	82	100,0	100,0	

### Staff working against the power structure

		Frequency	Percent	Valid%	Cumulative%
Valid	Strongly agree	39	47,6	47,6	47,6
	Agree	32	39,0	39,0	86,6
	Neutral	7	8,5	8,5	95,1
	Disagree	1	1,2	1,2	96,3
	Strongly disagree	3	3,7	3,7	100,0
	Total	82	100,0	100,0	

### Research feedback

		Frequency	Percent	Valid%	Cumulative%
Valid	Strongly agree	60	73,2	73,2	73,2
	Agree	13	15,9	15,9	89,0
	Neutral	4	4,9	4,9	93,9
	Disagree	5	6,1	6,1	100,0
	Total	82	100,0	100,0	

**APPENDIX 10: South African journal publication output units by classification of education subject matter (CESM) category, 2016 and 2017**

CESM Category	2016		2017		% increase/decrease from 2016 to 2017
	No. of Units	% of Total	No. of Units	% of Total	
Health Professions and Related Clinical Sciences	2760.02	18.17%	2834.79	18.42%	2.71%
Life Sciences	1525.47	10.04%	1557.35	10.12%	2.09%
Physical Sciences	1595.28	10.50%	1494.59	9.71%	-6.31%
Business, Economics and Management Studies	1441.37	9.49%	1399.07	9.09%	-2.93%
Social Sciences	1312.27	8.64%	1231.36	8.00%	-6.17%
Agriculture, Agricultural Operations and Related Sciences	884.60	5.82%	1195.47	7.77%	35.14%
Engineering	1001.35	6.59%	1110.90	7.22%	10.94%
Education	939.65	6.19%	837.12	5.44%	-10.91%
Philosophy, Religion and Theology	836.46	5.51%	811.02	5.27%	-3.04%
Law	641.66	4.22%	641.73	4.17%	0.01%
Languages, Linguistics and Literature	507.85	3.34%	533.09	3.46%	4.97%
Mathematics and Statistics	557.33	3.67%	491.07	3.19%	-11.89%
Psychology	348.66	2.30%	348.87	2.27%	0.06%
Computer and Information Sciences	227.62	1.50%	265.58	1.73%	16.68%
Public Management and Services	196.29	1.29%	214.03	1.39%	9.04%
Visual and Performing Arts	126.82	0.84%	139.74	0.91%	10.19%
Architecture and the Built Environment	96.92	0.64%	106.04	0.69%	9.41%
Communication, Journalism and Related Studies	111.02	0.73%	99.58	0.65%	-10.30%
Military Sciences	42.80	0.28%	48.84	0.32%	14.11%
Family Ecology and Consumer Sciences	34.33	0.23%	28.18	0.18%	-17.91%
<b>TOTAL</b>	<b>15187.77</b>	<b>100.00%</b>	<b>15388.42</b>	<b>100.00%</b>	<b>1.32%</b>

**APPENDIX 11: Government budgets for the public institutions of higher education 2015/2019**

Budget category	Budget totals for the university sector				Increase in budget from previous financial year			
	2015/16 (R'000)	2016/17 (R'000)	2017/18 (R'000)	2018/19 (R'000)	2015/16	2016/17	2017/18	2018/19
<b>Block grants for universities</b>	<b>20 538 361</b>	<b>21 678 098</b>	<b>25 322 874</b>	<b>26 915 052</b>	<b>5.0%</b>	<b>5.5%</b>	<b>16.8%</b>	<b>6.3%</b>
Actual research outputs	3 013 169	3 186 831	3 346 481	3 540 577	8.8%	5.8%	5.0%	5.8%
<b>Earmarked grants for universities</b>	<b>5 666 037</b>	<b>6 246 374</b>	<b>8 701 418</b>	<b>9 193 017</b>	<b>21.0%</b>	<b>10.2%</b>	<b>39.3%</b>	<b>5.6%</b>
Infrastructure and output efficiencies	2 301 200	2 422 013	2 541 903	2 688 063	4.6%	5.3%	5.0%	5.8%
Two new universities								
Capital funds	1 000 000	974 736	978 482	1 000 542	100.0%	-2.5%	0.4%	2.3%
Operational funds	201 014	290 429	360 736	416 489	26.4%	44.5%	24.2%	15.5%
NIHE Northern Cape Pipeline Students	12 000	10 000	6 500	0		-16.7%	-35.0%	-100.0%
Foundation provision	304 470	319 956	335 794	355 270	28.7%	5.1%	5.0%	5.8%
Teaching Development	616 900	649 596	510 000	0	1.2%	5.3%	-21.5%	-100.0%
Research Development	199 000	209 547	165 000	0	6.2%	5.3%	-21.3%	-100.0%
University Capacity Development			225 000	945 000				320.0%
Clinical Training of Health Professionals	429 635	452 406	475 026	502 578	4.6%	5.3%	5.0%	5.8%
HDI Development Grant (8 universities)	410 743	433 532	454 992	481 382		5.5%	5.0%	5.8%
Veterinary Sciences	141 764	149 250	156 638	165 723	4.1%	5.3%	5.0%	5.8%
MBChB students		30 700	27 900	16 700			-9.1%	-40.1%
Interest and redemption on historic loans	4 447	4 209	3 647	3 282	-34.2%	-5.4%	-13.4%	-10.0%
Zero% student fee increase		300 000	0	0				
Merger multi-campus	44 864	0	0	0	-52.6%	-100.0%		
Gap funding grant for poor and		0	2 459 800	2 617 988				6.4%

missing middle student fees <sup>1</sup>								
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## APPENDIX 11: Certificate of editing & authentication

Helen Richter  
Advanced Editing, Proofreading  
& Copywriting  
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10 May 2020

To whom it may concern

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### CERTIFICATE OF EDITING & AUTHENTICATION

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I have proofread and language edited the corrected PhD thesis titled:

"The effect of institutional research strategy on the attitudes of accountancy academics towards research engagement: A case study of Higher Education Institutions in KwaZulu-Natal"

By

Zwelihle Wiseman Nzuza

To the best of my knowledge, the work remains free of spelling, grammar, structural and stylistic errors, as per available institutional guidelines, and the contents are certified as the authors' own work.

With thanks.

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H. S. Richter