



**APPROACHES FOR IMPROVING PARTICIPATION OF  
ADMINISTRATIVE STAFF IN CORPORATE ENTREPRENEURSHIP AT  
VAAL UNIVERSITY OF TECHNOLOGY**

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Date Submitted: **08 July 2023**

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## DECLARATION

I, Mashuto Lebyane, declare that this dissertation is a representation of my own work in conception and execution. This work has not been submitted in any form for another degree at any university or institution of higher learning. All information cited from published or unpublished works has been acknowledged.

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08 July 2023

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## APPROVED FOR FINAL SUBMISSION

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**08 July 2023**

Date

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## ABSTRACT

The aim of the study was to examine the approaches for improving participation of administrative staff in Corporate Entrepreneurship (CE) at Vaal University of Technology (VUT). The study was guided by four specific objectives: to investigate the CE challenges facing VUT, to examine the role currently played by administrative employees in CE at VUT, to determine factors affecting the participation of administrative staff in CE at VUT, and to propose approaches that can be used at VUT to improve administrative staff's participation in CE. The Corporate Entrepreneurship Assessment Instrument (CEAI) model was used to assess these constructs. A quantitative research approach was adopted and an online survey questionnaire was used to obtain data from respondents. The target population for this study was 110 administrative employees within VUT. In selecting the respondents, the census sampling method was used to select all 110 administrative employees. Survey questionnaires were emailed to all 110 respondents. A response rate of 54.5% was achieved and 60 usable questionnaires were received. The data was analysed using the Statistical Package for the Social Sciences (SPSS), version 28.0 for Windows.

The key findings indicated that most administrative employees had no role in an entrepreneurial environment. It was discovered that the majority of administrative staff members were not participating in the process of CE, notably during the idea formulation or start stages. Furthermore, it appeared that there was no employee participation with relation to CE among administrative employees. According to the recommendations, management should concentrate on the factors that influence CE, such as management support, rewards, work discretion/autonomy, resources, organisational structure, and organisational culture. Future research recommendations were also made in the conclusion of this study. Because this was the university's first formal study, it can be used as a guide for other South African universities to examine their entrepreneurial intensity and corporate entrepreneurial climate.

**Keywords:** Corporate entrepreneurship; administrative employees; entrepreneurial activities; management support; organisational structure and organisational culture.

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## **LIST OF ABBREVIATIONS**

CE	Corporate Entrepreneurship
CEAI	Corporate Entrepreneurship Assessment Instrument
DUT	Durban University of Technology
R&D	Research and Development
SPSS	Statistical Package for the Social Sciences
VUT	Vaal University of Technology

# **CHAPTER ONE**

## **INTRODUCTION AND BACKGROUND OF THE STUDY**

### **1.1 Introduction**

Entrepreneurial behaviour and mindset are key to an organisation's survival, growth, and profitability (Sibindi 2021). This is supported by Niemann, Mai and Dickel (2022), who assert that established organisations must encourage entrepreneurship within their organisations by creating new corporate initiatives or starting internal improvements in order to meet the challenges associated with extremely competitive markets as well as rapid innovation cycles. Urban (2017) states that organisations that display corporate entrepreneurship (CE) are frequently perceived as dynamic and flexible organisations ready to grab new opportunities. Evidently, employee participation in such projects is essential because they promote innovation and change within existing organisations (Niemann, Mai and Dickel 2022).

According to Rodríguez-Peña (2021), CE is a significant trend nowadays for improving organisation financial performance. Organisations will need to strengthen their ability to innovate in order to increase productivity and assure long-term growth (Tseng and Tseng 2019). However, it has been argued that there has been insufficient research on the antecedents of CE and employee participation (Hornsby *et al.* 2013). In line with this argument, Mahmood and Arslan (2020) conclude that in order to discover new opportunities, the academic community must understand the psychology of entrepreneurship.

The focus of this research was to investigate the approaches for improving administrative staff participation in CE at Vaal University of Technology (VUT).

### **1.2 Background of the study**

A review of the existing literature has consistently proven that organisations must be able to swiftly adapt, innovate, and adapt in order to fulfil the demands of a

rapidly changing market (Lee and Pati 2017). In this respect, organisations ought to contribute to employees' concepts of CE and positive entrepreneurial culture to strengthen broadening of their services and products (Mugunzva and Rankhumise 2020). Mugunzva and Rankhumise (2020) further state that to remain competitive, organisations should utilise the knowledge of their employees in creative and innovative initiatives. Workers ought to be empowered and permitted to think seriously about advancement and inventiveness outside of the scope of their typical job responsibilities. As organisations are faced with a new global reality requiring innovative thinking, calculative risk-taking behaviour, and entrepreneurial leadership (Morris, Kuratko and Cornwall 2013), managers are called on to focus on utilising internal resources and skills to attain CE (Yunis, Tarhini and Kassir 2018).

According to Kuratko, Hornsby and Goldsby (2011), organisations are now forced to accept CE as the entrepreneurial imperative of the twenty-first century. This is supported by Elgharbawy and Abdel-Kader (2016), who argue that future competitive advantages are grounded in innovativeness, agility, and ability to seize new business opportunities as they arise. In spite of the paramount importance of entrepreneurship and innovation now being widely accepted in academics and by business practitioners (Kuratko, Hornsby and Covin 2014), corporate innovation implemented successfully has remained quite indefinable for most organisations. As a result, research on factors that facilitate staff participation in CE has increased (Pirhadi and Feyzbakhsh 2021).

Drawing from the empirical literature, several studies on CE have focused on CE and performance (Abou-Moghli and Al-Abdallah 2018), challenges of corporate innovation (Kuratko, Hornsby and Hayton 2015), factors facilitating CE (Popowska 2020), and CE strategy and frameworks (Kim, Hornsby, Enriquez, Bae and Tarabishy 2021; Kreiser *et al.* 2021; Rigtering and Behrens 2021). Most of the research focusing on factors advancing CE is from developed regions of the world such as the United States, Europe, and Asia (Nason, McKelvie and Lumpkin 2015). Few studies have been done in developing countries (Van Wyk and Adonisi 2012). Most of the studies conducted in underdeveloped countries focused on enabling aspects of CE in large and small businesses (Urban and

Wood 2017). There is an absence of research in facilitating staff participation in CE at institutions of higher learning, particularly in South Africa's universities of technology, hence the need of this study.

Based on the identified research gaps in the empirical literature, the current study seeks to investigate the CE challenges facing VUT and the role currently played by administrative employees in CE. This study also identifies factors affecting the participation of administrative staff in CE and then proposes approaches that can be used to improve administrative staff's participation in CE at VUT in Gauteng Province in South Africa. The results of this investigation are anticipated to add new insights to the amount of academic literature already in existence and provide practical recommendations to managers in institutions of higher learning.

### **1.3 Problem statement**

Organisations are confronted with new global realities that require innovation, risk-taking, bravery, and entrepreneurial leadership (Kuratko, Hornsby and Hayton 2015). There is always an opportunity to explore whether management can instil a CE culture in the employees within their businesses. Within their mission to fulfil an assortment of ever-changing needs of the community, organisations are left with little alternative but to adopt an entrepreneurial mindset and accept the opportunity to promote the kind of innovative conduct that elevates. Employee participation towards bringing innovation is critical for businesses (Ahmed, Shah, Qureshi, Shah and Khuwaja 2018). It is important for institutions to instil CE culture in all employees in order to endure and continue to compete in the market (Mugunzva 2019). Badoiu, Escrig-Tena and Segarra-Ciprés (2020) advocate that organisations that engage in CE exercises are anticipated to realise higher level of development and profitability than organisations that do not. Centralisation of CE activities within the top and middle administration levels and research and advancement teams tends to be a hindrance or restriction to administrative employees' commitment to CE within the institution of VUT (Mugunzva and Rankhumise 2020). The other challenge that administrative employees are confronted with involves the experience of a tall

authoritative structure which is also bureaucratic and complex. VUT underestimates the importance of administrative employees in the working environment and the role they play in achieving the institution's goals and objectives. Mugunzva (2019) posits that the institution needs to start thinking about CE elective approaches because the source of innovative ideas is not solely dependent on executives. and the research and development (R&D) department to produce innovative ideas. This study outlines the imperative role of administrative employee engagement as a potential arbitrator to improve this relationship (Ahmed *et al.* 2018). In addition, this study investigates approaches that facilitate the improvement of administrative staff participation in CE.

## **1.4 The aim and research objectives of the study**

This section presents this study's research aim, objectives, and research questions.

### **1.4.1 Research aim**

The aim of this study is to examine approaches that encourage and improve the participation of administrative staff in CE. This study uses the case of VUT.

### **1.4.2 Research objectives**

The specific objectives of this study that were formulated to address the research aim are:

- To investigate the CE challenges facing VUT
- To examine the role currently played by administrative employees in CE at VUT
- To determine factors affecting the participation of administrative staff in CE at VUT
- To propose approaches that can be used at VUT to improve administrative staff's participation in CE

### **1.4.3 Research questions**

- What are CE challenges facing VUT?
- What is the role currently played by administrative employees in CE at VUT?
- What are the factors that are affecting the participation of administrative staff in CE at VUT?
- What are the approaches that can be used at VUT to improve administrative employees' participation in CE?

### **1.5 Significance of the study**

The value of this study is shown in its contribution to creating a better entrepreneurial environment and its applicability to a significant part of the South African economy. The findings of this study create a structure for fostering corporate entrepreneurial activity within the university, which will be helpful for institutions looking to enhance their entrepreneurial climate at all levels of hierarchy. Executives and management of institutions can establish a work environment where entrepreneurship can flourish at the administrative level by identifying those elements that contribute to a culture that encourages corporate entrepreneurial activity.

This study will enable the university to become more entrepreneurial, thereby empowering the university to provide innovative services and gain a strategic competitive edge by constantly innovating. Additionally, management is given information on how to encourage the entrepreneurial spirit amid administrative personnel and how to create an institution entrepreneurial approach that would promote participation at the administrative level and be appropriate for the organisational structure. Furthermore, awareness is raised about the barriers faced by university administrative employees. Finally, management is provided with guidance and recommendations on how to foster an entrepreneurial culture and atmosphere at work. An entrepreneurial academic profile is naturally stimulated when there is a common entrepreneurial culture in a university (de Moraes, Spers, Mendes & da Silva 2021).



## **1.6 Research methodology and design**

In this section, the research design, the research methodology, the target population, and the sampling techniques of this study will be discussed briefly.

### **1.6.1 Research design**

According to Saunders, Lewis and Thornhill (2016: 163), “research design is the general plan of how a researcher will go about answering research question(s)”. According to Bryman, Bell, Hirschsohn, Dos Santos, Du Toit, Masenge, Van Aardt and Wagner (2014), a research design offers a structure for gathering and analysing data.

An explanatory design was adopted for this study to gather data simultaneously. Explanatory study focuses on examining a subject or problem in order to better understand the relationship between a number of variables (Saunders, Lewis and Thornhill 2016). A cross-sectional survey was used to examine the role of VUT administrative staff in CE and to determine factors affecting their participation in CE. “A cross-sectional survey examines a specific occurrence at a certain point in time” (Saunders, Lewis and Thornhill 2016: 200). The research design was used to obtain appropriate evidence and to efficiently secure useable, unbiased and precise answers to the research questions (Barnham 2015).

### **1.6.2 Research methodology**

Methodology refers to “a strategy of inquiry that guides a set of procedures” (Kaplan and Wolf 2017: 4). A quantitative research approach was adopted and an online survey questionnaire was used to obtain data from participants. According to Bryman *et al.* (2014), quantitative research is a particular type of approach that involves the gathering of numerical data, sees the relationship between theory and inquiry as being deductive, prefers a natural science method, and has an objectivist perspective of social reality. Saunders, Lewis and Thornhill (2016: 165) state that the “quantitative research approach is often used as a

synonym for any data collection technique or data analysis procedure that generates or uses numerical data”.

### **1.6.3 Target population**

Saunders, Lewis and Thornhill (2012) state that the population denotes the whole group of instances from which a sample is drawn. According to Bryman *et al.* (2014), population is the set of entities, such as people, countries, cities, regions, or businesses, from which the sample will be drawn. Saunders, Lewis and Thornhill (2016) describe target population as the group that the study question actually focuses on or is intended to reach. In this study, the respondents involved administrative employees within VUT. According to the VUT human resources department, the institution has 110 full-time administrative employees. The target population for this study was therefore  $N=110$  administrative employees within VUT. The target population was deemed relevant for this study because administrative employees are managers of information and drivers of the institution.

### **1.6.4 Sampling**

According to Bryman *et al.* (2014), a sample refers to the sector or subsection of the population that is chosen for study. In selecting the respondents, census sampling was used. The population of 110 administrators is very small, therefore, the researcher used a census to survey all administrative staff (Saunders, Lewis and Thornhill 2016).

### **1.6.5 Pilot study and pre-testing**

Prior to distributing the questionnaires, a pilot study was done to evaluate the research instrument used for data collection, and changes were made where appropriate. Five to ten participants, the same to those in the main research study, formed part of the pilot study. A pilot study is the first stage of the research process and is typically a smaller-scale study that aids in the design and

modification of the primary study (In 2017). After completion of the pilot study and once the required changes were incorporated, the main study commenced.

#### **1.6.6 Measuring instrument**

The term "research instrument" describes a tool used to analyse a large amount of data from the target participants in the study and to ensure that all participants provide consistent answers to the questionnaire questions (Saunders 2012). A survey questionnaire was utilised to gather primary data from respondents and to measure the variables. A questionnaire is an excellent technique to obtain responses from a large number of people before conducting a quantitative analysis (Saunders, Lewis and Thornhill 2016). Measurement instruments for the research constructs – CE challenges, the role of administrative staff in CE, administrative staff participation in CE and approaches to improve administrative staff participation in CE – were operationalised in accordance with previous works. Changes were made to align with the present study's goals and objectives (Fagarasanu and Kumar 2002). A 5-point scale was used to grade the items to demonstrate the degree of agreement, with 1 denoting a strong disagreement and 5 denoting a strong agreement. The survey questionnaire method was adopted because it is cost-effective and gives respondents anonymity.

#### **1.6.7 Data collection**

In the current study, a self-administered questionnaire was created and utilised as part of the survey method of data collection. This method was selected due to its benefits. The questionnaire was created on the online survey distribution platform Google Forms. A hyperlink was created to grant access to the surveys and was thereafter distributed to the respondents. Access was granted to all VUT administrative employees, and the hyperlink was distributed via email. The respondents were given a response period of two weeks. Email was found to be a reliable delivery mechanism since it is the mechanism which all VUT staff use to receive and distribute the institution's communications on a daily basis.

### **1.6.8 Data analysis**

Data collected from VUT respondents was extracted from the online survey and thereafter analysed using IBM Statistical Package for the Social Sciences (SPSS), version 28.0 for Windows. The data was organised, coded, and entered into SPSS to generate graphs, tables, descriptive statistics, and inferential statistics.

### **1.6.9 Reliability and validity**

Validity and reliability are related with the correctness and logic of a test (Scholtes, Terwee and Poolman 2011). Better comparative experiments are needed for reliability, while validity assesses whether the experiment is designed to effectively address the questions that are being posed, or if the experiment is logically sound (Scholtes *et al.* 2011). A Cronbach alpha test and a composite reliability coefficient were conducted in order to examine construct reliability in this study. The pre-existing scales of CE used by previous researchers, namely, Calisto and Sarkar (2017), Rasool *et al.* (2021), and Riyanto, Endri and Herlisha (2021), were used to ensure construct validity. The reliability of the CE measures was measured using estimates of Cronbach's alpha.

### **1.6.10 Ethical consideration**

An ethical consideration is conducting an institutional review of the ethical approval process while protecting participants' rights and obtaining their informed consent (Lacey *et al.* 2015). The policies on ethics of VUT and Durban University of Technology (DUT) were effectively followed and applied. The research was conducted through questionnaires. Ethical consideration for the research and the preservation of sensitive employee information were taken into account, and every effort was made to adhere to them. Respondents provided their informed consent after being advised that their data would only be used for research. After respondents had been properly informed, voluntary participation was assured by means of a section verifying consent which was also included in the questionnaire.

## **1.7 Outline of the study**

This dissertation consists of five chapters, organised as follows:

### **Chapter One: Introduction and background of study**

This chapter explains the background of the study and focuses on the research problem, objectives, research methodology and design, data collection instrument, analysis of data and ethical considerations of the study.

### **Chapter Two: Literature review**

This chapter discusses previous studies conducted by other researchers about CE. It describes the study's introduction and defines some of the major terms. Literature relevant to the challenges faced by VUT in CE, the role currently played by administrative employees in CE at VUT, and factors affecting the participation of administrative employees in CE at VUT, is reviewed.

### **Chapter Three: Research design and methodology**

This chapter explains the method that was employed to gather the data for this study, as well as the procedure that was used to convert the data into results and subsequently to draw conclusions.

### **Chapter Four: Data analysis and interpretation**

This chapter presents a detailed data analysis of this study. The outcomes of the study from all four sections of the survey questionnaire are discussed in this chapter.

### **Chapter Five: Conclusion and recommendations**

In this chapter, the results are compared to the present body of knowledge. The researcher discusses how well the objectives and research issues were addressed. The study's limitations as well as future research suggestions are presented.

## **1.8 Summary of the chapter**

In this chapter, the first section introduced the study and provided the context for the current research. The problem statement and the objectives of the study were outlined. The primary argument made was that there is a lack of research on how CE is used in universities from the viewpoint of the administrative employees. There is little understanding of CE at the administrative level and how the challenges faced by employees at this level are overcome.

The following chapter explores the existing body of available knowledge on the CE challenges faced by VUT. The roles and activities of administrative employees in relation to CE are given consideration, and the factors affecting the participation of administrative employees in CE within the institutions are discussed in detail.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

The literature review in this chapter describes the format and content of previous studies on CE. The chapter begins by giving definitions for the key terms used in this study that were extracted from preceding research studies. The discussion then focuses on CE challenges. The following section focuses on motivational factors such as rewards, work discretion, and resource availability. This is followed by an evaluation of human factors, that is human capital/workforce and organisational culture. The chapter then turns its focus to approaches that will improve administrative staff participation in CE. The purpose of this review is to present an overview of what CE entails.

#### **2.2 Definition of key terms**

CE is the procedure through which a person or group of people collaborates with an already-existing organisation to form a new one, or to promote renewal or innovation within that organisation (Arshad and Rehman 2022). Table 2.1 below provides a few definitions of CE:

**Table 2.1: Definitions of CE**

<b>Author</b>	<b>Aspects of Definition</b>
Sathe (1985)	In the 1980's, CE was only described as a process for renewing an organisation.
Kuratko and Morris (2018)	CE concerns expanding the institution's area of capability and its opportunity set through innovation.
Kuratko, Hornsby and Hayton (2015)	CE's substantial and successful area of research has genuine and tangible benefits for developing researchers

	since their work will essentially affect an emerging strategy.
Mugunzva and Rankhumise (2020)	CE is defined as the advancement of modern business ideas and opportunities within expansive and established organisations.
Mehta (2020)	CE implies creating and hatching new ideas and strategies to improve the benefits of an organisation, to preserve leadership within the market, or to resume a flat-lining business deliberately.
Asogwa <i>et al.</i> (2020)	CE is conceived as the entirety of an organisation's innovation, reestablishment, and venturing efforts.
Urbano, Turro, Wright and Zahra (2022)	CE is regarded as a decision made by the top management group and then carried out at lower organisational levels by subordinates.

Source: Author's research

In the context of this study, the definition that is adopted is that of Ahmed *et al.* (2018), who define CE as an advancing concept that talks about supporting and building up an environment that underpins and persuades individuals to work with an initiative mindset, indulging in creativity and innovation within the organisation. CE may be an all-encompassing process whereby individuals or groups of individuals at work start with creativity and innovation to form, re-establish, and revamp the organisation.

Administrative employees are referred to as non-managerial employees (Ferreira and van Antwerpen 2011). Musa (2016) states that administrative employees are capable of performing office duties without direct supervision. According to Nwaokwa and Okoli (2012), administrative employees must be able to multitask



and prioritise duties, and must possess good communication, interpersonal, organisational, and managerial skills. A university is an excellent example of an organisation that requires administrative staff engagement in decision-making in order to improve employee performance and enable them to carry out their essential societal role (FarajAllah, El Talla, Abu-Naser and Al Shobaki 2018).

### **2.3 The relevance of CE in a university context**

This section provides a brief review of related literature by other researchers that is relevant to the study in order to provide the required background and clarity to the research presented. The aim of the literature review is to assess the functionality of CE in a university context as it has been explored in other studies.

De Moraes *et al.* (2021) performed a study that analysed the impact of management support, autonomy, and rewards perception on university professors' innovative behaviour. The study found that managerial support is a crucial element in creating an organisational climate that is more supportive of innovative behaviour and CE. It was found, however, that reward perception is not a key element in determining the innovative behaviour of university employees in educational institutions with a more concentrated entrepreneurial ecosystem. de Moraes *et al.* (2021) recommended that academic institutions interested in encouraging CE should create opportunities for employees to collaborate to resolve challenges, encourage employees to show their effort outside of the university setting, and grow the primary indicators of management support and autonomy outlined in this study.

Furthermore, de Moraes, Fischer, Campos and Schaeffer (2020) explored how university entrepreneurial dynamics and activities impact faculty members' propensity to promote entrepreneurship. In the study, a conceptual model that directly links the university ecosystem to faculty engagement was developed and validated. The study found that entrepreneurial culture at the university level is a complex and cumulative phenomenon that depends on long-term developments. It recommended developing CE approaches for explaining and disseminating

knowledge on entrepreneurship as a useful alternative. Another recommendation was that including entrepreneurship in the list of research areas might be a significant step toward creating the institutional frameworks necessary for a thriving entrepreneurial culture.

A study conducted by Etzkowitz, Mack, Schaffer, Scopa, Guo and Pospelova (2020) focused on the lack of creativity in academic entrepreneurship and how to break through it. The study found that converting new discoveries into initiatives lags well behind the rate of academic discovery. It recommended increasing financing for initiatives that reach significant milestones or have greater inflection points. It is obvious that not all projects will advance at the same rate, so it would be helpful to establish a structure for rewarding activities that advance past established milestones. Another recommendation is to provide a research branch as a new component of the program. The research branch would give the program another source of projects and enable the administrative staff to focus on certain problems and subfields.

## **2.4 CE challenges in universities**

Initially, all institutions should engage in some sort of entrepreneurship as start-ups develop into large established institutions. There is sometimes a need to develop strict regulations, policies, and procedures (Mazzarol and Reboud 2017). This rigid structure and bureaucratic red tape are used for managing growth. This, however, may also prevent the entrepreneurial initiatives that first produced the competitive advantage. Kuratko (2017) states that challenges to CE normally show the incompetence of traditional management approaches when applied to the creation of innovations. Despite their best intentions, employees may refrain from engaging in corporate entrepreneurial behaviour as a result of the negative effects of a certain traditional management approach. Kumar and Pathak (2021) intimate that the inability of existing institutional infrastructure to support the institution's rapid expansion and innovation is a growing concern.

In their study, Kearney and Meynhardt (2016) recognised a number of significant CE challenges that are particularly common in universities. These include administrative and delivery constraints, short-term budgets and planning prospects, weak rewards and incentives for innovation, risk aversion culture, inadequate skills in active risk or change management, unwillingness to close down unprofitable programs or organisations, and the availability of technologies.

Like all organisations, universities must deal with challenges related to their financial constraints, such as issues with financial returns and limited access to financial resources (Arshad and Rehman 2022). The training and education of employees is another challenge that needs to be dealt with (Salamzadeh, Tajpour and Hosseini 2019). Researchers have noted that training and development strategies can encourage employee entrepreneurial behaviours, even if they are applicable to a variety of job roles (Moghadam and Salamzadeh 2018). Salamzadeh *et al.* (2019) state that when employees view themselves as entrepreneurs, employee training can be particularly effective.

It is no secret that organisations are built to make sure that their existing businesses succeed. As most of their income comes from ongoing operations, their priorities are maintaining organisational structures, serving existing customers, and utilising technology. New challenges are posed by the creation of new businesses because they are connected with uncertainties, and the systems are often the same as those of existing businesses (Kearney and Meynhardt 2016). Kuratko (2017) concurs that the majority of an institution's infrastructure (systems, policies, and procedures) were established for purposes other than encouraging entrepreneurship. According to Kumar and Pathak (2021), organisational structures that hinder entrepreneurial behaviour have too many levels of hierarchy, a very small range of power, responsibility without authority, top-down management, a lack of accountability for innovation and change, and a restricted number of communication channels. These kinds of organisations do not encourage entrepreneurial behaviour or culture.

It is evident from prior discussions that traditional management approaches may not always be effective when attempting to encourage entrepreneurship.

Therefore, it is crucial to understand the barriers that prevent the promotion of CE. If management wants to gain support and create excitement for the creation of innovations, it should remove the identified barriers and look for alternative management measures (Kuratko 2017). To promote CE, universities should look at these barriers and figure out how to remove them. An entrepreneurial university must have adaptable and unrestrictive procedures in order to thrive in an entrepreneurial climate.

## **2.5 Role played by administrative staff in CE**

According to Mehta (2020), in a financially hostile environment, the institution's effective and profitable existence can be achieved through implementing and accepting entrepreneurship. This might be accomplished through fostering and recognising possibilities, innovation, entrepreneurialism, and CE (Mugunzva and Rankhumise 2020). Prada (2020) states that CE is related to the techniques used by the organisation to foster innovative activities through employee initiative. Administrative employee entrepreneurial action is critical to creating and sustaining CE, but this is one of the foremost perplexing issues for managers (Mustafa, Gavin and Hughes 2018). Niranga (2020) argues that the innovative conduct of employees may be a key success figure for most of the organisations due to new applications of the business environment. Employee innovative behaviour, as defined by Niranga (2020), is behaviour in which employees generate or embrace new ideas and then work to implement them within an organisation.

An experimental study done by Hoque, Gwadabe and Rahman (2017) has discovered that employee decisions within CE components can improve administrative staff engagement. Hoque *et al.* (2017) also concluded that engaged administrative employees display more commitment, vitality and retention which is essential for the institution of higher learning to obtain higher levels of innovation performance, development and competitiveness. According to Ahmed *et al.* (2018), when employees are engaged, they do not only show a connection to their jobs, but also demonstrate a constant investment of their

physical and mental energies into the work in order to produce the best performance outcomes. Niranga (2020) found that a high rate of advancement support and execution of inventive ideas by workers are two essential components that have been key success factors for fruitful organisational performance. In the view of Ahmed *et al.* (2018), employees that are engaged and motivated at work are likely to be more active and committed to delivering innovation performance to an organisation because CE is a tool to foster an organisational climate that promotes creativity and innovation.

Salamzadeh *et al.* (2019) state the following advantages of employee participation in CE:

- Expanding participative structures in organisations can aid in the improvement of innovation processes.
- The team can offer a set of important skills for pursuing entrepreneurial opportunities.
- Teamwork also enables participants to share the risks associated with entrepreneurial behaviours and actions.
- Employees who work for organisations that value participation have the opportunity to take initiative, to participate in decision-making, and to express their thoughts about their jobs and related topics.
- Participation puts employees in a position to successfully direct how their job is done and to feel ownership over their work.
- Participation empowers workers to recognise and rectify issues as they arise.

According to Ahmed *et al.* (2018), an entrepreneurial culture and environment within an organisation are crucial for inspiring staff to increase productivity and innovate for the benefit of the institution. Therefore, it is asserted that how employees perceive various aspects of CE, such as management support, rewards, discretion in work, time availability, and organisational boundaries, can have a significant impact on employee engagement. Furthermore, those engaged employees will significantly improve innovation performance (Ahmed *et al.* 2018).

## **2.6 The role of management in creating and facilitating a CE environment**

According to Mugunzva and Rankhumise (2020), the entire success of CE in the organisation is heavily reliant on the efforts of management. The empirical literature contains much evidence that management support for CE facilitates and promotes entrepreneurial behaviours (Mustafa, Gavin and Hughes 2018). Kuratko, Hornsby and Covin (2014) assert that when management champions creative ideas and provides staff with resources to encourage entrepreneurial activity, CE can be expected to flourish. With robust management practices in place in an organisation or institution, the delivery of required resources or knowledge and the establishment of an innovation-oriented corporate environment are likely to be achieved and CE enhanced (Sebora and Theerapatvong 2010). As noted by Ryan and Tipu (2013), management practices can encourage employees to participate in CE, attain innovative accomplishments and increase their self-efficacy. (Mugunzva and Rankhumise 2020) substantiate the idea that management is crucial in creating an entrepreneurial culture within the organisation.

## **2.7 Factors affecting administrative staff participation in CE**

As Mustafa, Gavin and Hughes (2018) point out, CE is often studied as 'top-down' processes associated with the production of organisational change, renewal, and flexibility through a management propensity towards innovative, proactive, and risk-taking behaviours. Similarly, Lukes and Stephan (2017) point out that employees in organisations are rarely able to execute ideas on their own and must frequently seek approval from their line managers. However, entrepreneurial activity can exist throughout an institution at all levels and can also be driven by self-initiated activities by individuals, whether or not these activities are approved by the institution (Mustafa *et al.* 2018). According to Mustafa *et al.* (2018), management chains of command cannot be expected to execute standardised tasks. Kuratko *et al.* (2014) propose that variables related

to a sound internal corporate entrepreneurial environment act as antecedents to encouraging entrepreneurial behaviour among administrative employees.

The influence of corporate entrepreneurial activities on successful organisation execution has attracted attention to research into the organisational variables that might propel or hinder these initiatives (Klofsten, Fayolle, Guerrero, Mian, Urbano and Wright 2019). During the last few decades, researchers have looked for significant factors that might affect an organisation's pursuit of CE, such as management support, organisational structure, and incentives and control systems (Hornsby, Kuratko and Zahra 2002).

The corporate entrepreneurship assessment instrument (CEAI), which is designed around five antecedents, was used to evaluate the internal environment for CE at VUT. The adapted five antecedents proposed by Hornsby, Kuratko and Zahra (2002) retained management support, rewards/reinforcements and resources (including time), but substituted work discretion and organisational boundaries for risk-taking and a supportive organisational structure. The CEAI is a diagnostic instrument for examining, measuring and managing an organisation's internal environment in a way that fosters entrepreneurship (Kuratko and Morris 2018). de Moraes *et al.* (2021) state that to encourage CE, upper management needs to negotiate time availability, rewards, autonomy, and organisational limits in order to create an internal entrepreneurial environment.

It has been discovered that these antecedents have an impact on CE (Kuratko *et al.* 2014). Certain organisational antecedents are highlighted in the research as being essential factors for influencing CE within an institution (Hornsby *et al.* 2013). The five elements that influence administrative staff participation at VUT that are regarded to be antecedents of entrepreneurial activity are discussed below.

### **2.7.1 Management support**

Ahmed *et al.* (2018) assert that management support is essential for developing entrepreneurial activities. Management levels include not only senior management but also middle management. Mustafa *et al.* (2018) show that the

perspectives of top management and the implementation issues that arise at lower management levels are typically reconciled by middle managers. Additionally, top management is mainly focused on making strategic decisions, whereas lower-level management is primarily focused on carrying out instructions from middle management. With a focus on strategic imperatives, senior management directs the macro-level implementation of CE initiatives. The initiatives need the support of middle level managers, who should also make sure there are enough resources available. Furthermore, by exercising their "shepherding function, middle-level managers champion, protect, nurture, and direct the entrepreneurial initiative" (Mamabolo and Ravjee 2019: 5). Due to their function as the organisation's central engine for entrepreneurship, these managers play a crucial part. The idea that middle managers facilitate corporate entrepreneurial efforts is also advocated by (Mugunzva and Rankhumise 2020). Although different levels of management are necessary for entrepreneurial initiatives to carry out their duties, managers must act in a positive manner toward the initiative. Failure to do so will possibly result in less entrepreneurial activities (Kuratko and Morris 2018). Management support has been conceptualised as managers' capacity and willingness to encourage and spark entrepreneurial activity in an institution (Urban 2017). Management support provides an accommodating organisational structure that offers the administrative means for ideas to be assessed, selected, and employed (Chigamba, Rungani and Mudenda 2014).

Nevertheless, not every employee views management support in the same way. Executive management may appear to be much more supportive to those in higher levels of management, such as middle and senior management. In contrast with lower levels of employees, those in higher levels have more contact, correspondence, and discussions with top management or the executive (Mugunzva and Rankhumise 2020). Researchers also argue that senior management should be prepared to back an entrepreneurial strategy and aid in encouraging the entrepreneurial behaviour that is expected of employees (Urban 2017). However, Tampi, Nabella and Sari (2022) argue that CE will occur if superiors and subordinates have a mutual relationship in which superiors place more trust in subordinates to participate in decision-making in order to achieve



better organisational goals. Employees are more motivated when their superiors have their trust, as doing so makes them feel valued and motivates them to carry out their responsibilities and to make decisions with complete responsibility.

CE in major organisations is a top-down process used tactically by management to promote initiative and improvement in their employees (Divakara 2021). Top management support is regarded as a top-down approach and an effective driver of CE (Niemann, Mai and Dickel 2022). Executive or management involvement is necessary for administrative staff to believe in the CE process and that it will be possible to develop and commercialise good ideas. This may not be the case, though, as management sometimes rejects new, innovative ideas because they are commonly seen as different from usual business practices (Mugunzva and Rankhumise 2020). Mugunzva and Rankhumise (2020) further argue that managers impose internal restrictions on aspiring corporate entrepreneurs out of concern that their staff may surpass them in power and that their departments may fragment. de Moraes *et al.* (2020) argue that this is a big challenge in an environment where entrepreneurship-related initiatives continue to face significant resistance and criticism. To address this concern, management can create behaviours that support organisational change (de Moraes *et al.* 2020). Therefore, in spite of the need to coordinate entrepreneurial efforts with organisational objectives, management should allow enough freedom for innovative individuals and teams to lead impactful CE (Azis and Amir 2020).

Studies on the CE construct emphasise how important it is for managers to facilitate and generate CE (Urban and Wood 2017), especially in the context of the university (Campos, Moraes and Spatti 2021). Managers play a key role in facilitating the adoption of entrepreneurial behaviour at all levels, from the top down to the lowest level (Mugunzva and Rankhumise 2020). Management, as a support function, fosters an environment in which employees can adopt an entrepreneurial mindset and behaviour. Research conducted by Brim (2019) indicates that more innovation is strongly correlated with higher levels of engagement.

Organisations that adopt an entrepreneurially oriented vision, architecture, and processes exhibit corporate entrepreneurial behaviour. Many scholars' findings have thus provided convincing proof that management support in a setting of entrepreneurship affects CE within organisations.

### **2.7.2 Organisational structure**

Entrepreneurs are hesitant to impose hierarchical layers of managers because they perceive them as a "bureaucratic" threat to their ability to innovate (Lee 2022). An entrepreneurial university must organise itself in such a way that new opportunities are exploited and maximised. According to de Moraes *et al.* (2020) organisational structures that can strengthen the links between teaching, research, entrepreneurial, and management activities are necessary for universities that genuinely want to encourage entrepreneurial behaviour.

CE may be supported by the organisational structure and particular relationship mechanisms between divisions. The decision-making process is frequently a concern when developing the organisational structure because CE or innovation involves novel ideas (Azis and Amir 2020). Institutions that support organisational structures, values, and entrepreneurial activity are more likely to expand than those that do not. According to Kuratko, Hornsby and Hayton (2015), in structures that are closely related with an organic structure, significant innovative breakthroughs are more likely to take place. Organisational structures that are rigid and bureaucratic frequently stifle entrepreneurial behaviour. A bureaucratic organisational structure also makes it difficult to identify issues outside of the workplace. This is due to the fact that employees in these organisations tend to concentrate on issues specific to their departments and lacks perspective on the big picture Lee (2022) is of the view that the creative success of a university might be enhanced by a flatter hierarchy. Lee (2022) further states that by stipulating fewer hierarchical levels, a flatter hierarchy increases employee cross-relationships and gives them more autonomy. Therefore, it is important to encourage employees to view the institution holistically.

Mugunzva and Rankhumise (2020) note that the size of the organisation may have an effect on the connection between organisational success and entrepreneurial mentality. Some institutions employ strict instructions and procedures to manage their operations, which may prevent employees from acting entrepreneurially, resulting in less innovation (Mugunzva and Rankhumise 2020). Studies frequently ignore the grey area of job rotation within organisational frameworks, which may encourage entrepreneurial behaviour.

### **2.7.3 Resource/time availability**

Kuratko *et al.* (2014) consider time availability to be the notion that flexible work schedules provide for extra time for people and organisations to pursue new ideas, with employment created in such a way as to support these initiatives and to meet both immediate and long-term goals of the organisation. Top management should make sure that employees who must participate in CE activities have the time necessary to do so (Urban and Wood 2017). For an organisation to encourage CE at the administrative level, employees must have access to resources. Chigamba *et al.* (2014) note that the viability of CE is demonstrated by the resources' availability, which is best illustrated by time availability.

Mamabolo and Ravjee (2019) are of the view that in order to come up with ideas and seize opportunities, employees should be given time during the workday to engage in entrepreneurial activity. They augment that workers have a right to resources for innovation-related activities in order to motivate them to try new things and take calculated risks. Even though the organisation may have the resources it needs, CE may still be limited if those resources are not distributed fairly among the administrative staff. For the people working in the institution to be able to engage in innovative activities, time and physical resources are needed. Urban (2017) argues that there should be a positive perception of the organisation's ability to provide the necessary resources to pursue entrepreneurial opportunities, as well as a willingness to take chances and be tolerant of potential setbacks as they arise. Additionally, employees are inspired to come up with innovative ideas when organisations relax their restrictions. On

the other hand, employees who have a low level of entrepreneurial orientation might lack direction and not know how to use the extra time for corporate entrepreneurial projects (Niemann, Mai and Dickel 2022). Therefore, organisations must limit the amount of work that employees are assigned, refrain from setting time constraints on any component of their work and encourage teamwork for solving complex problems. Niemann *et al.* (2022) found that for employees who are more inclined toward entrepreneurship, having free time for one's own projects is especially important. Routines, workloads, and daily schedules that are demanding may not give employees much time to take on entrepreneurial endeavours.

#### **2.7.4 Autonomy/work discretion**

Mugunzva and Rankhumise (2020) found that employees who exercise discretion would have the freedom to experiment, which would result in opportunities and ideas. Allowing for this level of discretion should not be a privilege, but rather a requirement, to be able to promote innovation from the early concept to its actual application. Employees should be provided with a safe environment and freedom to try out new ideas without worrying about getting into trouble with senior management if their creative ideas do not work out as planned. The success of CE is increased by the use of policies and procedures that encourage participation, open communication, and teamwork. Additionally, an entrepreneurial orientation must be developed through increased participation in decision-making. An institution can lessen barriers to its pursuit of entrepreneurial initiatives by encouraging collaboration and open communication (Kim, Hornsby, Enriquez, Bae and Tarabishy 2021).

Urban (2017) envisions autonomy as the capacity to give staff members the freedom to decide how best to serve the organisation, with the freedom to take calculated risks playing a crucial role. Encouragement of CE activities is a function of how empowered and independent people are in their work (Chigamba *et al.* 2014). This authority affects employee attitudes and calls for management to tolerate failures. Urban (2017) suggests that management should be committed to accepting the possibility that entrepreneurial outcomes may fail and

should give staff members some freedom while delegating responsibility to enable autonomous decision-making.

According to Niemann *et al.* (2022), positive entrepreneurial outcomes are frequently produced by staff members who have some freedom to experiment. However, the organisation's budget restrictions typically place restrictions on work discretion (Mugunzva and Rankhumise 2020). By doing this, the organisation aims to decrease any faults or risk-taking that could limit their budget in the event that an innovative idea is unsuccessful. Kim *et al.* (2021) recommend that in order for employees to feel autonomous and accountable, the institution must grant them some degree of freedom and authority. By delegating some decision-making authority to administrative employees, management promotes a culture of accountability. The institution should recognise and accept that taking on risk entails the possibility of entrepreneurial ventures failing, but that doing so presents an opportunity to learn from mistakes and to move on to more successful ventures in the future. Institutions that uphold a free-floating ethical culture allow management to give staff members discretion, responsibility, and the ability to accept failure (Mamabolo and Ravjee 2019). Although it is not common practice in organisations, a failure-tolerance mindset is unquestionably necessary if knowledge is to be gained.

The ability to make one's own decisions carries with it the risk of making the wrong choice, so it is important to note that work discretion may not always be advantageous. Arguably, entrepreneurial employees have a relatively high risk tolerance, which creates a strong foundation for utilising work discretion (Niemann *et al.* 2022). Organisations must allow employees the freedom to choose how to carry out their duties (Kuratko *et al.* 2017). Administrative employees' freedom is often limited by the systems used and the nature of their work. Flexible and informal work cultures and climates promote and encourage entrepreneurial behaviour, creativity, and the sharing of ideas and information among employees, teams, departments, and management. When a university operates in a hierarchical manner, an administrative employee's autonomy is reduced. For a university to foster an entrepreneurial environment, it must both

possess and grant its administrative staff and researchers a certain level of autonomy (de Moraes *et al.* 2021).

### **2.7.5 Rewards/reinforcement**

Making employees feel valued depends on the degree to which reward and reinforcement systems acknowledge their effort, dedication, innovative entrepreneurial behaviour and risk-taking. A reward system is a tool utilised to encourage staff members to adopt creative behaviours that will aid in the implementation of CE activities. Chigamba *et al.* (2014) found that rewards and reinforcement create an environment where people are motivated to act in a creative, proactive, and moderately risky manner. In a study by Mamabolo and Ravjee (2019), rewards and compensation policies in human resource management were presented to give an organisation a competitive advantage over rivals by promoting creativity and innovation. This is in line with (Mugunzva and Rankhumise 2020)'s finding that employee motivation requires some sort of reward or acknowledgement. Rewards and reinforcements are essential for both management and human resource practitioners due to the supporting evidence from the literature and the results of the case studies. Niemann *et al.* (2022) believe that people are only motivated by rewards if they believe they can put forth the necessary effort. In order for rewards and reinforcements to be widely used throughout the organisation, senior management must be the driving force behind them. Rewards must play a part in promoting an entrepreneurial environment by encouraging entrepreneurial participation, taking on more risk, and preventing employee turnovers (Salamzadeh *et al.* 2019).

According to Mamabolo and Ravjee (2019), employees are willing to take risks and be entrepreneurial when they are rewarded. In short, employee recognition and rewards are also important to CE because they will naturally encourage participation through incentives. Urban (2017) found that rewards are one of the most important aspects of establishing a CE culture because they provide as a link between individual and organisational goals. Because the challenges and risks are not insignificant, especially for those who lead an initiative, employees

anticipate reward packages that are different from those offered to regular employees. Therefore, Azis and Amir (2020) propose that entrepreneurial staff should be compensated differently from ordinary professionals.

### **2.7.6 Human capital**

One distinction that universities provide is the active flow of human capital, that is, administrative personnel and middle management, who can update and innovate considerably more than R&D departments within institutions (de Moraes *et al.* 2021). Without a doubt, the innovation process is closely related to human capital. According to Sibindi (2021), managerial human capital is a function of the skills, competence, and knowledge that managers acquire over time with regard to coordinating human resources in an organisation from talent acquisition to development. Employee initiative, proactiveness, risk-taking, and the generation of novel ideas are traits that define CE (Mugunzva and Rankhumise 2020). The ability of an institution to foster and sustain innovation and the formation of new ventures strongly depends on the capabilities of individual employees, specifically those related to the pursuit of CE. Through dedication to a common goal, the workforce is empowered to innovate (Kim *et al.* 2021).

Mehta (2020) is of the notion that administrative staff can be heartened to be entrepreneurs through training and reward programs that focus on improving their knowledge, skills, and capabilities in support of CE. This notion is also supported by Azis and Amir (2020), who assert that management plays a crucial role in supporting employees who produce innovative ideas and have a keen interest in advancing their knowledge. Moreover, in order to promote CE among administrative staff, entrepreneurial behaviour must be instilled. Individual competencies include the knowledge needed to attain a certain result, the skills needed to put that knowledge into practice, and the personality traits needed to inspire the application of the knowledge and skills needed to achieve the intended result (Mugunzva and Rankhumise 2020). Universities need individuals who are creative and risk-takers, long-term thinkers, results-driven, adaptable to change, able to work well in a team, independent, accountable, and able to share the organisation's CE expertise (Azis and Amir 2020).

Mugunzva and Rankhumise (2020) provide four areas where organisations should focus on to overcome internal barriers and encourage innovative behaviour. Firstly, organisations should promote entrepreneurship by employing financial incentives rather than strict rules and regulations. Secondly, human resource policies should be managed appropriately, and organisational managers need to hold their roles long enough to get to know a specific division or industry. Thirdly, it is important to trust in entrepreneurial endeavours. The last area of importance is betting on persons rather than analysis.

Some academics have noted that organisations that empower their staff members are more likely to achieve the best performance possible from them, which invariably activates innovation and commitment, which in turn has a favourable and immediate impact on work performance (Mugunzva and Rankhumise 2020). Empowerment is the degree to which an organisation offers employees the authority and responsibility to solve current organisational challenges (Kim *et al.* 2021). Tampi *et al.* (2022) state that empowerment entails encouragement of greater employee participation in organisational activities and decision-making that impacts the organisation's success. This implies that they have the chance to demonstrate their ability to contribute smart ideas and their competence at making those ideas a reality. Sibindi (2021) found that institutional performance was improved as a result of effective human capital management, which involved talent identification, development, and teamwork. Teamwork is a known result of successful human capital management, and its benefit on organisational development is abundantly documented in the literature on organisations and management.

### **2.7.7 Organisational boundaries**

According to Mamabolo and Ravjee (2019), organisational boundaries measure the degree of information flow between the organisation's internal and external environments. Management and staff require a clear vision and map of the path to pursue in order to meet their objectives and increase the institution's financial profit margins. Kim *et al.* (2021) state that policies used by organisations to set



boundaries and overly restrict employee behaviour can hinder the innovativeness of institutions and entrepreneurial behaviour. Structured and planned innovative outcomes should motivate employees to work productively by abiding by the institution's norms, values, rules, and laws (Mugunzva and Rankhumise 2020). It must be made very apparent that management, R&D departments, or innovation champions are not the only ones responsible for innovation and entrepreneurship, and that these activities are not always confined by organisational boundaries and bureaucracy.

Kuratko *et al.* (2014) found that to respond to changes in their contexts, both internally and externally, institutions need to be flexible and proactive. Managers need to manage, exert influence over, and measure antecedents or dimensions in order to develop organic structures and strategies like the CE plan and the entrepreneurial planned idea. Niemann *et al.* (2022) is of the view that if top managers help remove barriers and possible risks for innovative ideas, this support is likely to serve as a motivational signal to staff. Flexible boundaries that encourage the flow of knowledge encourage innovation (Mamabolo and Ravjee (2019).

#### **2.7.8 Organisational culture**

To transform and build an atmosphere conducive to CE, a culture of entrepreneurship must be instilled from the top down. Top management or strategic management must develop an organisational environment that prioritises CE. This means that established policies must favour transformational measures that discourage bureaucracy (Mugunzva and Rankhumise 2020). Although the aforementioned administrative staff's role in creating an entrepreneurial culture in universities is seen as crucial to the CE process, it is also important to consider the fact that people's behaviour is rooted in organisational contexts that affect it. As a result, institutional environments that promote and acknowledge entrepreneurship as a legitimate activity and integrate it into organisational culture are extremely important to entrepreneurial universities (de Moraes *et al.* 2020).

Institutions must look beyond mere strategy and consider culture and its impact on the sustainability of an innovative culture (Kim *et al.* 2021). An organisation's culture is made up of a set of value systems, assumptions, or standards that have long been accepted and adhered to by its members as a standard for behaviour and the resolution of organisational issues (Tampi *et al.* 2022). In other words, organisational culture is the set of values and standards that are shared by all members of the organisation and serve as the foundation for the institution's rules of conduct (Tampi *et al.* 2022). Entrepreneurial culture must be instilled in administrative staff and extended throughout the organisation, rather than being focused at higher levels. Nonetheless, the presence of an innovative organisational culture creates favourable conditions for the application of CE. CE is the incorporation of entrepreneurial mindsets into the organisational culture and strategy of a university just as much as it is of a corporation (de Moraes *et al.* 2021). An organisation would often have a lower degree of CE because of the presence of a risk-averse culture.

In order to construct and implement entrepreneurial organisational culture ideals into the university setting, suitable systems of intrinsic (internal) and extrinsic (external) motivational factors must be developed. Intrinsic motivation exists in employees who believe their work is meaningful, interesting, and challenging, and that it allows them a reasonable amount of autonomy, opportunities for achievement and advancement, and opportunities to use and develop skills and capabilities. It is motivation that originates from the activity itself, rather than from external rewards. On the other hand, extrinsic motivation is external, and includes rewards, pay increases, praise, and promotions, as well as disciplinary actions, salary retention, and criticism (Kovačević 2021). Entrepreneurial culture involves a positive attitude and a willingness to adapt to change. Institutions that are both successful and promising foster a culture that views change as an opportunity rather than a threat (Mugunzva and Rankhumise 2020).

Because of the high level of cooperation and intensity required to develop an internal climate, a good organisational culture will significantly affect the way its employees behave (Tampi *et al.* 2022). A Positive organisational culture empowers staff to try new things, even if they fail to succeed. The concept is that

mistakes can be used to learn. One of the most important components of long-term business performance is an environment where people feel free to contribute new ideas and accept risk (Mamabolo and Ravjee 2019). However, this point of view is frequently neglected by some organisations due to the potential financial and resource costs. Entrepreneurial cultures promote learning through sharing of information, dedication, and accountability (Mugunzva and Rankhumise 2020). Understanding the core beliefs of these cultures and knowing the essential influential aspects in them can lead to successful innovations. Kuratko and Morris (2018) maintain that CE is necessary to keep an innovative culture alive.

Ahmed *et al.* (2018) state that employees who have positive perceptions of managerial support, time flexibility, discretion at work, and resources for entrepreneurship are frequently seen participating in innovation. Ahmed *et al.* (2018) further state that research clearly indicates that employees who have a high availability of internal CE factors perform better in innovation paradigms.

## **2.8 Approaches for improving administrative employee participation in CE**

Due to the discussion surrounding CE challenges, there is growing interest in the literature regarding the elements that support an entrepreneurial culture in organisations. A number of drivers have been recognised that organisations can use to boost entrepreneurial behaviour. The adaptation of structures and approaches to foster a stronger sense of enterprise among staff, professors, and students is essential to fostering the development of an entrepreneurial spirit within a university environment (de Moraes *et al.* 2021). Managers can employ a variety of strategies to make the structure of an organisation more adaptive to change and allowing corporate entrepreneurial activity to thrive (Hornsby *et al.* 2013).

Mugunzva (2019) proposes a variety of alternative approaches to instilling or cultivating an innovation culture, such as reducing approval processes, establishing creative development programs, or holding brainstorming sessions

with management and decentralisation of authority. Salamzadeh *et al.* (2019) also provide recommendations for implementing an entrepreneurial strategy in higher education institutions, such as downsizing and outsourcing, transforming organisational decision-making approaches from autocratic to collaborative decision-making, and rethinking business processes and procedures. Furthermore, (Mugunzva 2019) advises that management shift its attention from tracking and monitoring employees to motivating and encouraging them, as well as improving feedback systems.

Approaches from the CE literature incorporate a number of components, including top management's entrepreneurial strategic vision and organisational structures that support entrepreneurial behaviour (de Moraes *et al.* 2020). Accordingly, to become entrepreneurial, universities need a corporate strategy that addresses institutional intentions toward entrepreneurship, internal policies that give information and encouragement for entrepreneurial endeavours, and an environment that minimises the risks associated with these activities (de Moraes *et al.* 2020). In turn, such circumstances are linked to administrative staff members' willingness to participate in the entrepreneurial university concept and to support the development of an entrepreneurial culture.

Despite the obvious lack of an entrepreneurial culture, certain aspects of university culture, such as autonomy, managerial support and rewards, may encourage employees to act entrepreneurially and to be more engaged in their work (de Moraes *et al.* 2021). These approaches lead to the conclusion that not all employees need to have the same knowledge, abilities, and personality traits in order to promote CE.

## **2.9 Gap in the literature**

Many academic entrepreneurial studies have been written to emphasise universities and university management processes, but few have been written with a focus on the participation of university employees (Li *et al.* 2020). The previous studies tend to oversee the participation of administrative staff from

universities. Individuals and employees with higher degrees of education are considered to be more entrepreneurial or innovative than those with lower levels of education.

Research on the influences of culture and how institutions are set up for CE is still scarce in spite of the abundance of discussion about the importance that the corporate environment plays in encouraging entrepreneurial behaviour (de Moraes *et al.* 2021). The literature is considerably more scarce when it comes to developing economies (Hughes and Mustafa 2017) and university environments (Fischer, de Moraes and Schaeffer 2019). An evolving topic and a gap in CE research is administrative employees' entrepreneurial behaviour and how the corporate environment promotes such behaviour (de Moraes *et al.* 2021).

There is still a gap in scholarly understanding of how and why certain people, and not others, come up with business ideas when it comes to comprehending the process of recognising opportunity (Mugunzva and Rankhumise 2020). Therefore, corporate initiatives to encourage employee entrepreneurship may not produce the anticipated outcomes. As described by scholars, it is obvious that participation of administrative staff in CE requires further research. The stream is also very important for comprehending the CE phenomena on a deeper level and in greater depth. Mamabolo and Ravjee (2019) assert that discovering entrepreneurial opportunities is possible using a quantitative research format. Therefore, this dissertation focuses on uncovering the approaches that the institution can use to improve administrative staff participation in CE utilising quantitative research methods.

## **2.10 Summary of the chapter**

The purpose of this chapter was to present literature relevant to the importance of CE in light of the institution's internal environment and its challenges. In addition, the chapter reviewed prior literature on CE's antecedents. The discussion made it clear that CE is crucial for institutions because it fosters innovation among employees and gives organisations a competitive advantage,

which in turn helps them develop and perform financially. The literature emphasised that CE now contributes significantly to economic growth and job creation. It was discovered that a number of challenges, including a lack of managerial support, a lack of flexibility, and a bureaucratic framework, hinder CE in organisations. This contributed towards creating the approaches for improving employee participation in CE at VUT. The next chapter discusses the research methodology of the study.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

The previous chapter presented the literature review on the approaches for improving administrative employees' participation in CE. This chapter explains the research method used for this study. The research methodology outlines how the study was carried out to accomplish the objectives that were specified. The research methodology presented in this chapter focuses on the research design, details of the target population, sampling methods used, the procedure of data collection, data analysis, and reliability and validity. Ethical consideration is also covered in this chapter.

This study is guided by the following research objectives:

- To investigate the CE challenges facing VUT
- To examine the role currently played by administrative employees in CE at VUT
- To determine factors affecting the participation of administrative staff in CE at VUT
- To propose approaches that can be used at VUT to improve administrative staff's participation in CE

#### **3.2 Research design**

The most important step in research methodology is selecting a study design (Aggarwal and Ranganathan 2019). A suitable study design guarantees the accomplishment of the research objectives. The formulated research question and the method of sampling are essential components that should be taken into account when selecting the study design (Pawar 2020). A research design is defined by Rezigalla (2020: 2) as the "set up to decide on, among other concerns, how to obtain further data, analyse and interpret them, and thereafter provide an

answer to the question". Rezigalla (2020) further states that the main objective of a research design is to make sure that the information gathered enables the questions to be answered as clearly as possible. Pandey and Pandey (2015) attest that the research design is a learnt process that has evolved and changed in both intention and form while continuously trying to examine facts. Therefore, a research design is nothing more than a structure or action strategy for the study that will be conducted. This study employed explanatory design to collect data at the same time. Explanatory research investigates a condition or problem so as to describe the link among variables (Saunders, Lewis and Thornhill 2016).

As part of a quantitative research approach, an online survey questionnaire was utilised to gather data from respondents. These were self-administered surveys with no time constraints for respondents to complete them by. The purpose of using online questionnaires was to reach as many people as possible. A cross-sectional survey was adopted to examine the role of VUT administrative staff in CE and to determine factors affecting their participation in CE. A cross-sectional survey involves the study of a certain phenomenon at a particular time (Saunders, et al. 2016).

### **3.3 The nature of the study**

Studies can be categorised as descriptive or causal studies. These two classes have different objectives (Cooper and Schindler 2014). Nassaji (2015) asserts that the objective of descriptive research is to describe a phenomenon and its features. Causal research seeks to understand why one variable causes changes in another (Cooper and Schindler 2014), while descriptive studies involve an explanation of new information (Amjad, Hussain and Akram 2021). The main purpose of the study is descriptive in nature, as it focuses on reviewing the approaches that can be used to improving participation of administrative employees in CE at VUT.



### **3.4 Research methodology**

Methodology is the set of rules that govern how we approach and carry out tasks. The principles of research methodology guide us in organising, planning, designing, and carrying out effective research. In other words, it is the science and philosophy that underlies all research (Mohajan 2017). Methodology is defined as "an investigational strategy that directs a set of methods" (Kaplan and Wolf 2017: 4). This study employed a quantitative approach. The approach was chosen in order to produce an accurate representation of the situation. According to Creswell and Creswell (2018), quantitative research entails testing theories by investigating the relationship between variables. This method uses numerical or statistical data to analyse the issue. Saunders *et al.* (2016) state that the phrase "quantitative research approach" is frequently utilised as a substitute for any data gathering process or data analysis strategy that creates or uses numerical data. Ghauri, Grønhaug and Strange (2020) believe that quantitative research is decisive in its function. It attempts to quantify the problem and to understand how well-established it is by identifying predictable outcomes for a larger population.

### **3.5 Target population**

A study population is that combination of segments, such as people, nations, cities, regions, or businesses, from which the sample is actually chosen (Rubin and Babbie 2016). Williams (2019) describes the target population as the number of potential respondents in the research study. In addition to this, (Kumar 2019) refers to population as a defined group of people characterised by at least one common trait for the purposes of data collection and analysis. In this study, the target population comprises all administrative employees within VUT. According to the VUT human resources department, the institution has 110 administrative employees. These 110 employees are the target population for this study. This target population was deemed relevant for this study in order to get a good understanding of CE at this level.

### **3.6 Sampling method and sample size**

(Rubin and Babbie 2016) state that the smaller group observed in the studies is referred to as the sample, and the process of selecting this group is referred to as sampling. (Bryman *et al.* 2014) describe a sample as a percentage or subset of a demographic which has been selected for study purposes. The sample size denotes the number of components that will be used in the study (Teare, Dimairo, Shephard, Hayman, Whitehead and Walters 2014). When trying to draw a sample, it is crucial to identify the acceptable point between costs and sample size satisfactoriness (de Bekker-Grob, Donkers, Jonker and Stolk 2015). The sample population for this study was 110 administrative employees of VUT, which is a manageable size. In selecting the respondents, the census sampling method was used to select all 110 administrative employees. A census sample happens when the whole population is sampled for data collection (Saunders, et al.2016).

### **3.7 Data collection instrument**

Before developing the measuring instruments for this study, the researcher was directed by a review of the literature on CE and data collection methods. The term "research instrument" refers to a tool that examines a large amount of data from the target population in order to control the data collection process and to ensure that all respondents answer all of the same questions in the questionnaires (Saunders, Lewis and Thornhill 2009). According to Rubin and Babbie (2016), a survey is currently the most common method of collecting quantitative data. Moises Jr (2020) describes a survey as the procedure through which study participants personally answer to the structured questionnaire constructed by the researcher. The answers are then retrieved, encoded, and analysed to generate statistical information that can be shown as graphs or tables (Creswell and Creswell 2018). To obtain data from respondents and to quantify the variables, an online closed-ended survey questionnaire was employed.

### **3.7.1 The questionnaire**

A questionnaire is an effective technique to gather responses from a large sample (Saunders *et al.* 2016). Babbie and Rubin (2010) refer to a questionnaire as a document that includes inquiries and other elements created to gather relevant information for analysis. Closed-ended questions ask participants to pick an answer from a list supplied by the researcher (Rubin and Babbie 2016). Closed-ended questions are popular because they generate more uniform responses and are easier to process.

Rubin and Babbie (2016) proposed the following advantages and disadvantages of conducting online surveys.

#### **3.7.1.1 Advantages of online surveys**

- They can be sent rapidly and affordably to very large populations anywhere in the world.
- Data from survey responses are automatically entered into computers for processing, removing the need for manual data entry and enabling speedy online results tabulation.
- The researcher can check to see if respondents are skipping questions or replying to them inappropriately as they are doing the survey and can then advise them to fix any errors or omissions before moving on to the next question.
- They are perceived as more anonymous.

#### **3.7.1.2 Disadvantages of online surveys**

- The respondents' representativeness
- People who utilise the internet and are best suited to answer questions in online surveys are probably younger, wealthier, and more educated.
- A poor response rate may be experienced.

Although the use of questionnaires has the drawback of preventing direct interaction between the researcher and the respondents, this method of gathering data for the study was selected due to the advantages of respondent confidentiality as well as the simplicity with which the data can be analysed and transformed into quantifiable findings.

### **3.7.2 Layout and design of the questionnaire**

Creswell and Creswell (2018) recommend that a questionnaire should have simple instructions and should be easy to understand and user-friendly. (Rubin and Babbie 2016) advocate that the nature and language of the questions asked are equally as important as the structure of the questionnaire. Research questions used in previous studies were structured to enquire about the objectives of the study, which are CE challenges, the role of administrative staff in CE, and administrative staff participation in CE. For CE challenges, questions were adopted from (Kuratko, Hornsby and Covin 2014). Questions for the role currently played by administrative staff in CE were adopted from (Calisto and Sarkar 2017). Questions for factors affecting staff participation in CE were adopted from Rasool *et al.* (2021) and (Riyanto, Endri and Herlisha 2021). Suitable adjustments were made based on the current study's context and purpose (Fagarasanu and Kumar 2002). Prior to questions relating to the study's objectives, questions about the respondents' biographies were also asked to better understand their personalities. A 5-point Likert scale was used to express the degree of agreement with scale items, where 1 = strongly disagree to 5 = strongly agree.

The questionnaire covered five general information questions, five questions on CE challenges, eleven questions on the role currently played by administrative employees in CE, and twenty-six questions on factors affecting staff participation in CE. The questionnaire in this study comprised the following sections:

Section A – Biographical details

Section B – CE challenges

Section C – The role played by administrative employees in CE

## Section D – Factors affecting administrative employee's participation in CE

The survey questionnaire method was adopted because it is cost-effective and gives respondents anonymity. The actual instrument and the accompanying letter of information are shown in Annexure B.

### **3.8 Administration of the questionnaire**

The current study used an online survey method to collect the data. An online survey platform, Google Forms, was used to create the questionnaire. A hyperlink was created to grant access to the surveys and was thereafter distributed to the respondents. Access was granted to all VUT administrative employees and the hyperlink was distributed via email together with a letter of information. Rubin and Babbie (2016) assert that email is one method of carrying out an online survey. This method was selected based on its advantages. The respondents were given a two-week time frame to respond. Those who had not responded after a particular time period received weekly email reminders. Numerous follow-up phone calls and office visits were made to remind respondents to take the online survey. Email was found to be a reliable delivery method because it is the medium that is used daily by all VUT staff to receive and distribute the institution's communications. The employees of VUT were extremely supportive of this research.

The Likert scale, which has a maximum score of 5 and a minimum score of 1, was used. The average and standard deviation of the scale totals, as well as the frequencies of positive replies to each item, were computed. Only primary data was used in the study. The primary data source was obtained from respondents who completed the online survey via the Google forms links.

### **3.9 Data analysis**

According to Creswell (2021), quantitative data analysis refers to the systematic procedure of gathering, assessing, measuring, and confirming data in a statistical model that evaluates or analyses. Data collected from VUT respondents was

extracted from the online survey and thereafter analysed using IBM SPSS, version 28.0 for Windows. The data was organised, coded, and entered into SPSS to generate graphs, tables, descriptive statistics, and inferential statistics. These were prepared by the researcher.

### **3.10 Pilot study and pre-testing**

Prior to disseminating the questionnaires, a pilot study was performed to ensure the validity and reliability of the questionnaires in obtaining the data needed for the research's aims, and amendments were made as needed. The pilot test was sent to five VUT senior lecturers and errors in the survey were corrected. A thorough inspection of the questionnaire by the researcher's supervisor was done to ensure that all concepts pertaining to the study were included. A pilot study is the basic stage in the research process, and is usually a smaller-gauge study that assists with the preparation and revision of the major study (In 2017). Newing, Eagle, Puri and Watson (2011) state that the value of conducting pilot tests cannot be overstated. After completion of the pilot study and once the required changes were incorporated, the main study commenced.

### **3.11 Reliability and validity**

Reliability and validity are associated with the correctness and logic of a test (Scholtes, Terwee and Poolman 2011). Better comparative experiments are required for reliability, while validity evaluates whether the experiment is designed to effectively address the questions that are being posed, or if the experiment is logically sound (Scholtes *et al.* 2011). According to Hair, Hult, Ringle and Sarstedt (2021), there are two levels of reliability: item reliability and construct reliability. Item reliability reflects variance in a rating due to underlying constructs rather than errors, and is calculated by squaring the factor loadings (Heale and Twycross 2015). Construct reliability refers to how well a measuring scale represents a fundamental factor (Creswell and Creswell 2018). A Cronbach's alpha test and a composite reliability coefficient were conducted in order to examine construct reliability in this study. Cronbach's alpha measures the degree of internal

consistency, which describes how closely related a group of items are to one another (Sijtsma 2016). In most research circumstances, reliability coefficients of 0.70 and above are regarded as "acceptable" (Mohajan 2017).

The pre-existing scales of CE used by previous researchers, namely, Calisto and Sarkar (2017), Rasool *et al.* (2021), and Riyanto *et al.* (2021), were used to ensure construct validity. The reliability of the CE measures was evaluated using estimates of Cronbach's alpha. In this study, the reliability coefficients were obtained for 42 items and were computed at 0.888 as shown in Table 3.1 below. This study's reliability analysis for internal consistency of Likert-scale measurement was similar to previous ones. Table 3.1 presents the instrument's internal consistency using the Cronbach's alpha test, in which the reliability is within the acceptable range for this research. Reliability testing is explained further in section 4.3 of Chapter Four.

**Table 3.1: Reliability Statistics**

Reliability Statistics	
Cronbach's Alpha	N of Items
0.888	42

The validity of the measurement scale was assessed after confirming that the observed instrument fulfils the necessary degree of reliability. "Validity is the degree to which a concept is precisely quantified in a quantitative study" (Heale and Twycross 2015). To make sure the data measured what it was intended to measure, factor analysis was conducted. In other words, it served as a validity check. There are other forms of validity (Bryman *et al.* 2014); nonetheless, the focus of the current study was on convergent and discriminant validity.. The inter-correlation between assessment items and the specific study construct was tested to determine convergent validity. The survey contained questions pertaining to the research objectives and questions. The same results emerged from constructed research findings.

### **3.12 Ethical consideration**

An ethical consideration is conducting an institutional review of the ethical approval process while protecting participants' rights and obtaining their informed consent (Lacey *et al.* 2015). Wexler (2016) argues that ensuring the respondents' human rights includes the protection of their privacy, autonomy, right to self-determination, right to fair treatment, confidentiality, and protection from discomfort and harm, as well as explaining to respondents all relevant information at their disposal. The VUT and DUT policies on ethics were effectively followed and applied. The researcher was given permission to conduct the study at the research site after receiving written consent from VUT and DUT. Confidentiality was preserved. Respondents gave their agreement after being advised that their information would only be used for research purposes. After respondents had been properly informed, voluntary participation was assured by means of a letter of information which was also included in the questionnaire. No part of this study was designed to put respondents at risk, whether financially, socially, or in terms of employment.

### **3.13 Limitations**

There is insufficient empirical study on CE in South Africa. Furthermore, there is no evidence of any published formal research on the approaches for improving administrative employee participation in CE in South Africa.

### **3.14 Summary of the chapter**

This chapter described the research methodology used in the study, which included the research design. The researcher adopted a quantitative approach to attain an in-depth and more meaningful data collection approach. The target population was all administrative employees of VUT. For the sampling of the population, the researcher used a census sample to survey all the population. The respondents were chosen because the researcher wanted to gain a good



understanding of CE at this level. The next chapter discusses the data analysis and interpretation thereof.

## CHAPTER FOUR

### DATA ANALYSIS AND INTERPRETATION

#### 4.1 Introduction

The previous chapter highlighted the research methodology and design that was used to obtain and analyse data for this study. This chapter analyses and interprets data as per the research aim and objectives of the study. The primary research tool used to collect data was a questionnaire, which was distributed to all administrative personnel at VUT. This chapter begins with a discussion of the response rate, then discusses the instrument's validity and reliability as it was used in this research project. The findings from the study's completed questionnaires are discussed in the next section using descriptive statistics. The results for Section A were initially computed using descriptive statistics for the general information and demographic variables in SPSS V28.0. The researcher provided significant analysis for Sections B, C, and D in the form of frequencies and percentages for the remaining statements in a summarised tabular manner. This was justified by the fact that the questionnaire consisted of statements using a Likert scale under each area, and the sample respondents had provided the responses.

#### 4.2 Response rate

The response rate that was obtained for this study is briefly discussed in this section. Table 4.1 below provides information about the response rate for this study. Bryman *et al.* (2014) proposes the following formula for calculating the response rate:

$$\text{Response rate} = \frac{\text{Number of usable questionnaires}}{\text{Total sample minus unsuitable and uncontactable members of sample}} \times 100$$

Therefore, the response rate was:  $\frac{60}{110-0} \times 100 = 54.5\%$

**Table 4.1: Response rate for the research study**

Description	Statistics
Total number of questionnaires distributed	110
Total number of questionnaires returned	60
Unusable responses	0
Valid questionnaires retained	60
Usable response rate	54.5%

As presented in Table 4.1, one hundred and ten (110) self-administered questionnaires were prepared and distributed to all administrative staff at VUT. Sixty (60) questionnaires were returned. Sixty (60) usable questionnaires were used for the final analysis of this study. There were zero (0) unusable questionnaires. This represents a response rate of 54.5 percent. The survey response rate, according to Rubin and Babbie (2016), determines the survey's quality. Singer (2016) believes that a 33% average survey response rate is appropriate. According to Baruch and Holtom (2008), if the survey was conducted internally among employees, a response rate of at least 30% to 40% is acceptable, hence the response rate of 54.5% obtained in this study is appropriate.

### **4.3 Reliability testing**

This study used Cronbach's alpha for reliability testing. Cronbach's alpha was created in response to the requirement for an objective method of measuring an instrument's internal consistency and reliability in a research project (Adeniran 2019). According to Heale and Twycross (2015), Cronbach's alpha is the procedure most commonly used to evaluate an instrument's internal consistency. When a questionnaire measures what it is supposed to assess, it is considered reliable. According to the case processing summary shown in Table 4.2, all cases (100%) were valid and none were excluded. The reliability statistics, which are calculated at 0.888, are shown in Chapter Three (Table 3.1). This confirms the reliability and consistency of the questionnaire's statements. This demonstrates that if the study were repeated, the same results might be obtained. (Mohajan 2017) states that for exploratory research, a Cronbach's alpha of 0.70 is

acceptable, whereas 0.80 and 0.90 are good for basic research and practical applications, respectively.

**Table 4.2: Case processing summary**

Case Processing Summary			
		N	%
Cases	Valid	60	100.0
	Excluded	0	.0
	Total	60	100.0

## 4.4 Analysis of data

The questionnaire (Annexure B) had four sections. The preliminary presentation and analysis of the findings in this study begins with Section A, which analysed the demographic data using descriptive statistics and frequency graphs. The analysis begins with the biographical information, which includes the gender, age, highest qualification, work experience, and current position of respondents. This section was required to ensure that all participants responding to the survey questionnaire were fit for the purpose of this study. The biographical information is presented in Figures 4.1 to 4.5. The next part of the quantitative analysis interprets findings regarding the CE challenges facing VUT. This is followed by the role currently played by administrative employees in CE at VUT and the factors affecting the participation of administrative staff in CE at VUT. Descriptive statistics present the results in graphs, cross-tabulations and other figures. Below is a brief explanation of how to distinguish between descriptive and inferential statistics using the research's empirical analysis as an example.

### 4.4.1 Use of descriptive statistics in data analysis

Descriptive statistics explain an event of interest and are a method for sorting and analysing numerical data (McNabb 2017). Descriptive statistics, comprising bar graphs and comparative analysis tables, were utilised to show the analysed data in Section A of the data analysis of results. Descriptive statistics were employed for Sections B and C of the questionnaire, as indicated in the questionnaire, in

the form of frequency tables that summarised the total number and percentage of responses for each section in the questionnaire. This comparative analysis helped to clarify the employee sample group's frequency response rate at the VUT with regard to particular responses for each section.

#### **4.4.2 Use of inferential statistics in data analysis**

As asserted by (Saunders 2016), inferential statistics are used for making generalisations from the sample to the population. Various non-parametric statistical tests were used in this study to examine the computed relationships between those factors and those components thought to have a substantial influence on the study and variables, as well as to determine the acuity of the corresponding sample responses. Since the data was on a Likert scale, non-parametric tests were chosen (Mircioiu and Atkinson 2017).

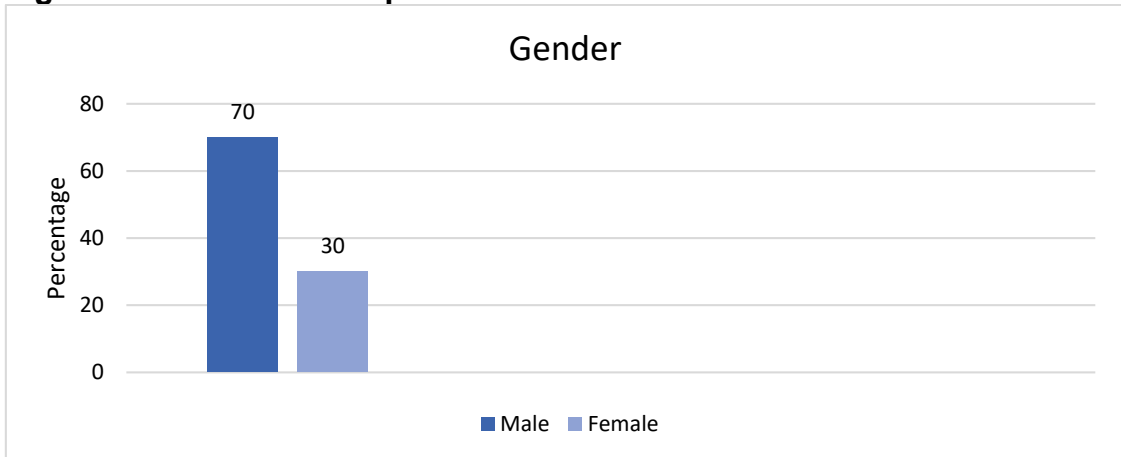
#### **4.5 Presentation of biographical information**

Figures 4.1 to 4.5 present data about the biographical information of the participants who contributed in this study. The following information was requested: gender, age, highest qualification, work experience, and current position of respondents.

##### **4.5.1 Gender of respondents**

Figure 4.1 shows that female administrative staff outnumber male administrative employees, since 70% of respondents were female and 30% were male. This indicates that VUT is dominated by female administrative employees. van der Heever and van der Merwe (2019) corroborate this finding by stating that in the administrative level, there is a shortage of males.

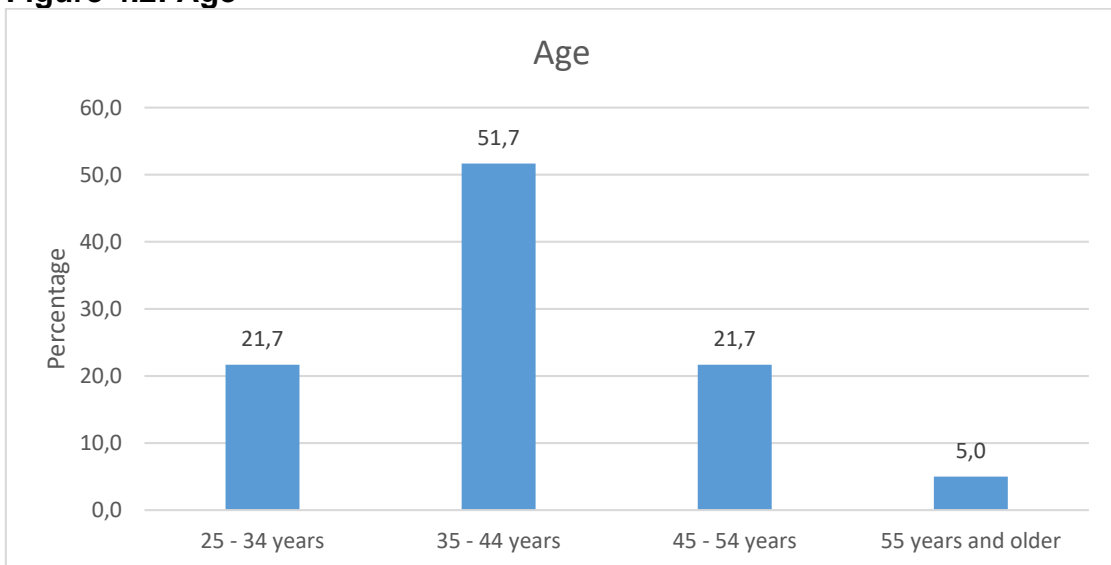
**Figure 4.1: Gender of respondents**



#### 4.5.2 Age of respondents

Figure 4.2 shows that 21.67% of respondents were between the ages of 25 and 34 years, while 52.67% of respondents were between 35 and 44 years. A further 21.67% of respondents were between the ages of 45 and 54 years, and 5.00% were 55 years and older. This indicates that VUT is dominated by officials between the ages of 35 and 44 (51.67%). These results indicate that there are more administrative employees that are still at the ages considered to be able to participate easily in CE. The usage of technology and innovative behaviour is difficult for elderly people since they lose patience rapidly. As a result, they must be properly directed and encouraged (Mohta and Halder 2020).

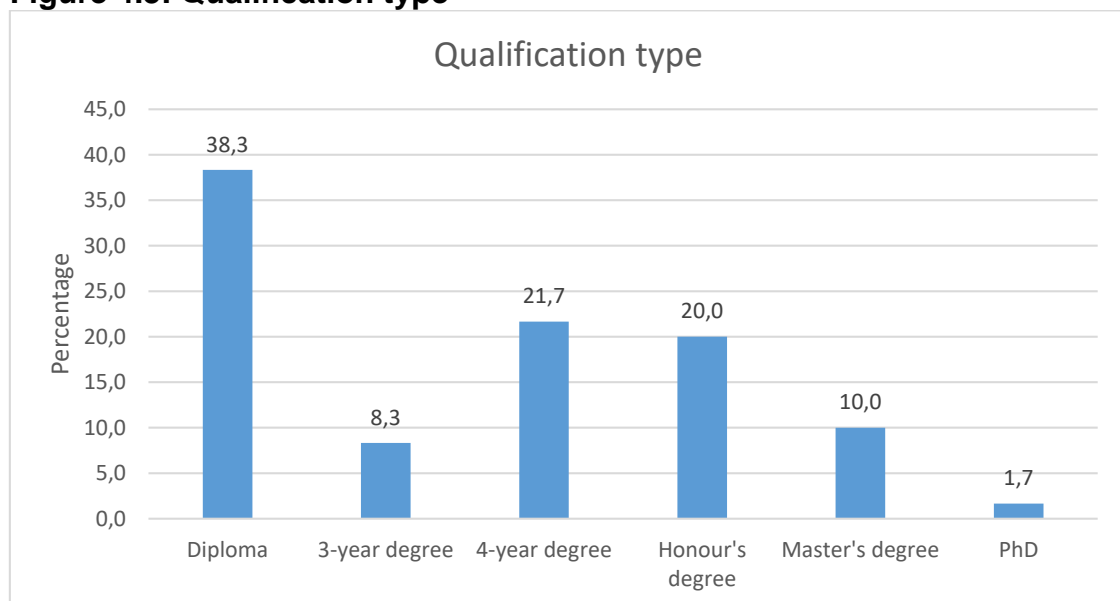
**Figure 4.2: Age**



### 4.5.3 Highest qualification

It is indicated in Figure 4.3 that 38.33% of administrative staff hold a diploma qualification, 8.33% hold a three-year degree qualification, and 21.67% hold a four-year degree. Furthermore, 20% hold an Honours degree, 10.00% hold a Master's degree, and 1.67% are at PhD level. These results suggest that even though the level of staff holding a diploma qualification is comparatively high, more administrative staff at VUT are pushing towards upgrading their educational levels. As technology changes, individuals get information about many things, including education and employment opportunities. As a result, there is a growing need to connect new technologies with career services and related professional practices (Kettunen and Sampson 2019). According to (Kettunen 2021), technological advancements such as the spread of the internet, mobile phone use, and social media use create new options for people to provide and receive professional help.

**Figure 4.3: Qualification type**



### 4.5.4 Work experience

Figure 4.4 shows how long respondents have been employed by the institution. The majority of respondents were employed by the institution for five to ten years or more. This does not demonstrate a rapid turnover of administrative employees.

The results show that the respondents had sufficient experience working for the institution and, as a result, knew about the issues that the researcher was looking for.

**Figure 4.4: Work experience**

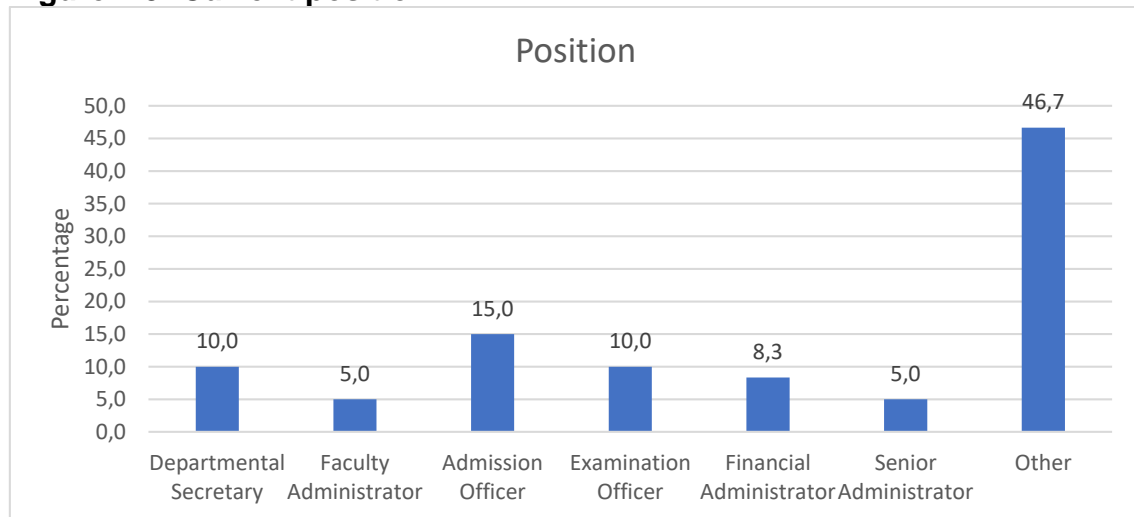


#### 4.5.5 Current position

Figure 4.5 depicts the positions that are being held by staff. The majority of responses were received from other officials, including human resources officials, IT officials and information services officials (46.67%), followed by admission officers (15.00%). The remaining respondents were as follows: departmental secretaries (10.00%), faculty administrators (5.00%), examination officers (10.00%), financial administrators (8.33%), and senior administrators (5.00%). These results indicate that VUT is dominated by admission staff (15.00%).



**Figure 4.5: Current position**



## **4.6 Analysis of results as per research objectives**

The analysis of findings in accordance with the study's objectives is provided in Figures 4.6 to 4.49 in the following section. Objective 4 of this study, which is to propose approaches that can be used at VUT to improve administrative staff's participation in CE, will be covered in Chapter Five of this study. Therefore, this section analyses the first three objectives of this study. A five-category Likert scale questionnaire was utilised. The Likert scale questionnaire had the following choices: 1=Strongly disagree, 2=Disagree, 3=Moderately agree, 4=Agree and 5=Strongly agree. The findings are presented in the form of a percentage summary for each variable that makes up each aspect. The results are then further analysed based on how significant the statements are. Descriptive research was employed. This method was chosen for this study because it analysed objective data for a large sample employing complicated structures and methodologies.

### **4.6.1 Objective 1: CE challenges facing VUT**

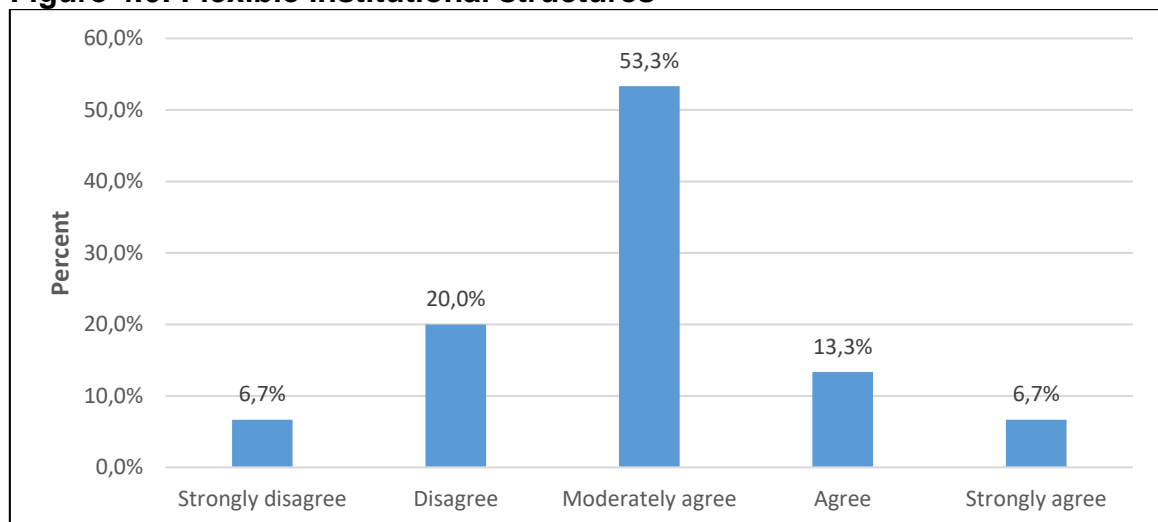
This section deals with understanding CE challenges that administrative employees of VUT are faced with. The aim of this section is to better understand whether administrative employees are encouraged to participate in CE. These analyses are linked to objective 1 of this study. In order to investigate the CE

challenges facing VUT, Figures 4.6 to 4.10 were used to summarise the scoring patterns derived from Section B of the questionnaire. The statements that were used from the questionnaire to measure objective 1 were given the following codes: CEC1, CEC2, CEC3, CEC4 and CEC5 (See Figures below).

- **Flexible institutional structures**

Figure 4.6 shows that for statement CEC1 (The institution does not accept flexible institutional structures to increase innovation), 6.7% of respondents strongly disagreed, 20.0% disagreed, 53.3% were not sure, 13.3% agreed, and 6.7% strongly agreed with the aforementioned statement. The majority of respondents were not sure whether or not the institution accepts flexible institutional structures to increase innovation. According to Kumar and Pathak (2021), organisational structures that hinder entrepreneurial behaviour have too many levels of hierarchy, a remarkably small range of authority, responsibility without authority, top-down management, a lack of accountability for innovation and change, and a restricted number of communication channels. These kinds of organisations do not encourage entrepreneurial behaviour or culture.

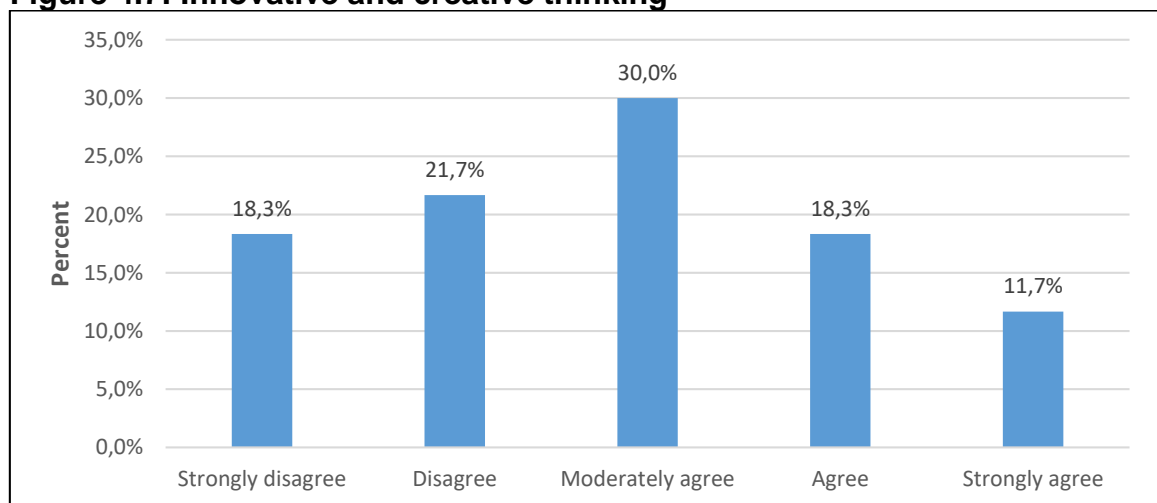
**Figure 4.6: Flexible institutional structures**



- **Innovative and creative thinking**

Figure 4.7 shows that for statement CEC2 (Innovative and creative thinking is not promoted or trained in this institution), 18.3% of respondents strongly disagreed, 21.7% disagreed, 30.0% were not sure, 18.3% agreed and 11.7% strongly agreed with the aforementioned statement. A total of 40% of respondents (comprising 18.3% who strongly disagreed and 21.7% who disagreed) disagreed that innovative and creative thinking is not promoted or trained in this institution. These findings indicate that the majority of respondents disagree that the statement above is a CE challenge faced by VUT. Literature on CE challenges (section 2.4 of Chapter Two) attest that, if management wants to gain support and create excitement for the creation of innovations, it should remove the identified barriers and look for alternative management measures (Kuratko 2017). This has the advantage of giving administrative employees a platform to be innovative and creative.

**Figure 4.7: Innovative and creative thinking**

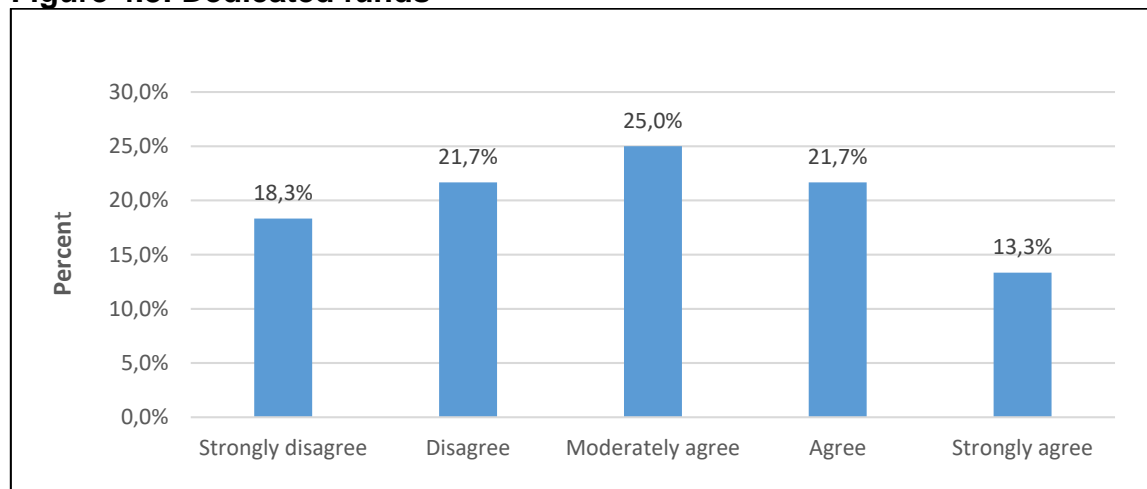


- **Dedicated funds**

A total of 40% of respondents (comprising 18.3% who strongly disagreed and 21.7% who disagreed) disagreed that VUT lacks a dedicated budget for launching entrepreneurial projects. This finding stems from Figure 4.8, which shows that for statement CEC3 (“In our institution, there are no dedicated funds

to launch entrepreneurial initiatives”), 18.3% of respondents strongly disagreed, 21.7% disagreed, 25% were not sure, 21.7% agreed and 13.3% strongly agreed with the aforementioned statement. These findings indicate that the statement above is not a CE challenge faced by VUT. Kuratko, Hornsby and Covin (2014: 39) assert that when management champions creative ideas and provides staff with resources to encourage entrepreneurial activity, CE can be expected to flourish.

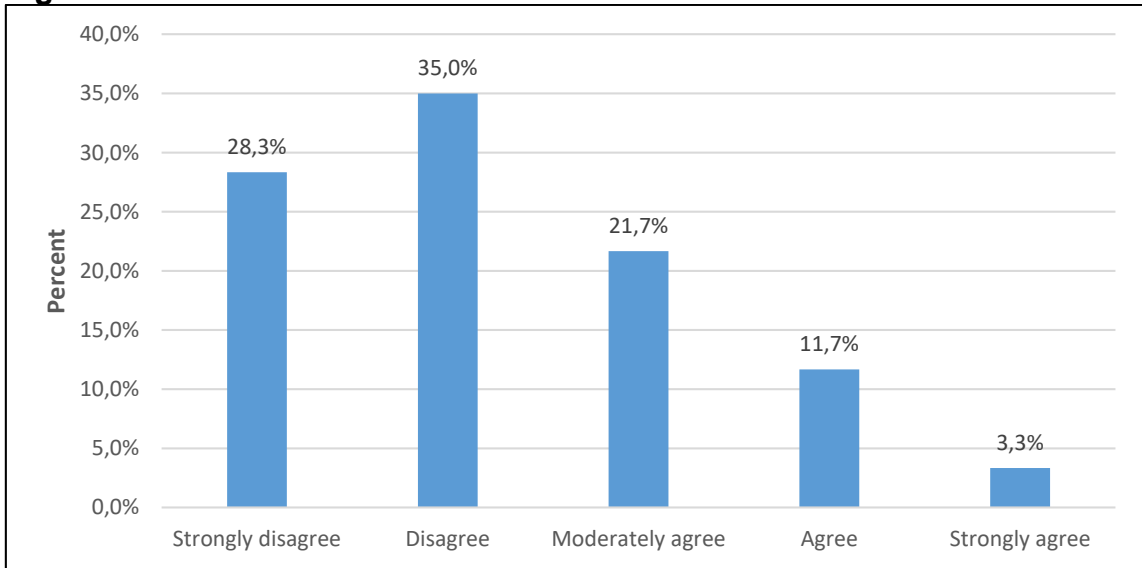
**Figure 4.8: Dedicated funds**



- **Focus on R&D**

Figure 4.9 indicates that for statement CEC4 (In my institution, there is no focus on R&D, technological leadership, or innovative practices), 28.3% of respondents strongly disagreed, 35% disagreed, 21.7% were not sure, 11.7% agreed and 3.3% strongly agreed with the abovementioned statement. A total of 63.3% of respondents (comprising 28.3% who strongly disagreed and 35% who disagreed), disagreed that VUT does not focus on R&D, technological leadership, or innovative practices. These findings indicate that the statement above is not a CE challenge faced by VUT.

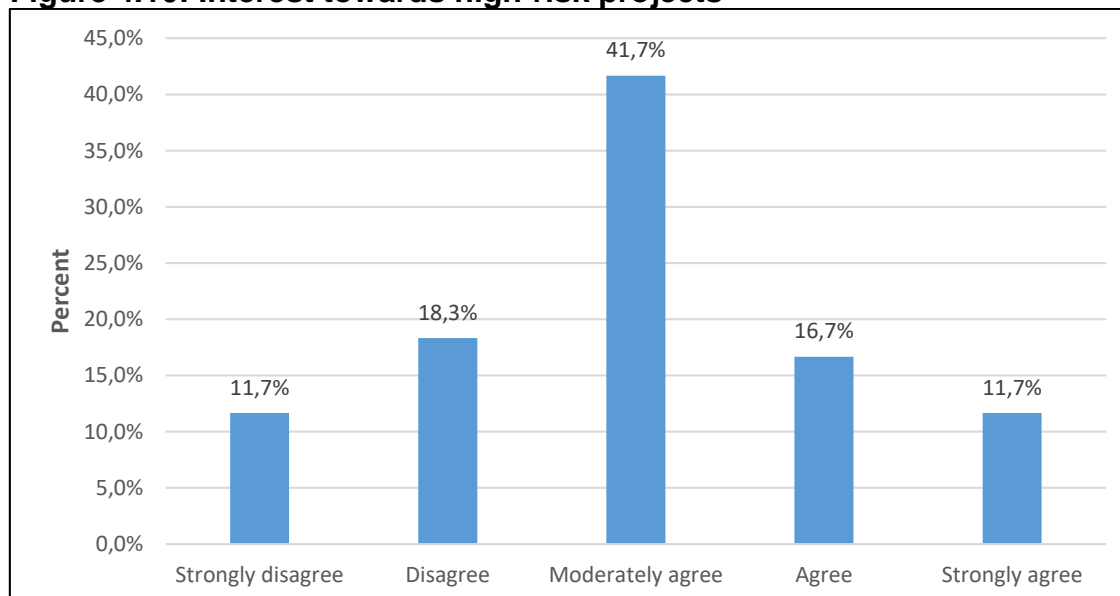
**Figure 4.9: Focus on R&D**



- **Interest towards high-risk projects**

Figure 4.10 depicts that 11.7% of respondents strongly disagreed, 18.3% disagreed, 41.7% were not sure, 16.7% agreed and 11.7% strongly agreed with statement CEC5 (In general, the top managers at our institution have little interest towards high-risk projects). These findings indicate that the majority of respondents (41.7%) were not sure whether top managers at VUT have interest towards high-risk projects or not. Universities need individuals who are creative and risk-takers, accountable, and able to share the organisation's CE expertise (Azis and Amir 2020).

**Figure 4.10: Interest towards high-risk projects**

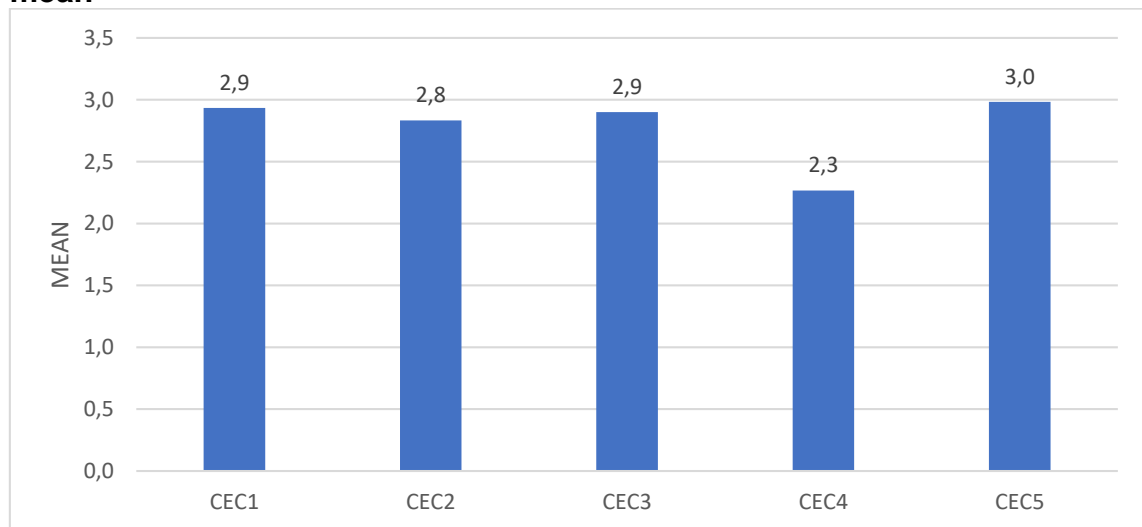


- **Summary of results for objective 1**

Table 4.9 and Figure 4.11 summarise the scoring patterns for objective 1 using the mean. A binomial test was performed to see if the scoring patterns for each report varied considerably from the central score of 3. The null hypothesis asserts that there is little difference between the mean and 3. The alternative suggests that there is a big difference. The direction is indicated by the mean's magnitude. When the mean is more than 3, agreement is more likely, and when the mean is less than 3, disagreement is more likely. The mean for CEC1, CEC2, CEC3 and CEC4 ranges between 2.3 and 2.9, which indicates that the majority of respondents disagreed with the remarks in most cases. Statement CEC5 has a mean of 3.0, which indicates that there was no difference to the mean score of 3. This means that majority of respondents scored along the moderately agree option. Statement CEC4 has a mean of 2.3; a total percentage of 63.3% of the respondents disagreed with this statement, and 21.7% of the respondents neither agree nor disagree with this statement. This indicates that the institution does focus on R&D, technological leadership, and innovative practices. In light of the findings obtained for objective 1, it can be concluded that VUT has no CE-related challenges. Most respondents disagreed with the abovementioned statements. It can, therefore, be concluded that VUT promotes innovative and creative thinking and that there are dedicated funds to launch entrepreneurial initiative.

**Table 4.3: Summary of the scoring patterns for objective 1 using the mean**

Descriptive Statistics					
		N	Minimum	Maximum	Mean
CEC1	The institution does not accept flexible institutional structures to increase innovation.	60	1	5	2,9
CEC2	Innovative and creative thinking is not promoted or trained in this institution.	60	1	5	2,8
CEC3	In our institution, there are no dedicated funds to launch entrepreneurial initiatives	60	1	5	2,9
CEC4	In my institution, there is no focus on research and development, technological leadership, or innovative practices	60	1	5	2,3
CEC5	In general, the top managers at our institution have little interest towards high-risk projects (with chances of very high returns).	60	1	5	3,0

**Figure 4.11: Graph representing the responses for objective 1 using the mean**

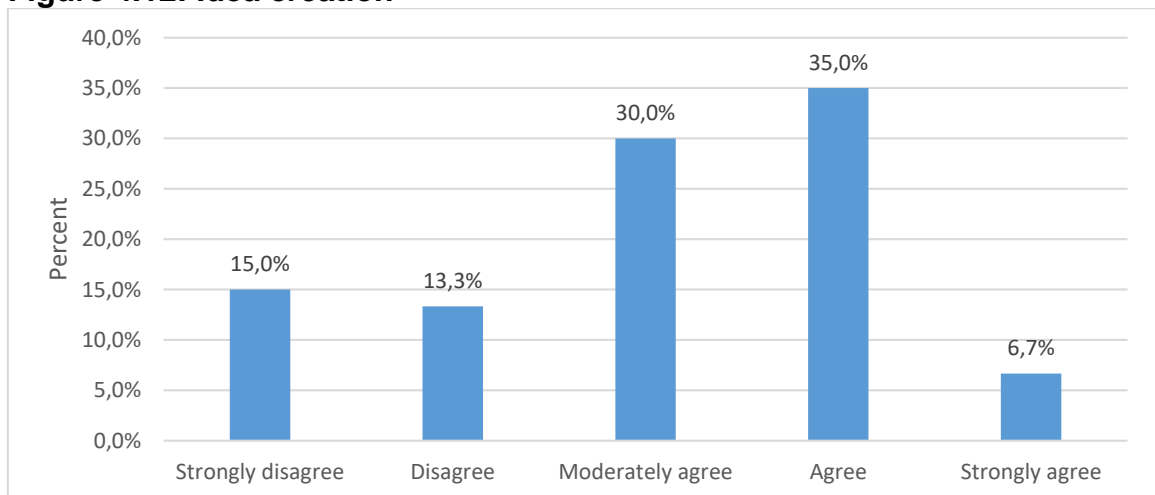
#### **4.6.2 Objective 2: The role currently played by administrative employees in CE**

This section deals with understanding the role currently played by administrative employees of VUT in CE. The aim of this section is to better understand whether administrative employees play a role in facilitating CE. These analyses are linked to objective 2 of this study. The findings for this objective are explained in Figures 4.12 to 4.22.

- **Idea creation**

The results illustrated in Figure 4.12 for statement RAS1 (My duties involve the creation of new ideas that in turn lead to the creation of new services that are offered by my university), indicate that 15.0% of respondents strongly disagreed, 13.3% disagreed, 30.0% were not sure, while 35.0% agreed and 6.7% strongly agreed with the abovementioned statement. 41.7% of respondents (comprising 35.0% who strongly agreed and 6.7% who agreed), agreed that their duties include the generation of new ideas, which leads to the development of new VUT services. These findings indicate that administrative staff are participating in developing new ideas to the institution. In the view of Ahmed *et al.* (2018), employees that are engaged and motivated at work are more committed to delivering innovation performance to an organisation because CE is a tool to foster an organisational climate that promotes creativity and innovation.

**Figure 4.12: Idea creation**



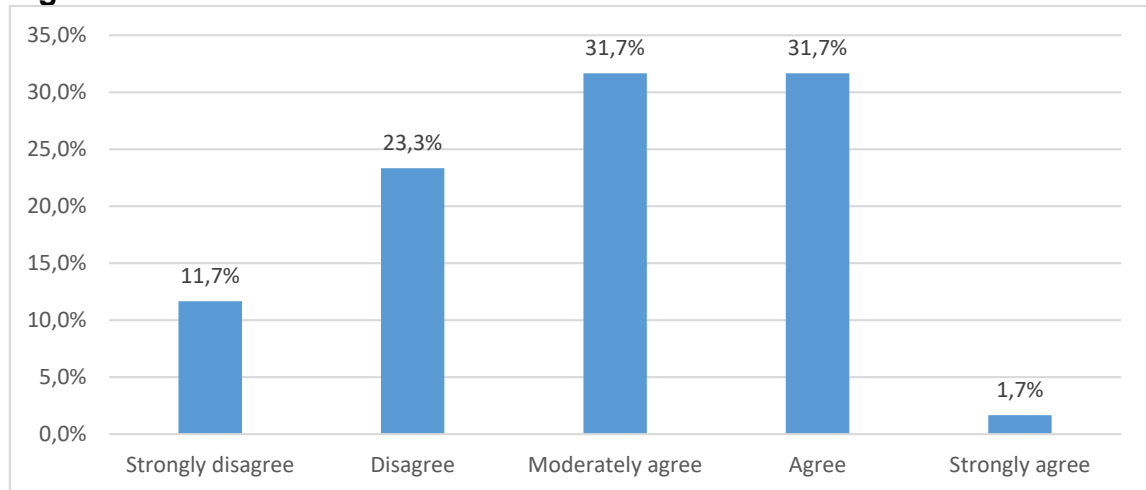
- **Creation of ideas and solutions**

The analysis for statement RAS2 (My duties involve the creation of new ideas and solutions that are used in the improvement of processes used by my university) indicated that 11.7% of respondents strongly disagreed, 23.3% disagreed, 31.7% were not sure, while 31.7% agreed and 1.7% strongly agreed with the abovementioned statement. The majority of respondents agreed or were not sure whether their duties involve the creation of new ideas and solutions that



are used in the improvement of processes used by the university. According to Ahmed *et al.* (2018), an entrepreneurial culture and environment within an organisation are crucial for inspiring staff to increase productivity and innovate for the benefit of the institution.

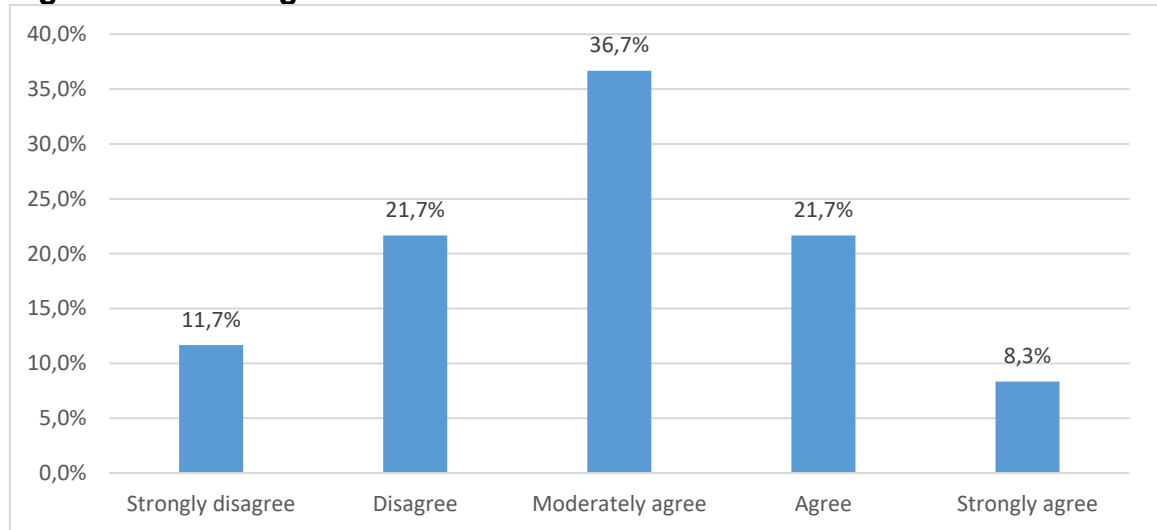
**Figure 4.13: Creation of ideas and solutions**



- **Acting as an innovator**

As shown in Figure 4.14, 11.7% of the respondents strongly disagreed and 21.7% disagreed with statement RAS3 (Even though I have a job description, however, I am allowed to act as an innovator). Therefore, a total of 33.4% of respondents were in disagreement, while a total of 30.0% were in agreement. A total of 36.7% of the respondents were not sure. These findings indicate that a majority of administrative staff are not sure whether they are allowed to act as innovators or not. Literature on management support attests that management should allow enough freedom for innovative individuals and teams to lead impactful CE (Azis and Amir 2020).

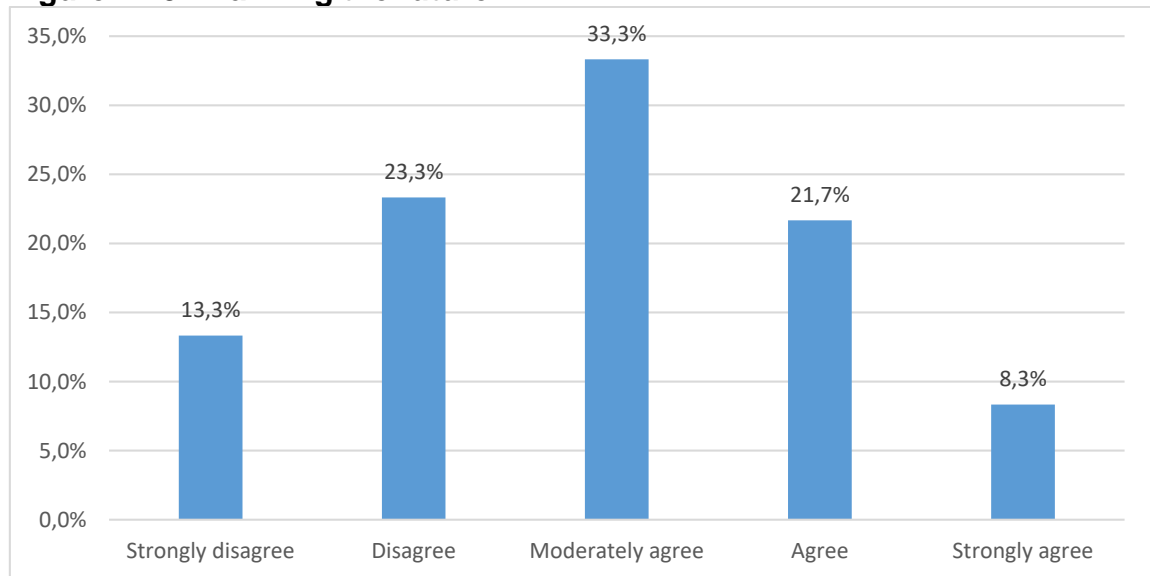
**Figure 4.14: Acting as an innovator**



- **Planning the future**

The results presented in Figure 4.15 indicate that 13.3% of respondents strongly disagreed, 23.3% disagreed, 33.3% were not sure, while 21.7% agreed and 8.3% strongly agreed with statement RAS4 (“Employees are able to describe vividly how things could be in the future and what is needed to get the firm there”). Therefore, a total of 36.6% of respondents were in disagreement, while 33.3% were not sure whether they can clearly describe the future potential of the situation and what is required to get the institution there. These findings indicate that administrative staff are not included when planning the future of the institution. Kim *et al.* (2021) recommend that in order for employees to feel autonomous and accountable, the institution must grant them some degree of freedom and authority. By delegating some decision-making authority to administrative employees, management promotes a culture of accountability.

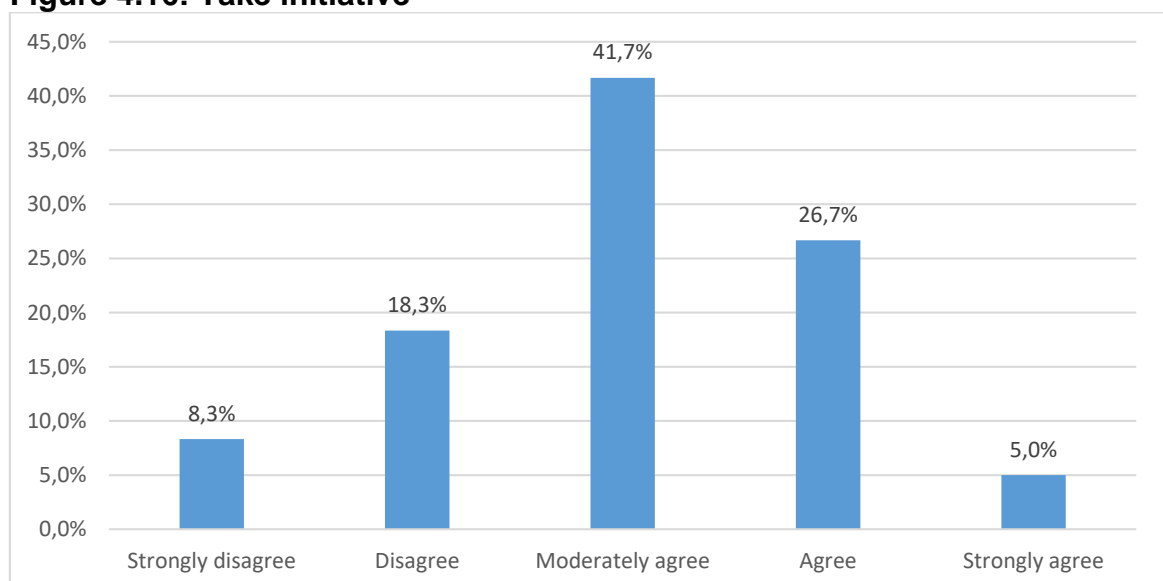
**Figure 4.15: Planning the future**



- **Take initiative**

As shown in Figure 4.16, a mere 5.0% of respondents strongly agreed and 26.7% of respondents agreed with statement RAS5 (“Employees encourage their colleagues to take initiative for their own ideas”). 8.3% respondents strongly disagreed, 18.3% disagreed, and 41.7% were not sure about the abovementioned statement. The majority of respondents (41.7%) were not sure whether they can persuade their fellow employees to take the lead on their own initiatives.

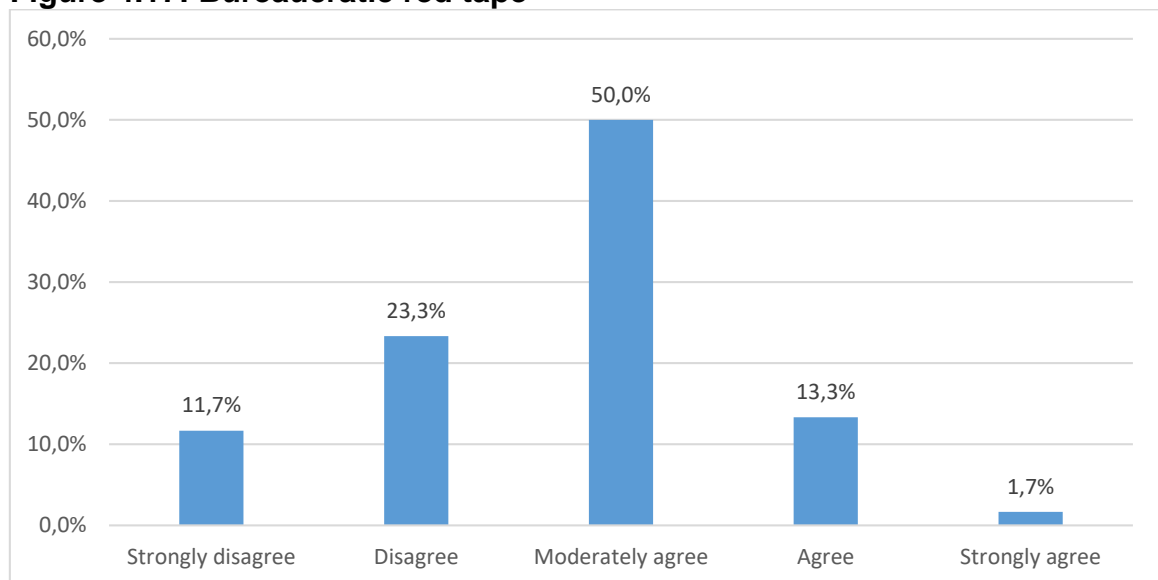
**Figure 4.16: Take initiative**



- **Bureaucratic red tape**

The findings presented in Figure 4.17 for statement RAS6 (Through "bureaucratic red tape", employees efficiently get proposed actions into practice) indicate that 11.7% of respondents strongly disagreed, 23.3% disagreed, 50.0% were not sure, while 13.3% agreed and 1.7% strongly agreed with the abovementioned statement. The majority of respondents (50.0%) were not sure whether employees can get their proposed ideas into practice through bureaucracy. Lee (2022) is of the view that the creative success of a university might be enhanced by a flatter hierarchy.

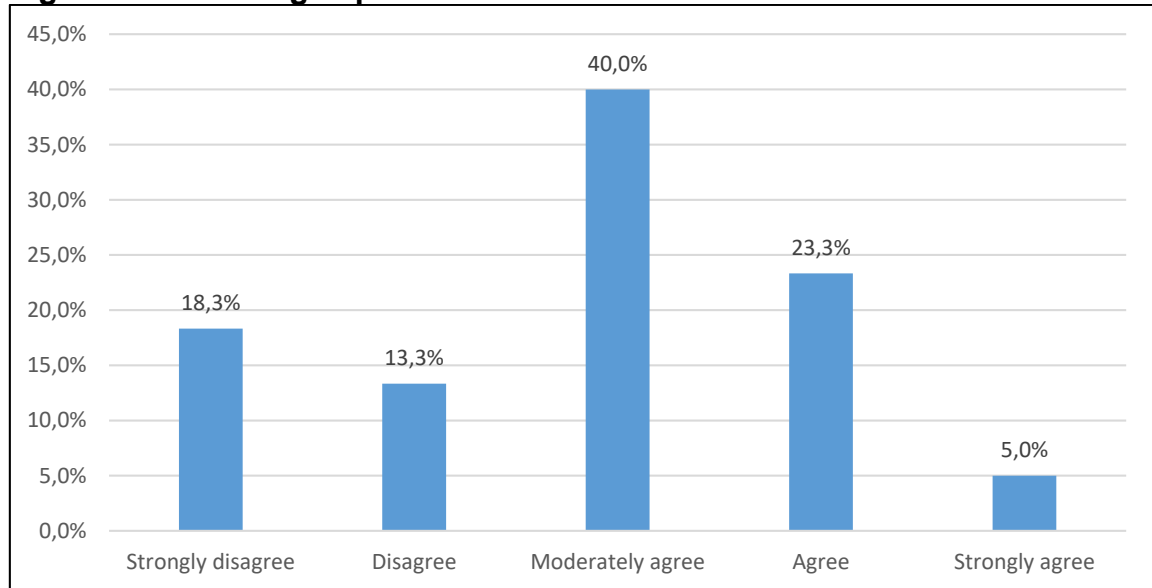
**Figure 4.17: Bureaucratic red tape**



- **Making improvements**

As depicted in Figure 4.18, 18.3% of respondents strongly disagreed, 13.3% disagreed, 40.0% were not sure, while 23.3% agreed and 5.0% strongly agreed with statement RAS7 ("Employees create an environment where people get excited about making improvements"). The majority of respondents (40.0%) were not sure whether they can foster an atmosphere where people are motivated to make improvements.

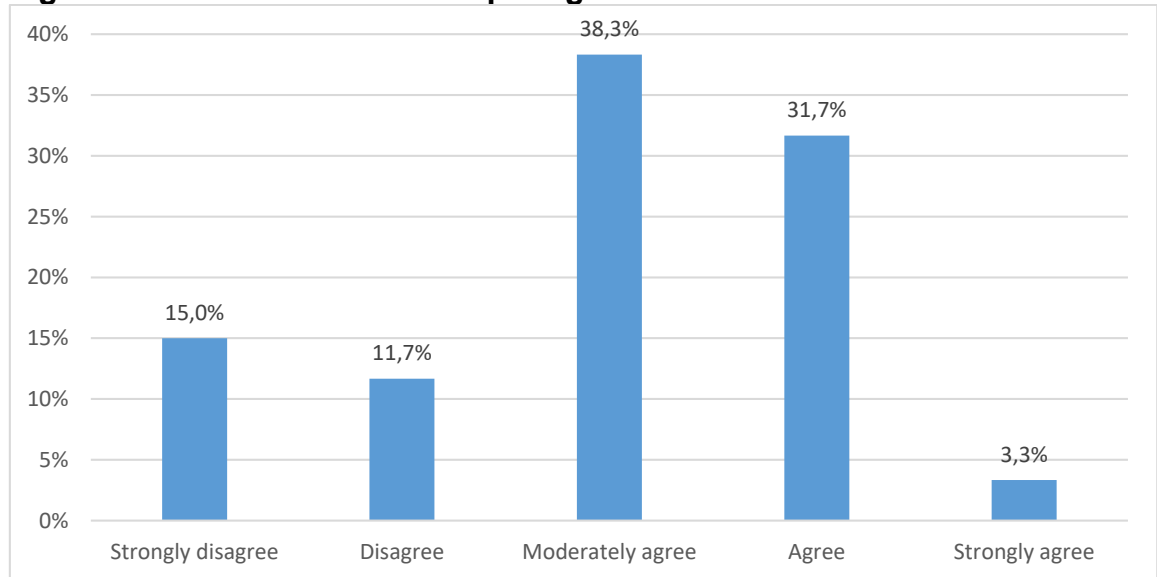
**Figure 4.18: Making improvements**



- **Enthusiasm for acquiring skills**

Figure 4.19 depicts the findings for statement RAS8 (Employees display an enthusiasm for acquiring skills). 15.0% of respondents strongly disagreed, 11.7% disagreed, 38.3% were not sure, while 31.7% agreed and 3.3% strongly agreed with the abovementioned statement. The majority of respondents (38.3%) were not sure whether employees display an enthusiasm for acquiring skills or not. Mehta (2020) is of the notion that administrative staff can be encouraged to be entrepreneurs through training and reward programs that focus on improving their knowledge, skills, and capabilities in support of CE.

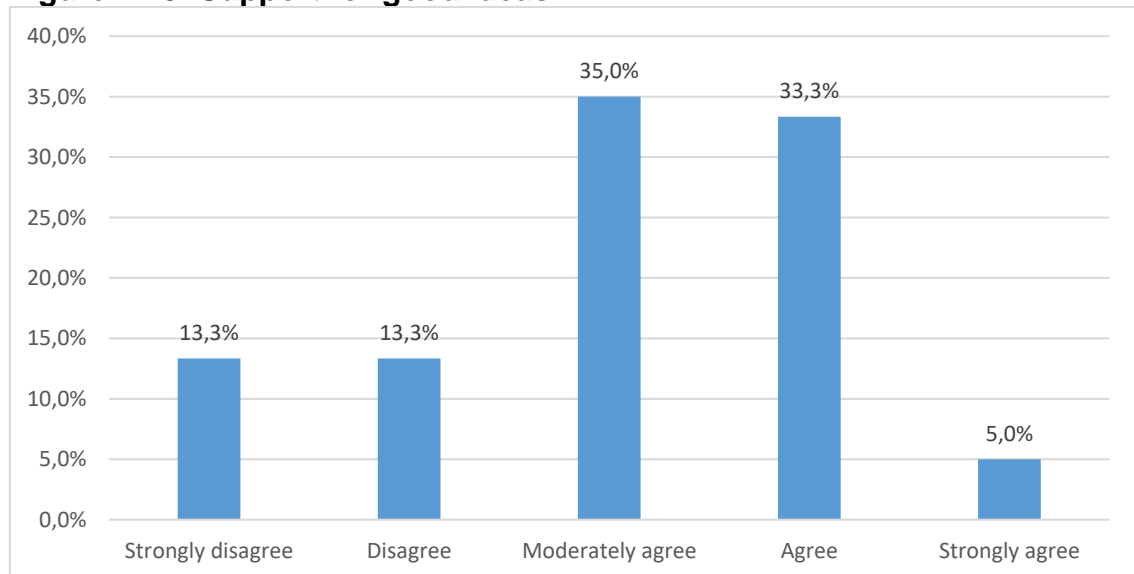
**Figure 4.19: Enthusiasm for acquiring skills**



- **Support for good ideas**

Figure 4.20 illustrates that for statement RAS9 (Employees give support for the good ideas of their colleagues), 13.3% of respondents selected strongly disagreed, 13.3% disagreed, 35.0% were not sure, 33.3% agreed and 5.0% strongly agreed with the abovementioned statement. Therefore, in total, 38.3% of respondents were in agreement that employees do give support for the good ideas of their colleagues. One of the most important components of long-term business performance is an environment where people feel free to contribute new ideas and accept risk (Mamabolo and Ravjee 2019).

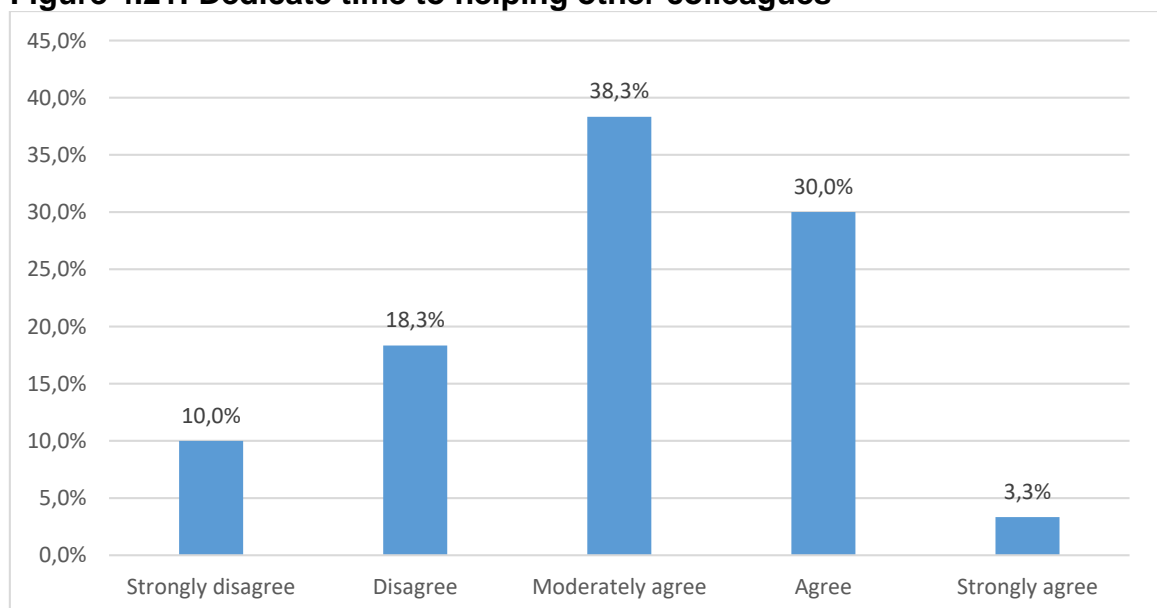
**Figure 4.20: Support for good ideas**



- **Dedicate time to helping other colleagues**

Figure 4.21 shows the results for statement RAS10 ("Employees dedicate time to helping other colleagues find ways to improve our products and services"). 3.3% strongly agree and 30.0% agree with this statement. Therefore, a total of 33.3% of respondents were in agreement that employees invest time in assisting other employees in finding ways to enhance products and services, while a total of 28.3% were in disagreement and a total of 38.3% of respondents were not sure.

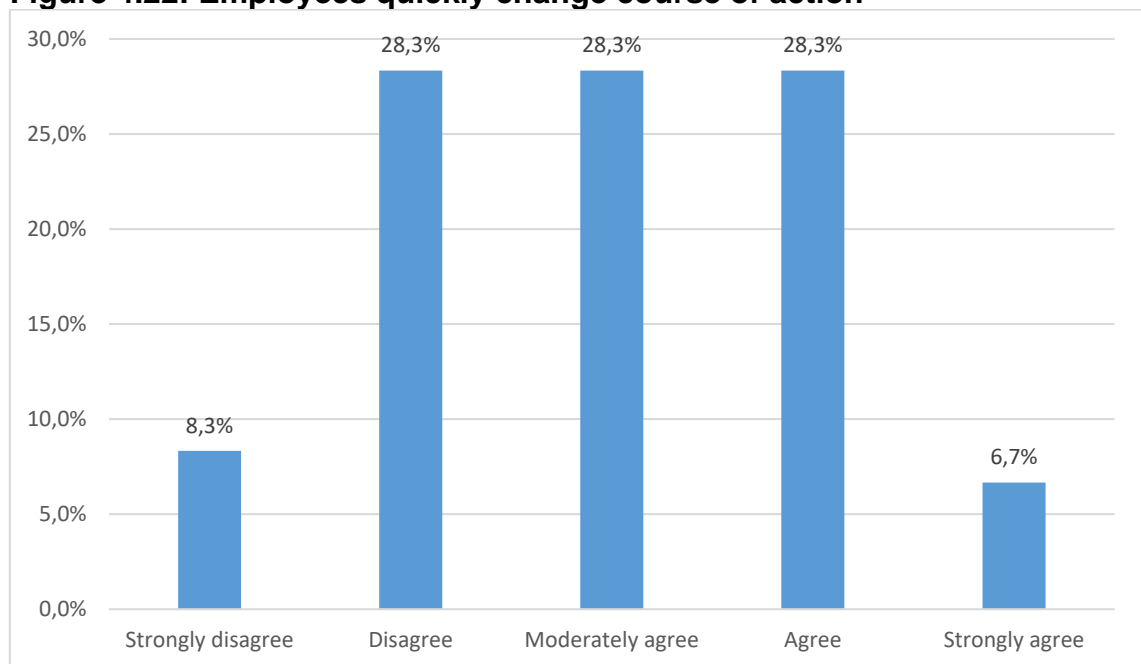
**Figure 4.21: Dedicate time to helping other colleagues**



- **Employees quickly change course of action**

Figure 4.22 shows the results for statement RAS11 (“Employees quickly change course of action when results are not being achieved”). 6.7% of respondents strongly agreed, 28.3% agreed, 28.3% were not sure, 28.3% disagreed and 8.3% strongly disagreed with the above-mentioned statement.

**Figure 4.22: Employees quickly change course of action**



- **Summary of results for objective 2**

The summary of the scoring patterns for objective 2 using the mean is illustrated in Table 4.10 and Figure 4.23. A binomial test was done to establish whether the scoring patterns per statement were significantly different to the central score of 3. The extent of the mean indicates the direction. The mean values greater than 3 lean more towards agreement, and values less than 3 lean more towards disagreement. The mean for statements RAS1, RAS5, RAS8, RAS9, RAS10 and RAS11 ranges between 3.0 and 3.1, which indicates a high level of moderately agree scores, where the respondents neither agreed nor disagreed with these statements. The mean for statements RAS2, RAS3, RAS4, RAS6 and RAS7 are below the mean of 3.0, indicating that the majority of respondents disagreed more



with these statements as the percentage for 'disagree' is higher in these statements.

Statement RAS6 has a mean of 2.7. A total of 35.0% of respondents disagreed that they can efficiently get proposed work into practice through bureaucratic red tape, and 50% of respondents neither agree nor disagree with this statement.

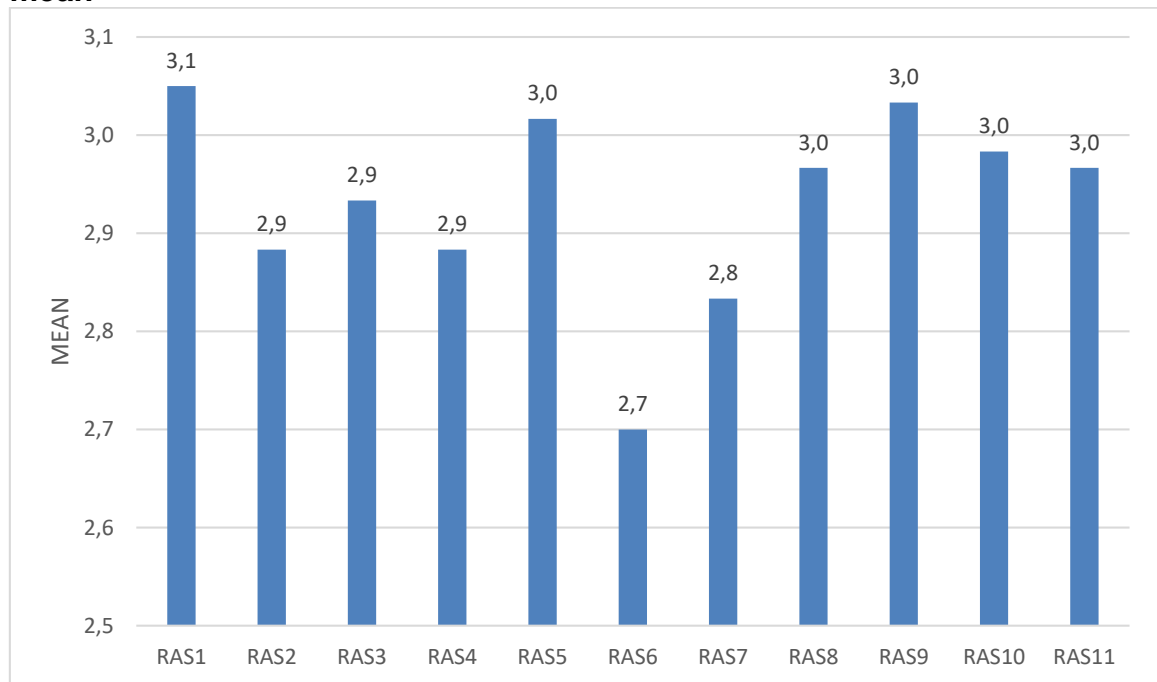
The analysis for objective 2 revealed that administrative employees play a huge role for CE to become a success. From the responses received, some of the trends that were observed indicate that some statements show a higher level of moderate agreement. Whilst certain levels of agreement are lower, they are nonetheless higher than those of disagreement. In one statement (statement RAS6), 'through "bureaucratic red tape" employees efficiently get proposed actions into practice', the findings indicate a higher level of moderate agreement (50% of respondents) and disagreement (35% of respondents), indicating that this is a concern to the institution. Six of the statements (RAS3, RAS4, RAS5, RAS7, RAS8 and RAS10) indicate a high level of moderate agreement, where respondents neither agreed nor disagreed with these statements. Two statements (RAS1 and RAS9), indicate a high level of agreement, indicating that administrative employees are involved in the creating of new ideas and support good ideas of other employees. This is an advantage to the institution.

**Table 4.4: Summary of the scoring patterns for objective 2 using the mean**

Descriptive Statistics						
		N	Minimum	Maximum	Mean	Std. Deviation
RAS1	My duties involve the creation of new ideas that in turn lead to the creation of new services that are offered by my university.	60	1	5	3,1	1,2
RAS2	My duties involve the creation of new ideas and solutions that are used in the improvement of processes used by my university.	60	1	5	2,9	1,0
RAS3	Even though I have a job description, however, I am	60	1	5	2,9	1,1

	allowed to act as an innovator.					
RAS4	Employees are able to describe vividly how things could be in the future and what is needed to get the firm there.	60	1	5	2,9	1,2
RAS5	Employees encourage their colleagues to take initiative for their own ideas.	60	1	5	3,0	1,0
RAS6	Through "bureaucratic red tape", employees efficiently get proposed actions into practice	60	1	5	2,7	0,9
RAS7	Employees create an environment where people get excited about making improvements	60	1	5	2,8	1,1
RAS8	Employees display an enthusiasm for acquiring skills.	60	1	5	3,0	1,1
RAS9	Employees give support for the good ideas of their colleagues.	60	1	5	3,0	1,1
RAS10	Employees dedicate time to helping other colleagues find ways to improve our products and services.	60	1	5	3,0	1,0
RAS11	Employees quickly change course of action when results are not being achieved.	60	1	5	3,0	1,1

**Figure 4.23: Graph representing the responses for objective 2 using the mean**



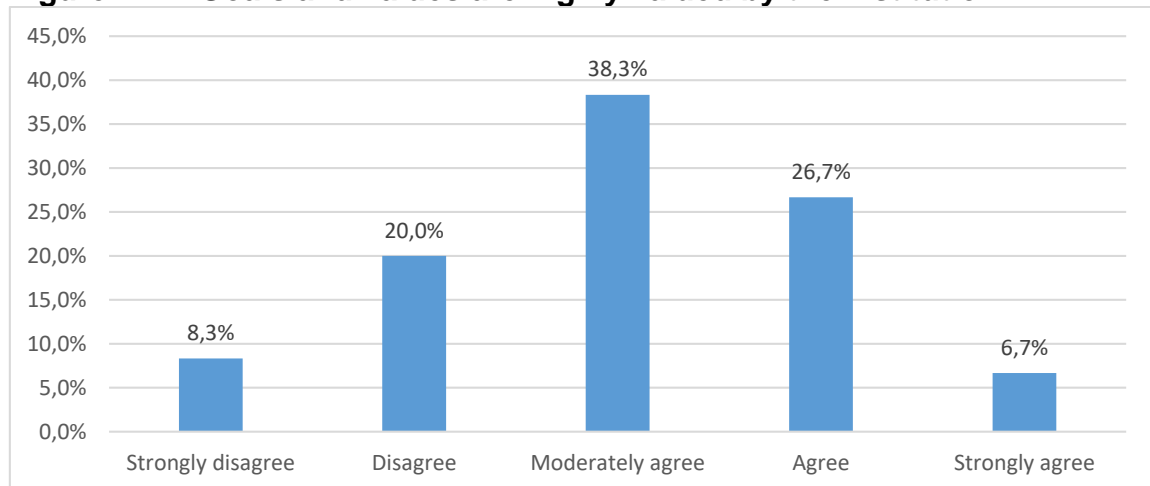
#### **4.6.3 Objective 3: Factors affecting administrative staff participation in CE**

The aim of this section is to better understand the factors that may influence administrative staff participation in CE at VUT. In order to determine the factors affecting administrative staff participation in CE at VUT, Figures 4.24 to 4.49 below were used to summarise and interpret the findings.

- **Goals and values are highly valued by the institution**

As illustrated in Figure 4.24, for statement FASP1 (My work goals and values are highly valued by the institution), 6.7% of respondents strongly agreed, 26.7% agreed, 38.2% were not sure, 20.0% disagreed and 8.3% strongly disagreed with the abovementioned statement. The results indicate that the work goals and values of the administrative staff of VUT are highly valued by the institution. Hence, a total of 33.4% of respondents were in agreement that their work goals and values are highly valued by the institution, while 38.2% of respondents were not sure. Administrative employee entrepreneurial action is critical to creating and sustaining CE (Mustafa, Gavin and Hughes 2018).

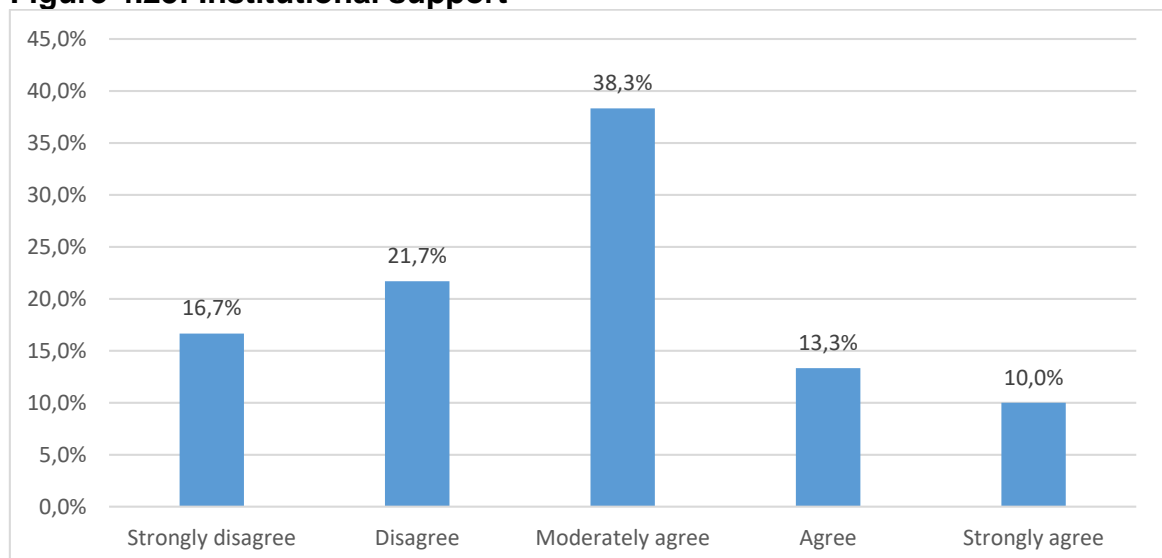
**Figure 4.24: Goals and values are highly valued by the institution**



- **Institutional support**

As shown in Figure 4.25, 10.0% of respondents strongly agreed, 13.3% agreed, 38.3% were not sure, 21.7% disagreed and 16.7% strongly disagreed with statement FASP2 (When I am going through a difficult time, I always have the support of the institution). The results indicate that the institution does not offer support when employees are going through a difficult time. Hence, a total of 38.4% of respondents disagreed and 38.3% were not sure that they always have support from the institution when they are going through a difficult time. Mosweu (2016) found that on-going support of the employees becomes essential for the success of CE.

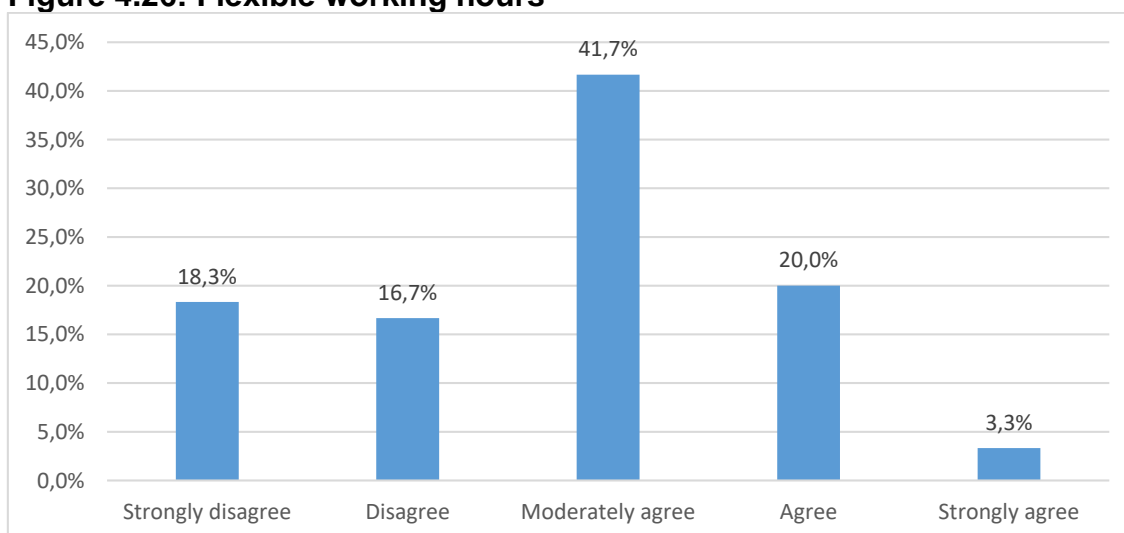
**Figure 4.25: Institutional support**



- **Flexible working hours**

As shown in Figure 4.26, the responses to statement FASP3 (Whenever I guarantee to accomplish my tasks on time, the institution allows me to be flexible with my working hours, if necessary) indicated that 3.3% of respondents strongly agreed, 20.0% agreed, 41.7% were not sure, 16.7% disagreed and 18.3% strongly disagreed with the abovementioned statement. Hence, 41.7% of respondents were not sure and a total of 35.0% disagreed that the institution allows them to be flexible with their working hours. The results indicate that the institution does not actually allow administrative employees to be flexible with their working hours. Top management should ensure that staff have the time required to participate in CE activities (Urban and Wood 2017).

**Figure 4.26: Flexible working hours**

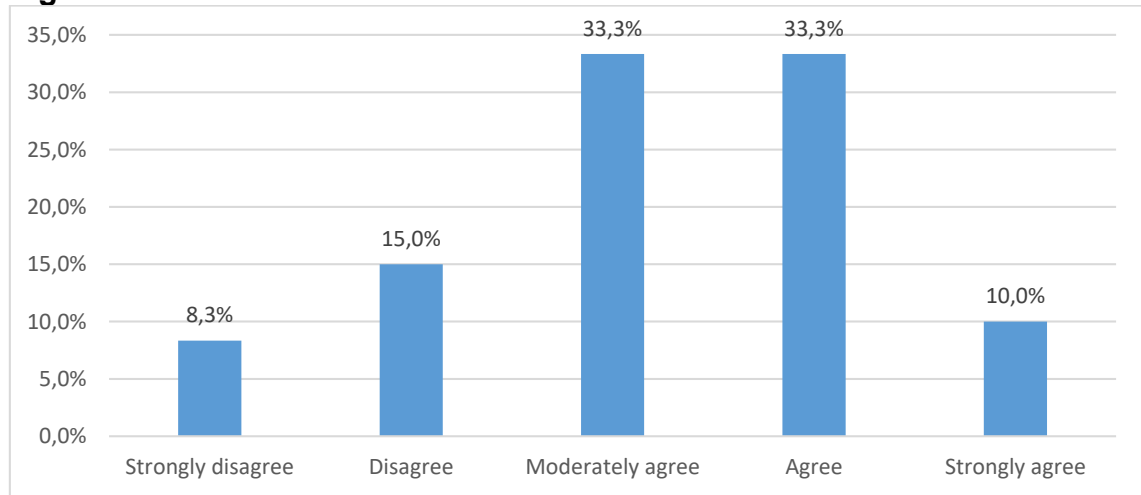


- **Accommodative work schedule**

Based on the findings shown in Figure 4.27, for statement FASP4 (My work schedule allows me to take care of my family matters), 10.0% of respondents strongly agreed, 33.3% agreed, 33.3% were not sure, 15.0% disagreed and 8.3% strongly disagreed with the aforementioned statement. 43.3% of respondents were in agreement that the work schedule at VUT allows staff to take care of family matters. The literature reviewed in section 2.7.3 of Chapter Two attests

that employees are inspired to come up with innovative ideas when organisations relax their restrictions.

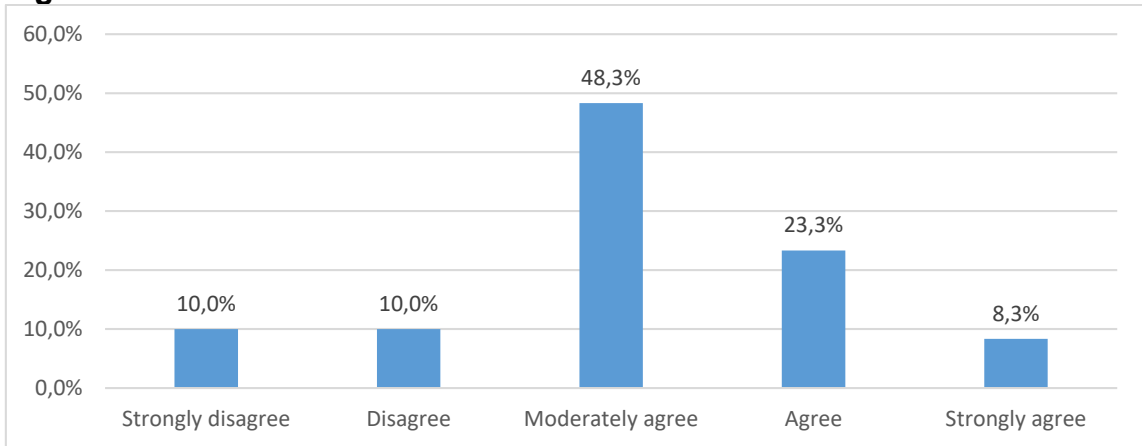
**Figure 4.27: Accommodative work schedule**



- **Job satisfaction**

In Figure 4.28, approximately 8.3% of respondents strongly agreed and 23.3% of respondents agreed with statement FASP5 (In general, I am satisfied with my work at my institution). Therefore, a total of 31.6% of respondents were in agreement that they are satisfied with their work at VUT, while 20% were in disagreement. 48.3% of respondents were not sure whether they are satisfied with their work at VUT. In a study conducted by Otache and Mahmood (2015), employees who feel proud of the institution and its brand are more likely to recommend it as a good place to work.

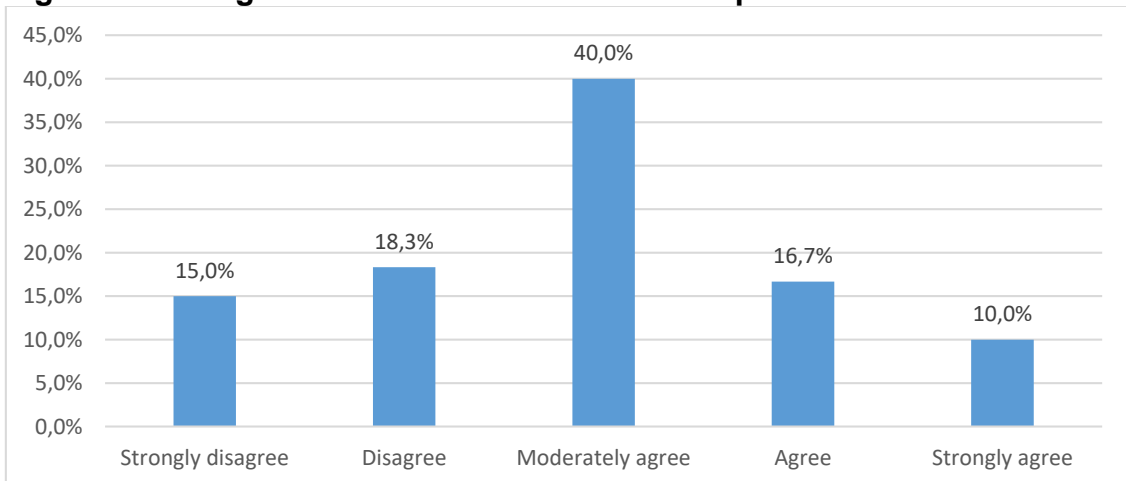
**Figure 4.28: Job satisfaction**



- **Regular communication with the supervisor and co-workers**

Figure 4.29 shows that the results for statement FASP6 (My supervisor and co-workers talk to me regularly about how I am doing) indicate that 10.0% of respondents strongly agreed, 16.7% agreed, 40.0% were not sure, 18.3% disagreed and 15.0% strongly disagreed with the aforementioned statement. Hence, a total of 33.3% of respondents were in disagreement that their co-workers and line managers ask them about how they are doing, and 40.0% of the respondents were not sure. The results indicate that line managers and co-workers seldom talk to employees about how they are doing. As asserted by Santhanam *et al.* (2017), in order for employees to participate in CE, organisations need to show care, concern, and follow through on their promises.

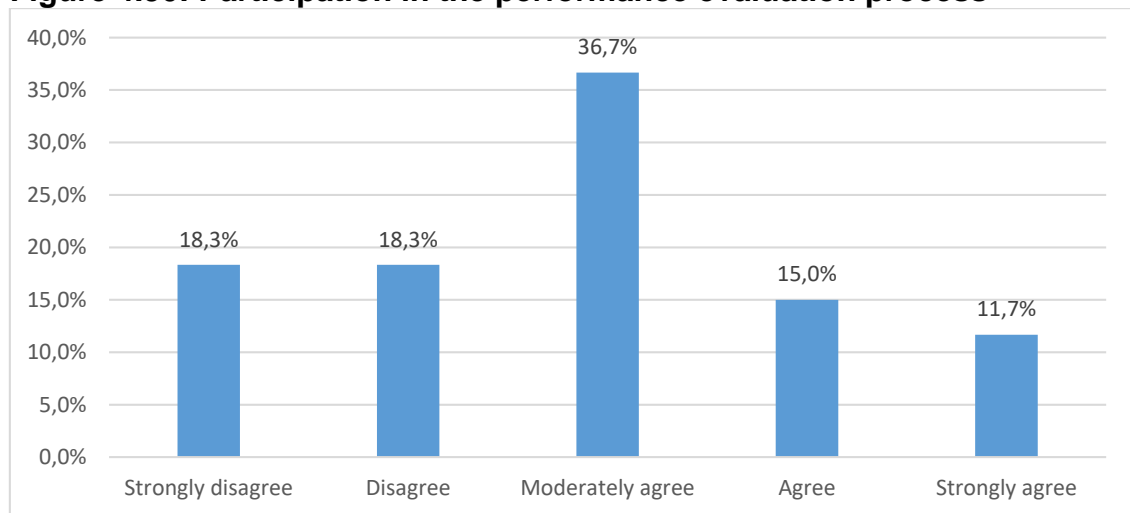
**Figure 4.29: Regular communication with the supervisor and co-workers**



- **Participation in the performance evaluation process**

As indicated in Figure 4.30, 11.7% of respondents strongly agreed, 15.0% agreed, 36.7% were not sure, 18.8% disagreed and 18.3% strongly disagreed with statement FASP7 (In my institution, I participate in the process of evaluating my performance). Therefore, a total of 36.6% of respondents were in disagreement that they participate in their performance evaluation process, while 36.7% were not sure. These results indicate that most administrative employees do not participate in their performance evaluation process.

**Figure 4.30: Participation in the performance evaluation process**

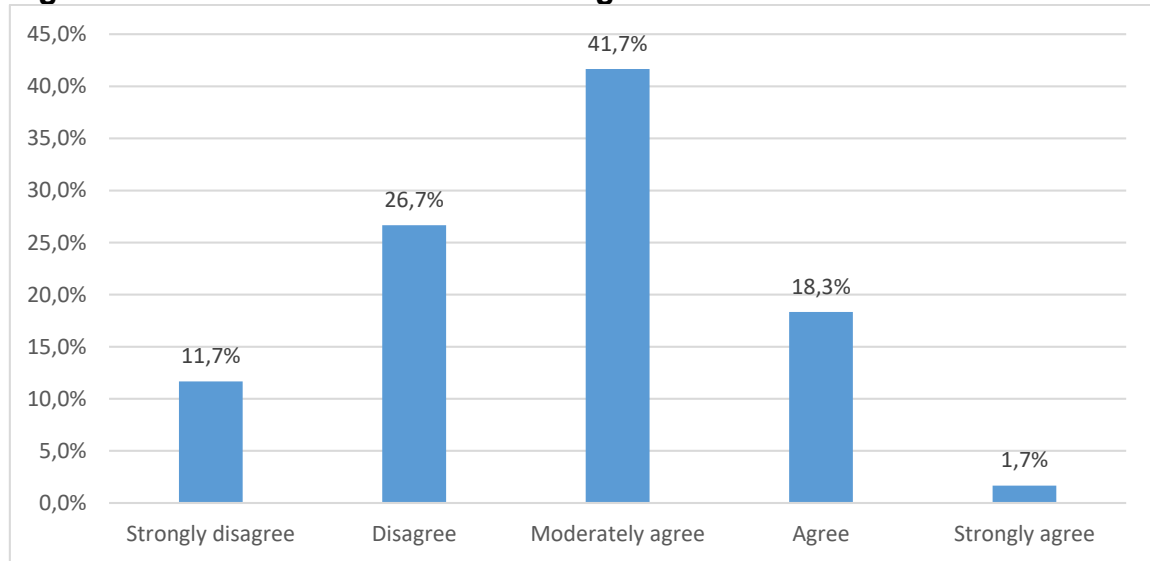


- **Work-life balance as an organisational culture**

As illustrated in Figure 4.31, for statement FASP8 (In my institution, balance between work and family life is part of our organisational culture), 1.7% of respondents strongly agreed, 18.3% agreed, 41.7% were not sure, 26.7% disagreed and 11.7% strongly disagreed that balance between work and family is part of the institution's culture. Hence, a total of 41.7% of respondents were not sure and 38.4% were in disagreement with the abovementioned statement. The results indicate that at VUT, balance between work and family life is not part of the institution's culture.



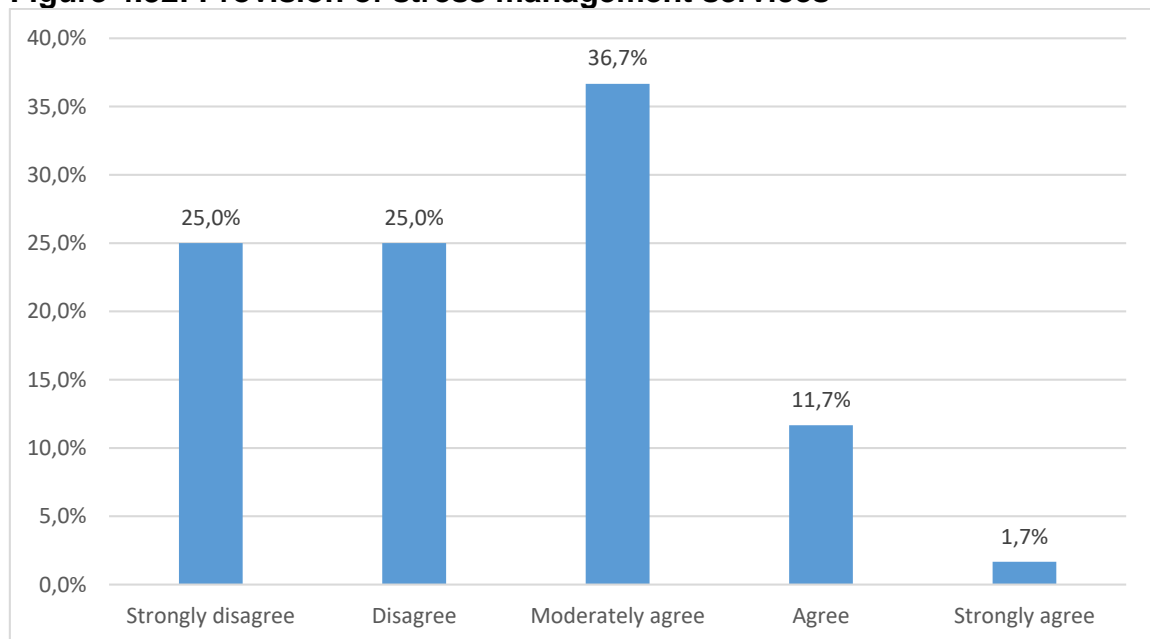
**Figure 4.31: Work-life balance as an organisational culture**



- **Provision of stress management services**

Figure 4.32 shows that a mere 1.7% of respondents strongly agreed, 11.7% agreed, 36.7% were not sure, 25.0% disagreed, and 25.0% strongly disagreed with the statement FASP9 (My institution provides stress management services). These results indicate that 50.0% of administrative employees of VUT disagreed that the institution provides stress management services.

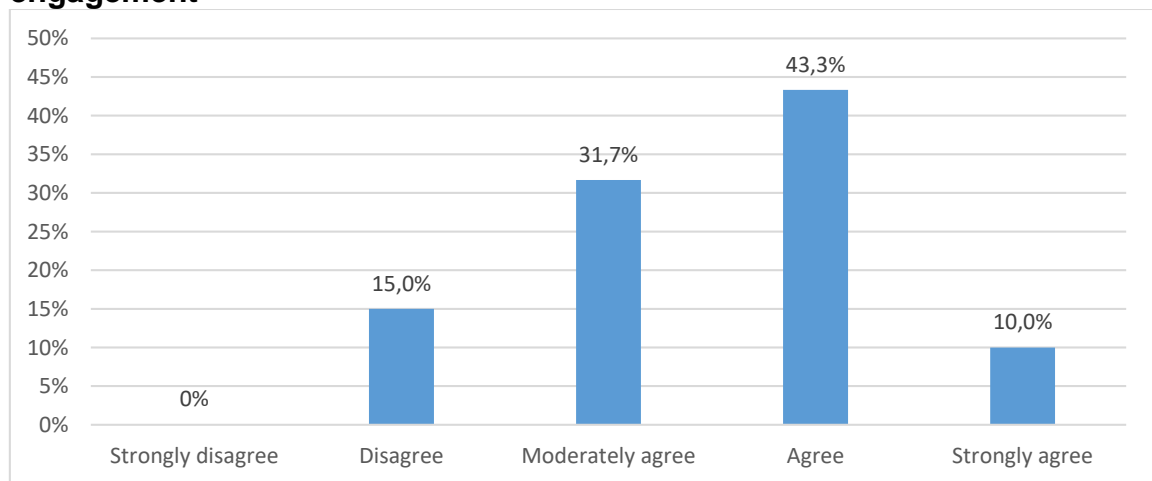
**Figure 4.32: Provision of stress management services**



- **I really throw myself into my job and organisation engagement**

Figure 4.33 shows the results for statement FASP10 (“I really throw myself into my job and organisation engagement”). 10.0% of respondents strongly agreed, and 43.3% agreed. Therefore, a total of 53.3% of respondents were in agreement that they throw themselves into the work and institution engagement, while 31.7% were not sure, and 15% disagreed with the aforementioned statement. This indicates that administrative employees are dedicated to their work and institution engagement.

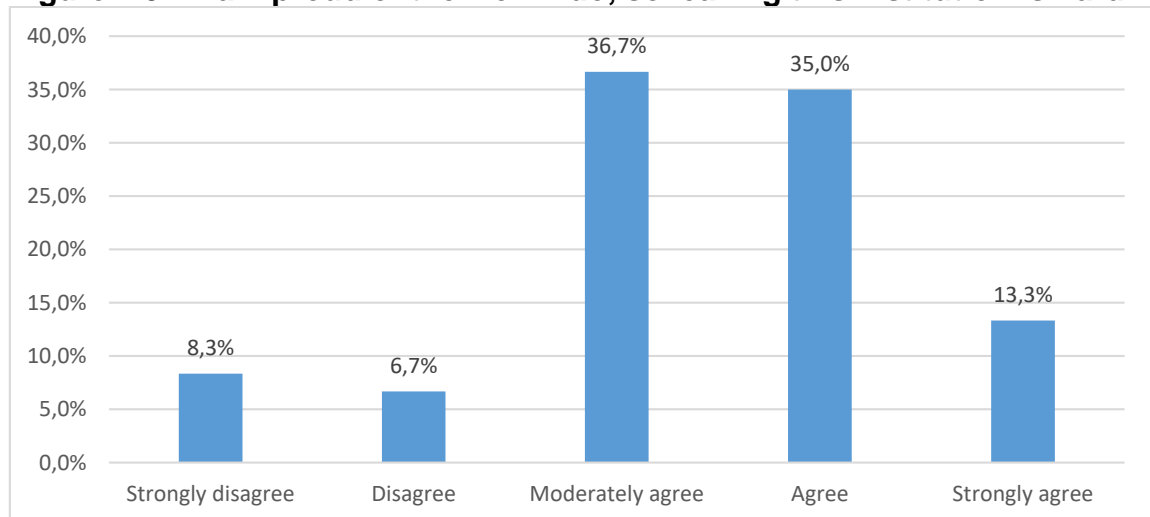
**Figure 4.33: I really throw myself into my job and organisation engagement**



- **I am proud of the work I do, so leaving this institution is hard**

Figure 4.34 shows the results for statement FASP11 (“I am proud of the work I do, so leaving this institution is hard”). 13.3% of respondents strongly agreed and 35.0% agreed. Therefore, a total of 48.3% of respondents agreed that they are proud of their job and that leaving VUT is hard, while 36.7% were not sure, and a total of 15% disagreed with the aforementioned statement. This indicates that most respondents are happy with the work they do, and that they are not planning to leave the institution. In a study conducted by Otache and Mahmood (2015), employees who feel proud of the institution and its brand are more likely to recommend it as a good place to work.

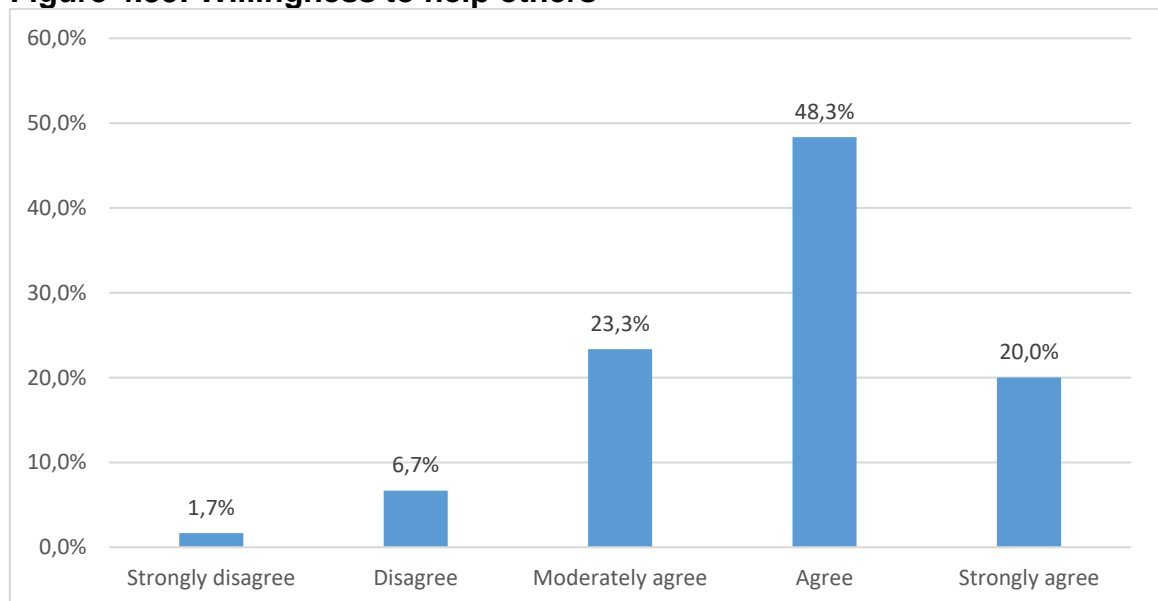
**Figure 4.34: I am proud of the work I do, so leaving this institution is hard**



- **Willingness to help others**

Figure 4.35 illustrates that 20,0% of respondents strongly agreed, 48,3% agreed, 23,3% were not sure, 6,7% disagreed, and 1,7% strongly disagreed with statement FASP12 (“I am willing to help others who need help with work-related issues”). These findings indicate that a total of 58,6% of administrative employees of VUT do help other employees with work-related issues.

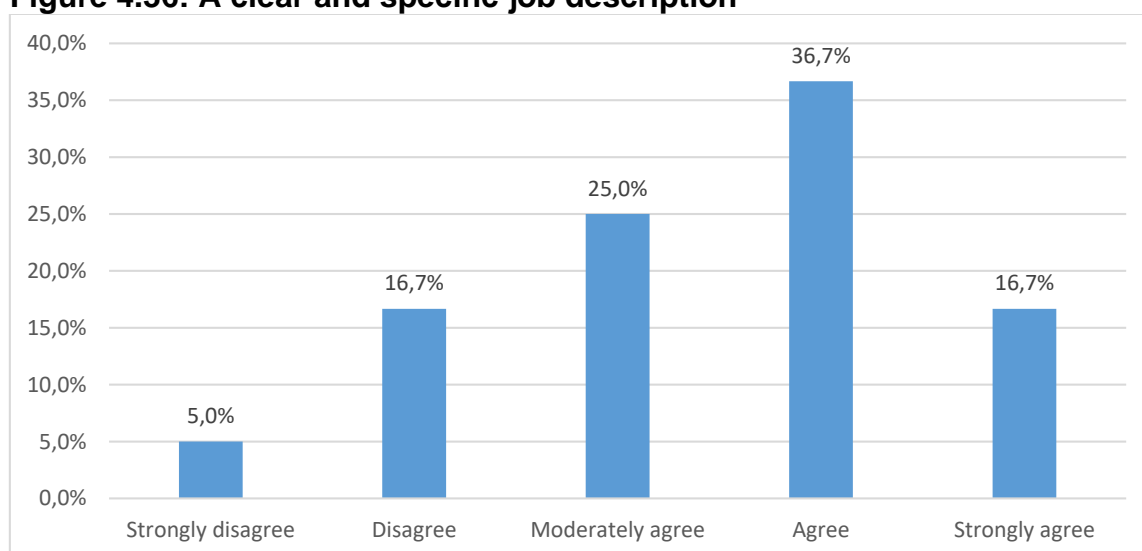
**Figure 4.35: Willingness to help others**



- **A clear and specific job description**

As Figure 4.36 illustrates, 16.7% of respondents strongly agreed and 36.7% agreed with statement FASP13 (My job description specifies the duties I must perform). Therefore, in total, 53.45% of respondents were in agreement that their job description clearly specifies the duties that they must perform at VUT, while 25.0% were not sure, and 21.7% disagreed. The findings indicate that employees know what is expected of them in terms of their duties.

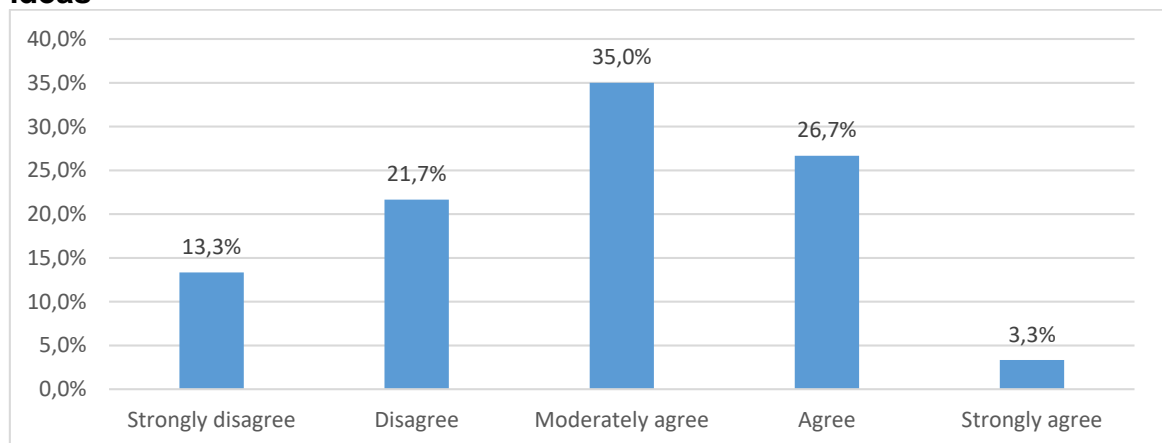
**Figure 4.36: A clear and specific job description**



- **Management encouragement and feedback for innovative ideas**

As shown in Figure 4.37, 3.3% of respondents strongly agreed and 26.7% agreed with statement FASP14 (Management has been encouraging and providing feedback to employees with innovative ideas). On the other hand, 35% were not sure, 21.7% disagreed and 13.3% strongly disagreed with the aforementioned statement. These results indicate that a total of 35% of respondents are of the view that management has not been providing continuous feedback and encouragement to employees with innovative ideas. As indicated in section 2.8 of Chapter Two, it is advised that management shift its attention from tracking and monitoring employees to motivating and encouraging them, as well as improved feedback systems (Mugunzva 2019).

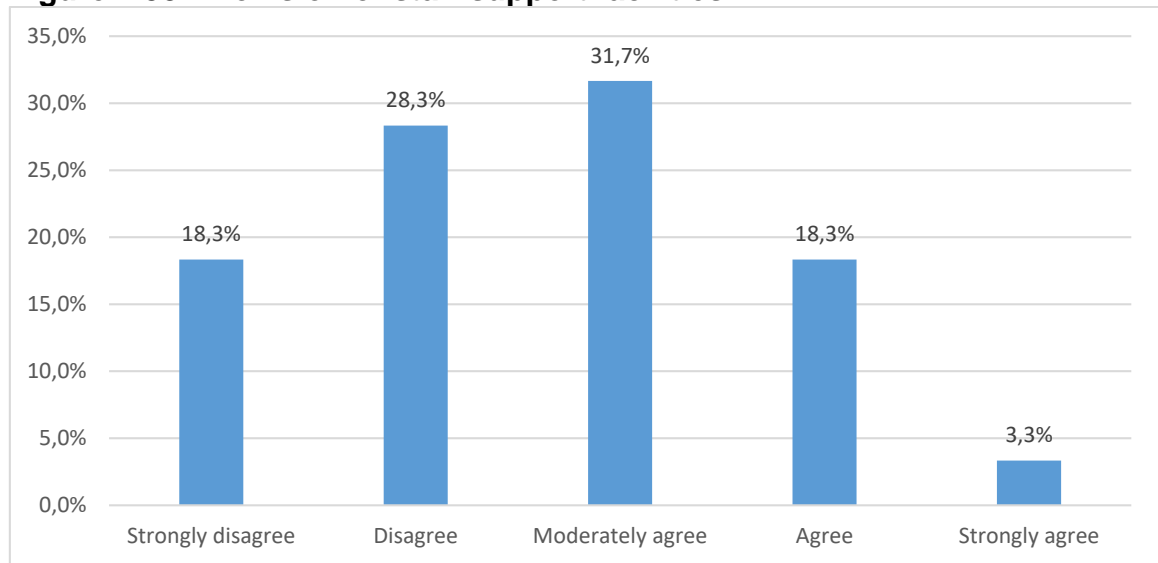
**Figure 4.37: Management encouragement and feedback for innovative ideas**



- **Provision of staff support facilities**

Figure 4.38 shows the results for statement FASP15 (“Our institution provides spaces (e.g., brainstorming rooms, laboratories”) and tools (e.g., software, technical equipment) for developing new ideas, prototypes, and projects). 3.3% strongly agreed, 18.3% agreed, 31.7% were not sure, 28.3% disagreed and 18.3% strongly disagreed with the abovementioned statement. Therefore, a total of 46.6% of respondents were in disagreement that VUT provide space and resources for developing new ideas and projects. This study aligns with the literature in terms of its findings. Mamabolo and Ravjee (2019) believe that employees have a right to resources for innovation-related activities in order to motivate them to try new things and take calculated risks.

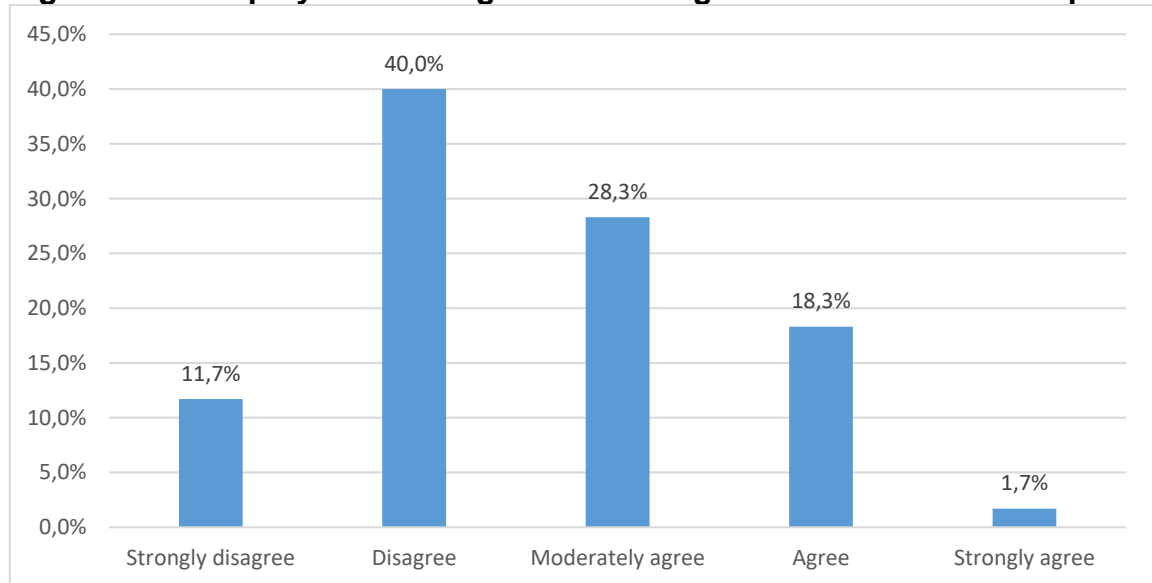
**Figure 4.38: Provision of staff support facilities**



- **Employees with a good idea are given free time to develop it**

Figure 4.39 shows the results for statement FASP16 (“Employees with a good idea are given free time to develop it”). 1.7% of respondents strongly agreed, 18.3% agreed, 28.3% were not sure, 40.0% disagreed and 11.7% strongly disagreed with this statement. Hence, a total of 51.7% of respondents disagreed with the abovementioned statement. The results indicate that the institution does not give employees with innovative ideas free time to develop them. Mamabolo and Ravjee (2019) are of the view that in order to come up with ideas and seize opportunities, employees should be given time during the workday to engage in entrepreneurial activity.

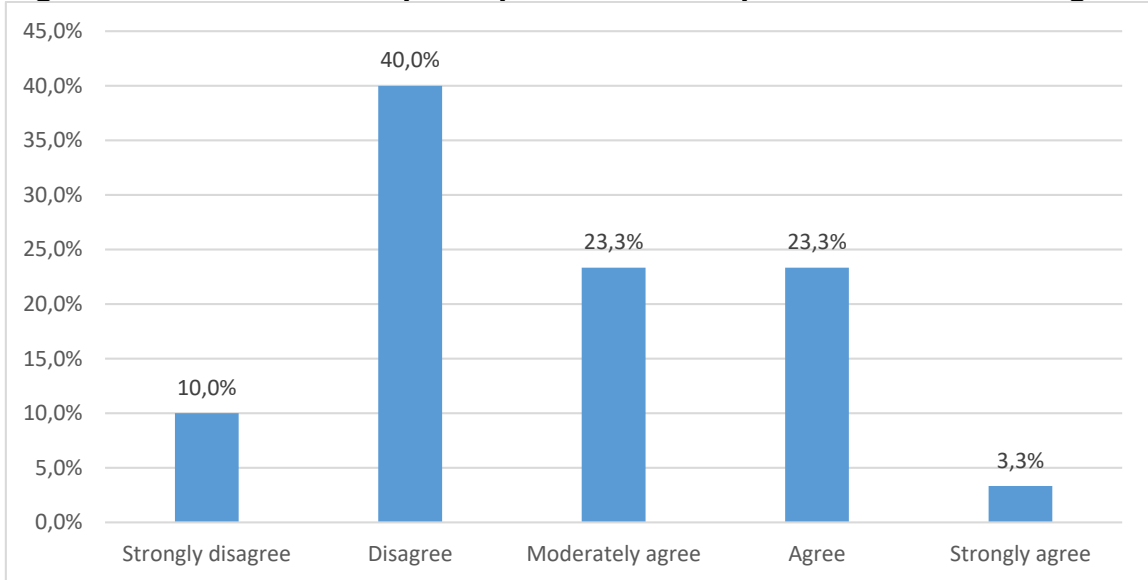
**Figure 4.39: Employees with a good idea are given free time to develop it**



- **Promotion to participative leadership and decision-making**

As illustrated in Figure 4.40, 3.3% of respondents strongly agreed, 23.3% agreed, 23.3% were not sure, 40.0% disagreed and 10.0% strongly disagreed that VUT promotes participative leadership and decision-making. Therefore, a total of 50.0% of respondents disagreed with the statement FASP17 (Our institution promotes participative leadership and decision-making). Mugunzva and Rankhumise (2020) found that employees who exercised discretion would have the freedom to experiment, which would result in opportunities and ideas.

**Figure 4.40: Promotion to participative leadership and decision-making**

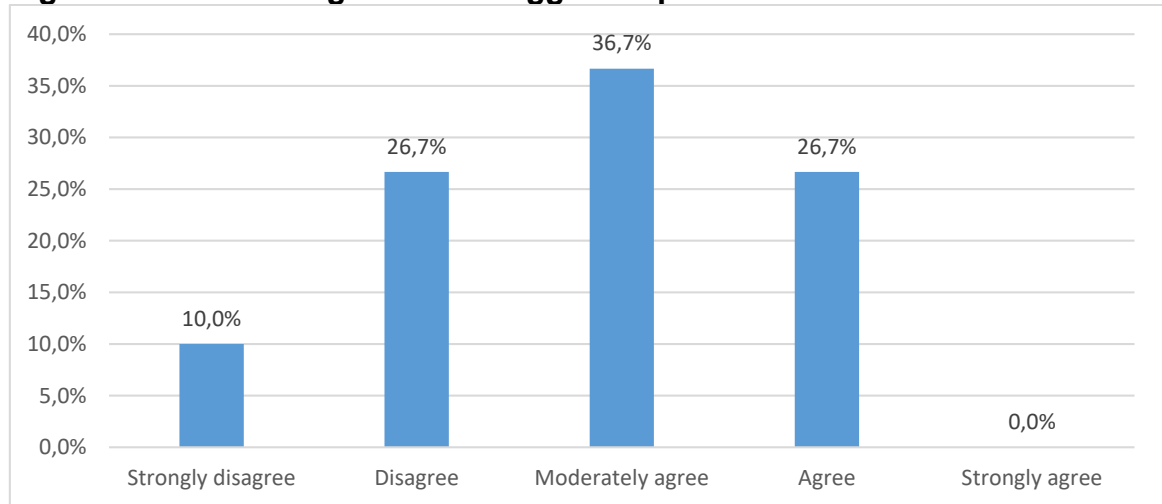


- **Encouragement to suggest improvements**

Figure 4.41 shows the results for statement FASP18 (“Our institution encourages employees to suggest improvements to processes, products, and practices”). 0.0% of respondents strongly agreed, 26.7% agreed, 36.7% were not sure, 25.7% disagreed and 10.0% strongly disagreed with the abovementioned statement. A total of 36.7% of respondents were in disagreement that the institution encourages employees to suggest improvements to process and services, while 36.7% were not sure. The results indicate that VUT does not encourage employees to participate in making suggestions for improvements to processes. For a university to foster an entrepreneurial environment, it must both possess and grant its administrative staff and researchers a certain level of autonomy (de Moraes *et al.* 2021).



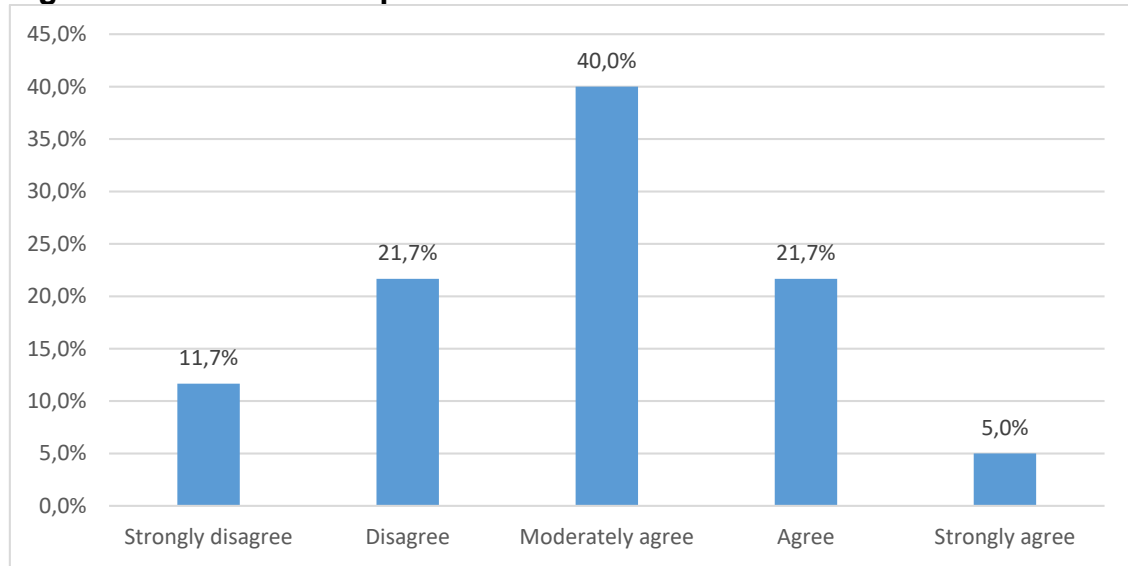
**Figure 4.41: Encouragement to suggest improvements**



- **Staff development**

Figure 4.42 shows the results for statement FASP19 (“Our institution organises initiatives (e.g., courses, seminars, workshops”) to develop entrepreneurial behaviours and competencies in the employees). 5.0% strongly agreed, 21.7% agreed, 40.0% were not sure, 21.7% disagreed and 11.7% strongly disagreed with the aforementioned statement. The majority of respondents were in disagreement that the institution organises seminars, courses and workshops to develop entrepreneurial behaviours of employees. Azis and Amir (2020) state that since innovators deal with new things, supporting and encouraging learning is extremely important.

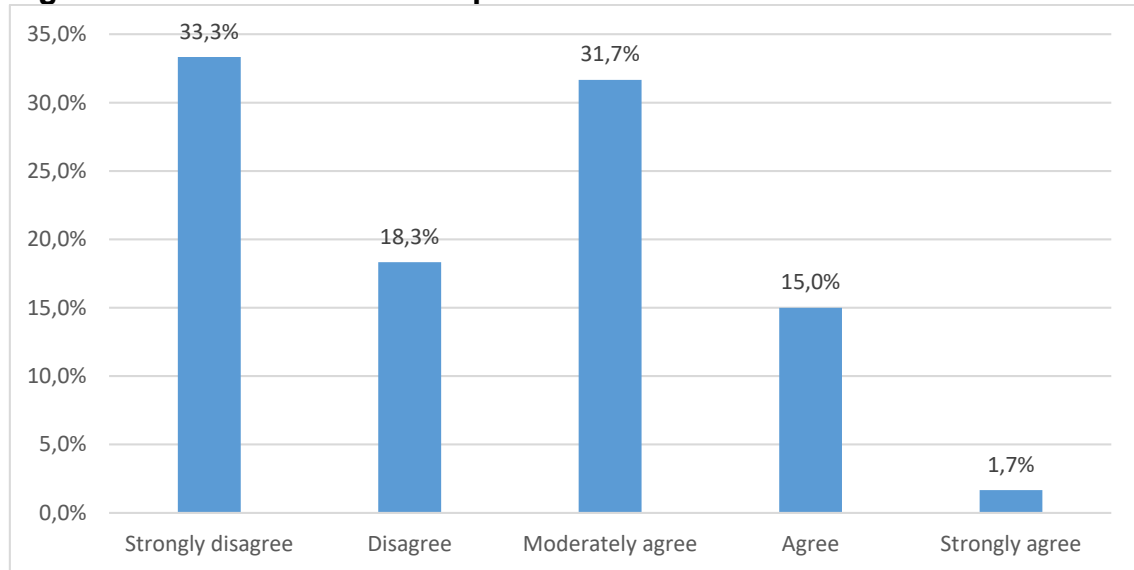
**Figure 4.42: Staff development**



- **Rewards and compensation**

Figure 4.43 shows the results for statement FASP20 (“Individuals with successful innovative projects receive additional rewards and compensation beyond the standard reward system”). 33.3% of respondents strongly disagreed and 18.3% disagreed with this statement. Therefore, a total of 51.6% of respondents disagreed that employees that complete innovative initiatives successfully are rewarded and compensated more, while 31.7% were not sure, and a mere total of 16.7% agreed with the abovementioned statement. The results indicate that at VUT, there is no reward or compensation for employees who participate in innovative projects. This has the disadvantage of not giving the administrative employees of VUT a platform to participate in CE. Chigamba *et al.* (2014) found that rewards and reinforcement create an environment where people are motivated to act in a creative, proactive, and moderately risky manner.

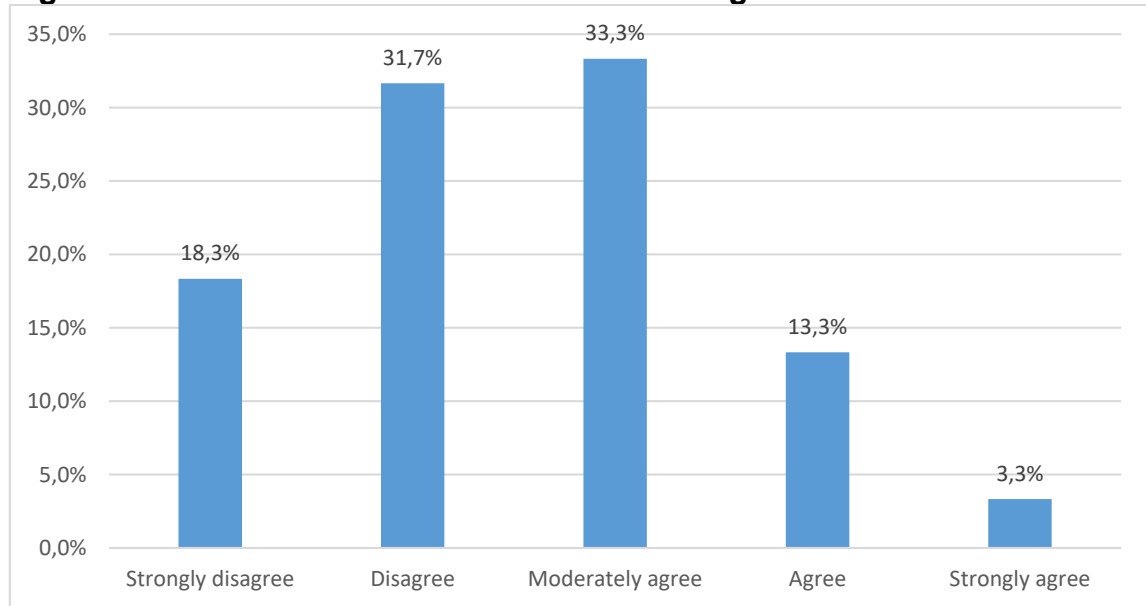
**Figure 4.43: Rewards and compensation**



- **Positive attitude towards risk-taking**

As shown in Figure 4.44, a mere 3.3% of respondents strongly agreed and 13.3% agreed with statement FASP 21 (“Employees have a good attitude towards risk-taking”). Therefore, in total, 16.6% of respondents agreed that employees have a positive attitude towards risk-taking, while 33.3% were not sure, and a total of 50.0% of respondents disagreed with the abovementioned statement. The results for this statement indicate that VUT administrative employees do not have a good attitude towards risk-taking.

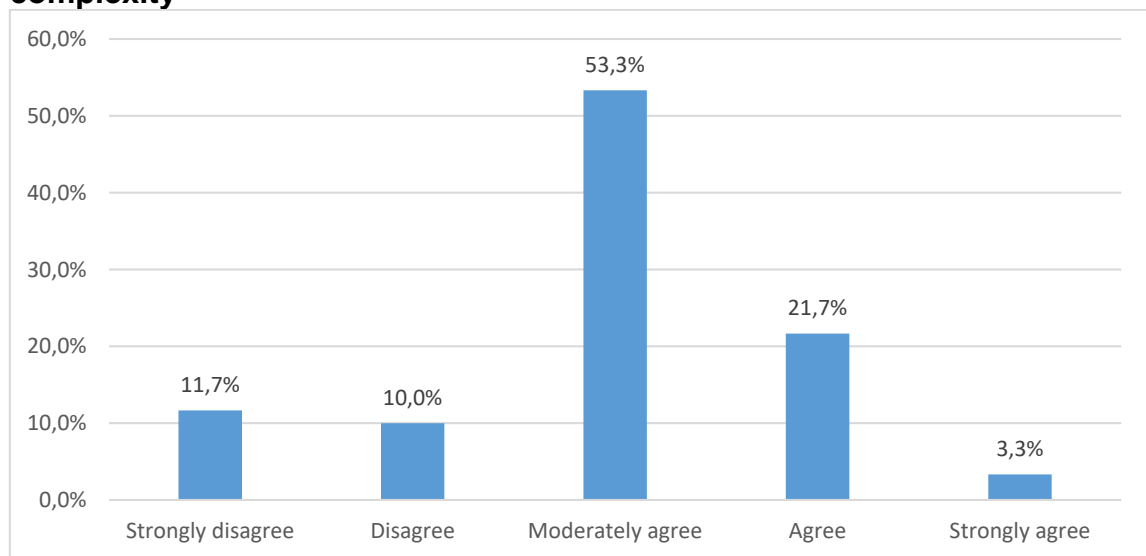
**Figure 4.44: Positive attitude towards risk-taking**



- **Employees are flexible with changes and are comfortable with complexity**

Figure 4.45 shows the results for statement FASP22 (“Employees are flexible with changes and are comfortable with complexity”). 3.3% of respondents strongly agreed, and 21.7% agreed with this statement. A total of 25.0% of respondents were in agreement that they are flexible to changes and flexible with complexity, while 53.3% were not sure, and a total of 21.7% disagreed with the aforementioned statement.

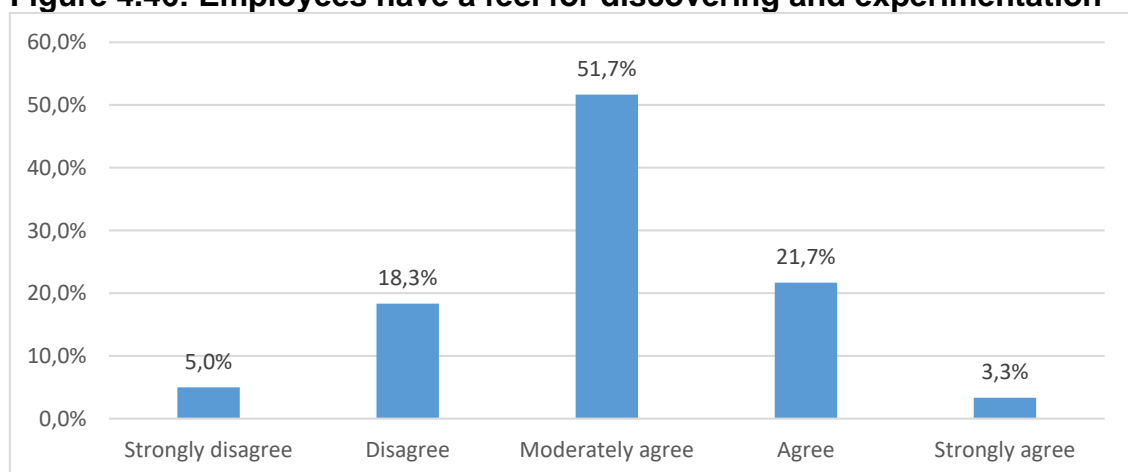
**Figure 4.45: Employees are flexible with changes and are comfortable with complexity**



- **Employees have a feel for discovering and experimentation**

Figure 4.46 shows the results for statement FASP23 (“Employees have a feel for discovering and experimentation”). 3.3% of respondents strongly agreed, 21.7% agreed, 51.7% were not sure, 18.3% disagreed, and 5.0% strongly disagreed with the aforementioned statement. The majority of respondents (51.7%) were not sure whether they have a feel for discovering new things and experimentation. It could be that the respondents did not understand the question.

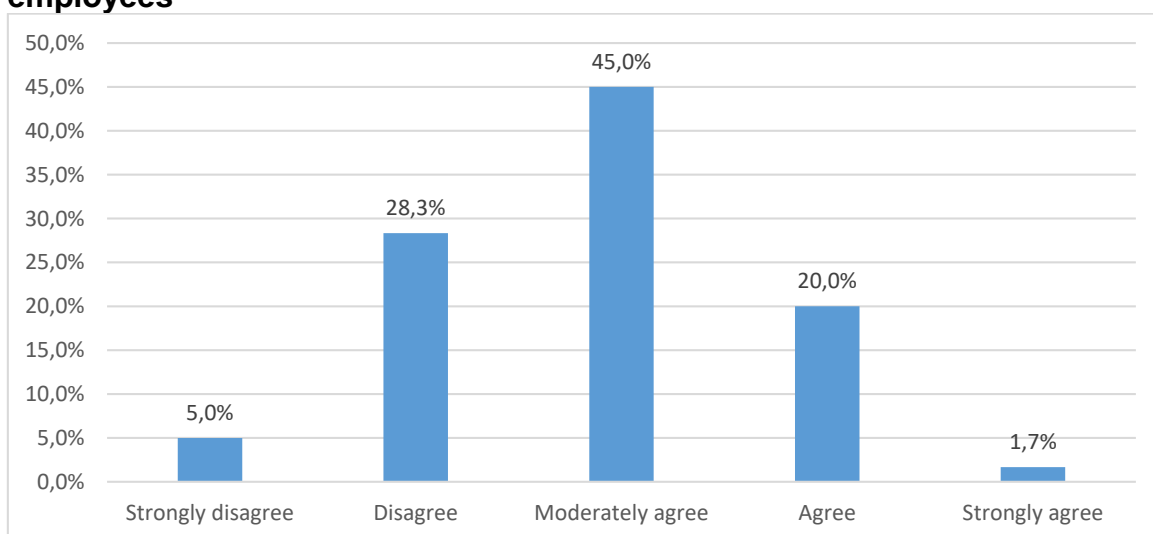
**Figure 4.46: Employees have a feel for discovering and experimentation**



- **Our institution promotes delegation and empowerment of employees**

Figure 4.47 shows the results for statement FASP24 (“Our institution promotes delegation and empowerment of employees”). 1.7% of respondents strongly agreed, 20.0% agreed, 45.0% were not sure, 28.3% disagreed, and 5.0% strongly disagreed with the aforementioned statement. Therefore, a total of 33.5% of respondents were in disagreement that VUT promotes delegation and empowerment of employees, while 45.0% of respondents were not sure. Literature on human capital (section 2.7.6 of Chapter Two) states that institutions that empower their staff members are more likely to achieve the greatest performance possible from them, which always activates innovation and dedication (Mugunzva and Rankhumise 2020).

**Figure 4.47: Our institution promotes delegation and empowerment of employees**

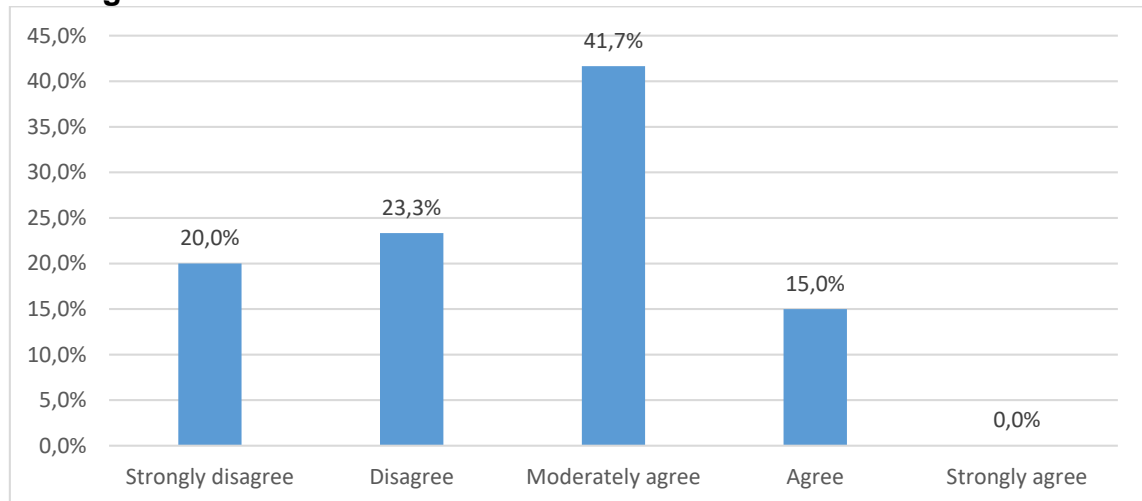


- **Management is keen to involve subordinates in decision-making**

According to the results for statement FASP25 (“Management is keen to involve subordinates in decision-making”) as shown in Figure 4.48, none of the respondents (0.0%) strongly agreed, a mere 15.0% of respondents agreed, 41.7% were not sure, and a total of 43.3% disagreed that management is eager to include employees in decision-making. Urban (2017) suggests that management should be committed to accepting the possibility that

entrepreneurial outcomes may fail and should give staff members some freedom while delegating responsibility to enable autonomous decision-making.

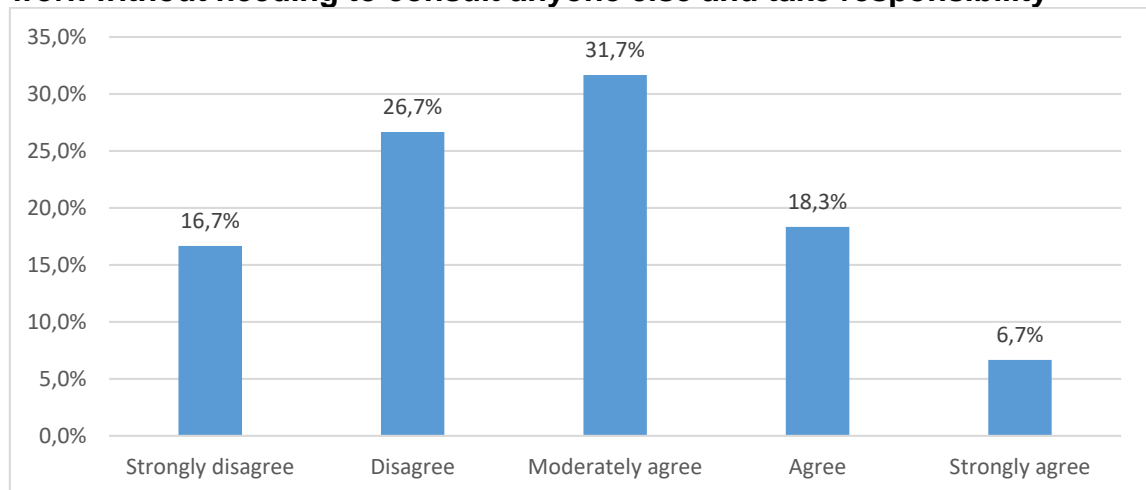
**Figure 4.48: Management is keen to involve subordinates in decision-making**



- **I have the power and authority to make decisions about my work without needing to consult anyone else and take responsibility**

Figure 4.49 shows the results for statement FASP26 (“I have the power and authority to make decisions about my work without needing to consult anyone else and take responsibility”). 6.7% of respondents strongly agreed, 18.3% agreed, 31.7% were not sure, 26.7% disagreed, and 16.7% strongly disagreed with the aforementioned statement. Hence, a total of 43.4% of respondents disagreed with this statement. The results show that administrative staff members of VUT do not have the authority and power to decide how they will carry out their work without consulting with their line managers. Literature on autonomy (section 2.7.4 of Chapter Two) attests that employees should be provided with a safe environment and freedom to try out new ideas without worrying about getting into trouble with senior management if their creative ideas do not work out as planned.

**Figure 4.49: I have the power and authority to make decisions about my work without needing to consult anyone else and take responsibility**



- **Summary of results for objective 3**

Table 4.11 and Figure 4.50 summarise the scoring patterns for objective 3 using a mean. A binomial test was performed to see if the scoring patterns for each statement varied significantly from the centre score of 3. The null hypothesis claims that the mean is not that different from 3. The alternate indicates that the difference is significant. The magnitude of the mean indicates the direction. Mean values greater than 3 tend more towards agreement, and values less than 3 tend more towards disagreement. The mean for each of the statements FASP1, FASP22 and FASP23 is 3.0, indicating that there is no difference from mean 3. This means that the majority of respondents selected moderately agree, showing that these assertions were not met with either agreement or disagreement from the respondents. The mean values for statements FASP2, FASP3, FASP6, FASP7, FASP8, FASP9, FASP14, FASP15, FASP16, FASP17, FASP18, FASP19, FASP20, FASP21, FASP24, FASP25 and FASP26 are below the mean of 3, ranging between 2.3 and 2.9. This shows that the majority of respondents disagreed with the assertions.

Statement FASP29 has a mean of 2.3, and a total percentage of 51.6% of the respondents disagreed that employees that accomplish innovative initiatives successfully are rewarded and compensated more. 31.7% of the respondents neither agreed nor disagreed with this statement. For statement FSP9, the mean



value is 2.4. 50% of the respondents were in disagreement that the university provides them with stress management services. 36.7% of the respondents neither agreed nor disagreed with this statement.

Based on the data analysis presented for objective 3, a number of factors have adversely affected the participation of administrative employees in CE. It appears that employees do want to participate in CE, but they do not have support from management. It is evident that there is no continuous support given to the administrative employees. This has also been supported by the results obtained for statements FASP16, FASP17, FASP20 and FASP21, where the majority of respondents were in disagreement that the institution promotes participative leadership and decision-making. For statements FASP4, FASP10, FASP11, FASP12 and FASP13, there is a high level of agreement. The results show that respondents agreed that they are proud of the work that they do and willing to help others who need help with work related issues. The lack of a reward system for successful innovative projects has also contributed negatively to the participation of administrative employees in CE. This is supported by the results obtained for statement FASP20, where 51.6% of respondents were in disagreement. Seventeen of the statements (FASP1, FASP2, FASP3, FASP5, FASP6, FASPL7, FASP8, FASP9, FASP14, FASP15, FASP18, FASP19, FASP22, FASP23, FASP24, FASP25 and FASP26) elicited a high level of 'moderately agree' scores, indicating that respondents neither agreed nor disagreed with these statements.

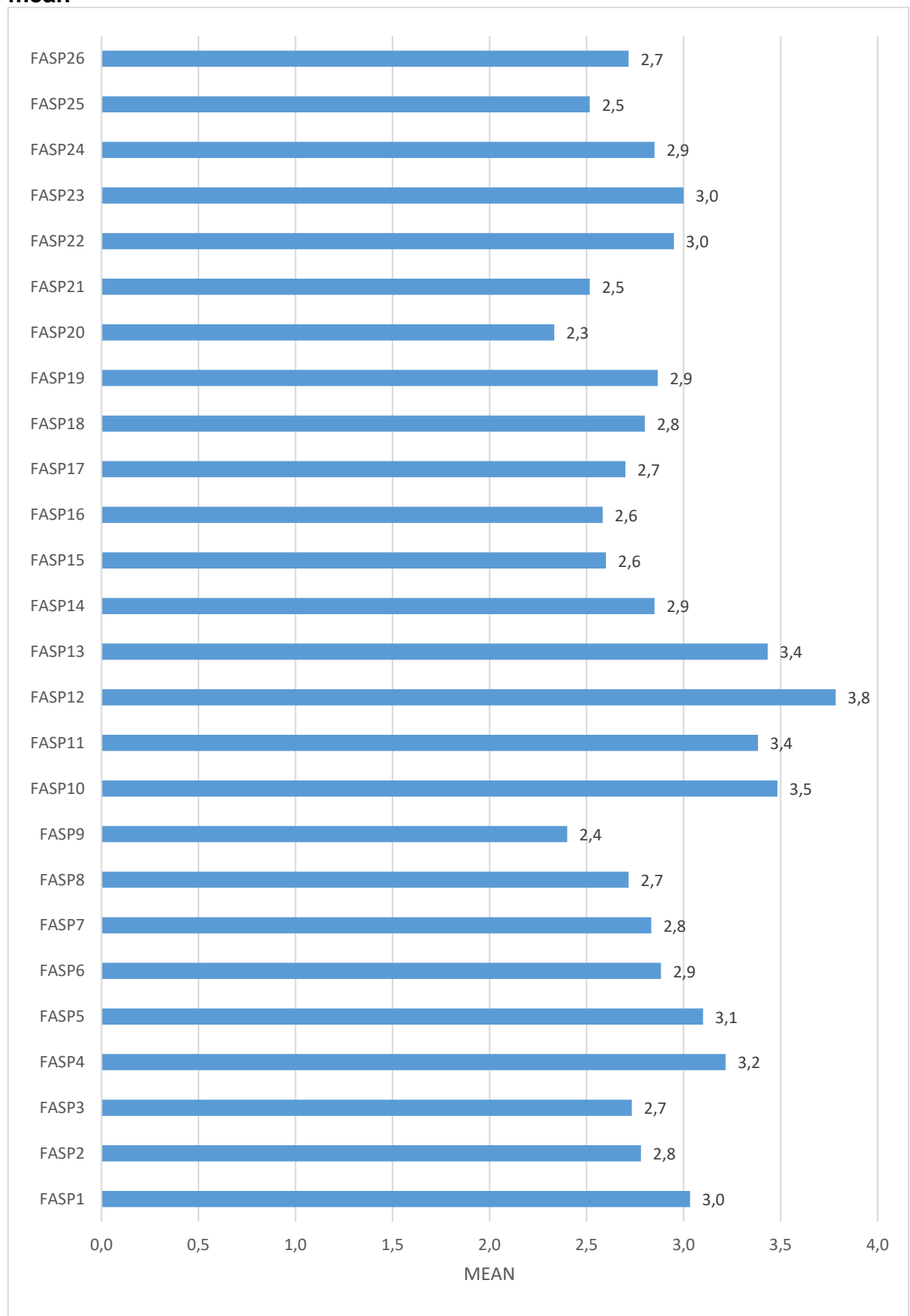
**Table 4.5: Summary of the scoring patterns for objective 3 using the mean**

		N	Minimum	Maximum	Mean	Std. Deviation
FASP1	My work goals and values are highly valued by the institution	60	1	5	3,0	1,0
FASP2	When I am going through a difficult time, I always have the support of the institution.	60	1	5	2,8	1,1
FASP3	Whenever I guarantee to accomplish my tasks on time, the institution allows me to be flexible with my	60	1	5	2,7	1,1

	working hours, if necessary.					
FASP4	My work schedule allows me to take care of my family matters.	60	1	5	3,2	1,1
FASP5	In general, I am satisfied with my work at my institution	60	1	5	3,1	1,0
FASP6	My supervisor and co-workers talk to me regularly about how I am doing.	60	1	5	2,9	1,2
FASP7	In my institution, I participate in the process of evaluating my performance	60	1	5	2,8	1,2
FASP8	In my institution, balance between work and family life is part of our organizational culture.	60	1	5	2,7	1,0
FASP9	My institution provides stress management services	60	1	5	2,4	1,0
FASP10	I really throw myself into my job and organisation engagement.	60	2	5	3,5	0,9
FASP11	I am proud of the work I do, so leaving this institution is hard	60	1	5	3,4	1,1
FASP12	I am willing to help others who need help with work-related issues.	60	1	5	3,8	0,9
FASP13	My job description specifies the duties I must perform.	60	1	5	3,4	1,1
FASP14	Employees with innovative ideas receive management encouragement and feedback	60	1	5	2,9	1,1
FASP15	Our institution provides spaces (e.g., brainstorming rooms, laboratories) and tools (e.g., software, technical equipment) for developing new ideas, prototypes, and projects	60	1	5	2,6	1,1
FASP16	Employees with a good idea are given free time to develop it	60	1	5	2,6	1,0

FASP17	Our institution promotes participative leadership and decision-making	60	1	5	2,7	1,0
FASP18	Our institution encourages employees to suggest improvements to processes, products, and practices	60	1	4	2,8	1,0
FASP19	Our institution organises initiatives (e.g., courses, seminars, workshops) to develop entrepreneurial behaviours and competencies in the employees	60	1	5	2,9	1,0
FASP20	Individuals with successful innovative projects receive additional rewards and compensation beyond the standard reward system	60	1	5	2,3	1,1
FASP21	Employees have a good attitude towards risk-taking	60	1	5	2,5	1,0
FASP22	Employees are flexible against changes and are comfortable with complexity	60	1	5	3,0	1,0
FASP23	Employees have a feel for discovering and experimentation	60	1	5	3,0	0,9
FASP24	Our institution promotes delegation and empowerment of employees	60	1	5	2,9	0,9
FASP25	Management is keen to involve subordinates in decision-making	60	1	4	2,5	1,0
FASP26	I have the power and authority to make decisions about my work without needing to consult anyone else and take responsibility	60	1	5	2,7	1,2

**Figure 4.50: Graph representing the responses for objective 3 using the mean**



## **4.7 Summary of the chapter**

This chapter provided an analysis of the data gathered by means of a questionnaire distributed to 110 sample respondents. Data was analysed after a total of 60 questionnaires were completed. The results of the analysis of the responses were presented in detail. The numerous outcomes were shown graphically in tabular and statistical formats. This study has been contextualised in accordance with the researcher's conclusions derived from the empirical analysis. These findings are consistent with the research literature review and the problem statement. The findings have revealed differences and connections between the variables.

The following chapter comprises the study's conclusion and the recommendations as a result of data analysis. It also provides suggestions for further research.

# **CHAPTER FIVE**

## **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

### **5.1 Introduction**

The first four chapters of this dissertation discussed the research orientation, literature review, method used to collect data, and findings. The main objective of Chapter Five is to analyse the findings and draw conclusions. The findings lead to specific recommendations for management at VUT. Additionally, the study's limitations are outlined.

### **5.2 Overview of the study**

The following is a summary of each chapter of this research:

#### **5.2.1 Overview of Chapter One**

The chapter gave a brief overview of the study as well as descriptions of each section. The study's introduction and background were the main focus of Chapter One. The study's problem statement and research objectives were developed. It was found that, despite the fact that research in this area has been undertaken, there has not been a quantitative analysis of the approaches to improving administrative employees' participation in CE in the setting of South African universities. The problem statement also highlighted the importance of this study.

#### **5.2.2 Overview of Chapter Two**

Chapter Two examined the literature on CE in light of the institution's internal environment and its challenges. In addition, the chapter reviewed prior literature on CE's antecedents. The discussion made it clear that CE is crucial for institutions because it fosters innovation among employees and gives organisations a competitive advantage, which in turn helps them develop and perform financially. The literature indicates that CE has been identified as an

important pillar of growth and sustainability by some organisations and as the least important by others. It was discovered that a number of challenges, including a lack of managerial support, a lack of flexibility, and a bureaucratic framework, hinder CE in organisations.

### **5.2.3 Overview of Chapter Three**

The purpose of this chapter was to discuss the methodology employed to conduct this research. The research design and paradigms were described. Research design describes how the research question will be answered. It is the blueprint for the study. Chapter Three described the method that was employed to collect the data for this study, as well as the procedure used to convert the data into results and to draw conclusions. An explanatory design within a quantitative research framework was found to be suitable for answering the research questions and describing the contribution and role of administrative workers to CE. A suitable population was identified for the purposes of answering the survey questions. The use of SPSS software to analyse data enabled conclusions to be drawn from the results.

### **5.2.4 Overview of Chapter Four**

The study's outcomes from all four sections of the survey questionnaire were discussed in Chapter Four. The results indicated that most administrative employees have no role in an entrepreneurial environment. It was discovered that the majority of administrative staff members were not participating in the process of CE, notably during the idea formulation or start stages. Furthermore, it appeared that there was no employee participation with relation to CE among administrative employees. There was also a lack of management support because management was primarily concerned with performance reviews. Employees often felt that management's attention was focused on evaluations and achieving everyday goals, which inhibited their ability to be creative.

### **5.3 Reviewing the research aim and objectives**

The following were the aim and objectives of this study:

#### **5.3.1 Research aim**

The aim of this study was to examine approaches that encourage and improve the participation of administrative staff in CE. This study used the case of VUT.

#### **5.3.2 Research objectives**

- To investigate the CE challenges facing VUT
- To examine the role currently played by administrative employees in CE at VUT
- To determine factors affecting the participation of administrative staff in CE at VUT
- To propose approaches that can be used at VUT to improve administrative staff's participation in CE

### **5.4 Achievement of the study's objectives**

Based on the analysis of the literature and the empirical results of this study, this section addresses the achievement of the research aim and objectives of this study.

#### **5.4.1 Objective 1: CE challenges facing VUT**

The results presented in Chapter Four revealed that there are no CE challenges facing VUT. The data analysis presented in Figure 4.6 revealed that although a total of 53.3% of respondents were not sure, 26.7% of respondents were in disagreement that the institution does not accept flexible institutional structures that will help to increase innovation. This indicates that this statement is not a CE challenge to VUT. The respondents indicated that the institution does promote



innovation and creative thinking. This is confirmed by the findings shown in Figure 4.7, which indicate that the majority of respondents (40%) disagreed with the statement “The institution does not promote innovation and creative thinking”. It was also found that the institution has dedicated funds to launch entrepreneurial initiatives. This is confirmed by the results depicted in Figure 4.8, which indicate that the majority of respondents (40%) disagreed with the statement “In our institution, there are no dedicated funds to launch entrepreneurial initiatives”.

Furthermore, it emerged that the institution does focus on R&D, technological leadership, and innovative practices. In light of the findings obtained for objective 1, it can be concluded that VUT has no CE-related challenges, as most respondents disagreed with the abovementioned statements.

#### **5.4.2 Objective 2: The role currently played by administrative employees in CE**

The findings indicate that the majority of administrative staff are participating in developing new ideas for the institution. The results illustrated in Figure 4.12 confirm that 41.7% of respondents agreed that their duties include the generation of new ideas, which leads to the expansion of new services at VUT. This could suggest that administrative employees appreciate their position more than the CE-related activities they carry out. It was found that the institution does not allow administrative employees enough freedom to act as innovators. Figure 4.14 shows that 71.1% of respondents were not sure or in disagreement that the institution allows them to act as innovators. This suggests that the administrative employees' roles in terms of CE were not clear since they were unaware of their role in contributing to CE. It was also found that a total of 36.6% were in disagreement while 33.3% of respondents were not sure that they can describe intensely how things could be in the future and what is needed in order to get the institution there. The presence of CE at the institution exists, although it appears to be very limited at the administrative level. This is clear in the non-engagement or exclusion of administrative staff, particularly during the CE starting phases. Figure 4.17 depicts another concern in that the majority of respondents (50%) were not sure if employees can get their proposed ideas into practice through

bureaucracy, while 35% of respondents were in disagreement that they can get their proposed actions into practice through "bureaucratic red tape". This demonstrates how employees' ability to be innovative can be limited by a focus on following standard operating procedures and a rigid, bureaucratic work environment. However, it appears that employees show interest in acquiring skills and that they do support good ideas of their colleagues. (Mamabolo and Ravjee 2019) affirm that one of the most important components of long-term business performance is an environment where people feel free to contribute new ideas.

#### **5.4.3 Objective 3: Factors affecting administrative employee participation in CE**

A range of organisational factors including managerial support, organisational structure, reward systems, resources/time availability, autonomy, and organisational culture, were found to have an impact on administrative staff engagement with CE.

- **Management support**

The results illustrated in Figure 4.25 show that the institution does not offer support when employees are going through a difficult time. A total of 38.4% of respondents disagree and 38.3% are not sure if they always have support from the institution when they are going through a difficult time. Figure 4.29 shows that respondents indicate that line managers and co-workers hardly talk to employees about how they are doing. Based on the results shown in Figure 4.37, it is evident that the majority of respondents (35% in total) are of the view that management has not been providing continuous feedback and encouragement to employees with innovative ideas. The results of this study provided strong confirmation that management support in an entrepreneurial environment has an impact on CE within an organisation. However, it was concluded from this study that middle management in particular did not provide enough support to make CE possible.

- **Organisational structure**

Based on the findings shown in Figure 4.6, most of the respondents (53.3%) were not sure whether the institution accepts flexible institutional structures to increase innovation, while 20% of respondents felt that it does not accept flexible structures. The findings of the research led to the conclusion that the organisational structure was bureaucratic because it had many reporting channels. Lee (2022) is of the view that the creative success of a university might be enhanced by a flatter hierarchy.

- **Reward systems**

Employee recognition and incentives are crucial for encouraging entrepreneurial behaviour within the organisation. The findings of this study show that at VUT, there is no reward or compensation for employees who participate in innovative projects. This is confirmed by the results shown in Figure 4.43, where a total of 51.6% of respondents disagreed that employees who complete successful innovative tasks are rewarded and compensated more generously, while 31.7% were not sure and a mere total of 16.7% agreed. Essentially, rewards were tied to metrics or ratings rather than to actual entrepreneurial activity.

- **Resources and time availability**

The results indicate that the institution does not actually allow administrative employees to be flexible with their working hours. 41.7% of respondents are not sure and a total of 35% disagreed that the institution allows them to be flexible with their working hours. Further to this, 51.7% of respondents disclosed that the institution does not give employees with innovative ideas free time to develop these ideas. The results shown in Figure 4.38 confirm that the majority of respondents (46.6%) were in disagreement that the institution provides space and resources for developing new ideas and projects. The conclusion was reached that the institution did not supply any resources and that there was not enough time to act entrepreneurially or to start any innovative ideas, since the

workload operated as a challenge to the creation of new ideas. Administrative staff members were more concerned with achieving their daily goals.

- **Work discretion**

Work discretion implies that managers should be willing to accept mistakes and offer employees the freedom to make their own decisions. There is a lot of empirical information suggesting that the institution does not encourage participatory leadership and decision-making. A total of 50% of respondents disagreed that the institution promotes participative leadership and decision-making. It was also found, as shown in Figure 4.41, that the institution does not encourage staff to suggest changes to procedures, products, or practices. Further to this, the results presented in Figure 4.49 indicate that VUT's administrative employees do not have the discretion and authority to decide how they will carry out their work without consulting with their line managers. A notable 43.4% of respondents disagreed that they have the authority and power to decide what to do at work without needing to consult anyone else and to take responsibility. Therefore, The findings of this study demonstrated that administrative staff did not have any discretion in their work, since they were required to follow predetermined protocols, standard operating procedures, or other regulations and guidelines.

- **Organisational culture**

An analysis of the data shown in Figure 4.31 indicates that at VUT, balance between work and family life is not part of the institution's culture. A total of 41.7% of respondents were not sure, a mere 20% of respondents agreed, and 38.4% were in disagreement that balance between work and family life is part of the organisational culture. However, the results shown in Figure 4.34 indicate that the majority of employees are happy with the work they do, and that they are not planning to leave the institution. It is clear that the institution has an entrepreneurial culture, but that it does not filter or spread throughout the administrative staff; rather, it is focused on the middle to the top levels of the hierarchy.

#### **5.4.4 Objective 4: Proposed approaches for adoption to improve administrative employee participation in CE**

To foster or instil an innovative culture, a variety of different approaches are recommended. These approaches include:

**Speeding up the approval process:** Management must find a way to trust employees so that they are not required to obtain permission for everything they do. They should be given a framework and a budget to work within without any restrictions. This will encourage employees to be innovative.

**Rotating duties among staff members:** Management needs to rotate employees' duties based on their skills and interests. When an employee takes on a new role, they bring with them their own working habits and way of thinking. A new perspective can lead to improved efficiency, creativeness, and ability to solve problems.

**Implementing new development programmes:** Management must put in place new development programmes and encourage staff to engage. This will increase employee participation.

**Holding brainstorming sessions with management:** Instead of putting all of the burden on one person to come up with a brilliant new idea, management could introduce a brainstorming session. This will allow employees to share their innovations and collaborate respectfully and responsibly to generate ideas and find viable solutions to problems.

Additionally, it is recommended that management shift its emphasis from tracking and monitoring personnel to inspiring and encouraging them.

#### **5.4.5 Recommendations for entrepreneurial projects or actions**

Amongst other recommendations, it is suggested that employees become aware that they are appreciated and trusted within the institution. The institution's administrative staff should feel that they are actively involved in the entrepreneurial activities that are being undertaken, rather than being only spectators. Management should work to eliminate the traditional processes of tracking and evaluating personnel to see if they follow policies and procedures and achieve goals. In order to change the organisational culture for the better, management should put more of an emphasis on inspiring and motivating employees to develop new abilities. Management should also make an effort to practise role switching within the institution. Creativity can be stifled when employees spend a long time in the same positions. If roles are aligned to employees' abilities and passions, role changes may help employees contribute more value to the institution; nevertheless, role changes should not be implemented too frequently, because doing so could have the opposite effect.

#### **5.5 Limitations of the study**

The research undertaken had the following limitations:

- The study was cross-sectional and had to be finished within a certain time frame. The response rate might have been higher if the time period had been extended.
- Due to the extremely low overall number of administrative staff, a census sampling method was used. The sample was drawn from the total population in order to guarantee a respectable response rate.
- In this study, the sample was limited to administrative staff. Other employees' perspectives and experiences were not taken into consideration.
- There was no recent literature that particularly addressed administrative employee participation in CE in South African higher education institutions.

## **5.6 Contribution to the field of study**

This study fills a gap in the existing literature on administrative employee participation in CE. There has not been any research of this kind before within the South African context. Consequently, this work is a pioneer in its field. This study has started research on a neglected topic in higher education institutions, namely the intense requirement to encourage employee participation in CE in order to stay effective, contemporary, and sustainable.

## **5.7 Recommendations based on the findings of the research**

Possible recommendations that management might consider when facilitating CE at VUT are discussed in this section. The case study provided compelling evidence that management, particularly middle-level managers, should play a larger role in supporting and advancing entrepreneurial efforts throughout the institution. Intermediate-level managers perform at a functional and operational level by acting as a wall between top management and lower-level workers in the enabling and employment of corporate entrepreneurial strategy. It is believed that their participation would enhance CE facilitation for VUT administrative employees.

Management must foster an environment in the workplace where employees can learn about the types of entrepreneurial behaviours that are expected and welcomed, as well as how to act entrepreneurially themselves. All employees, but especially middle management, should have a desire to constantly improve things. It is crucial for management to maintain a vigilant discontent with the status quo. The organisational antecedents are a means to assess whether all managers engage in a way that supports an entrepreneurial environment within the institution by better understanding the institutional environment, and how all managers think, behave, and act in relation to these antecedents.

The following are recommendations for VUT to build and support the antecedents of an entrepreneurial climate at the administrative level:

- **Management support**

Enhancing management support is necessary to remove the perception of a lack of support. All managers, top and middle, have a duty to routinely evaluate the entrepreneurial environment among administrative staff. Management should analyse and enhance older or traditional appraisal procedures, such as quantifiable metrics, as the sole measures for tracking administrative employee performance. These traditional procedures can occasionally affect performance since employees prioritise their evaluations over entrepreneurial initiatives.

It is important for improved feedback systems to coach and educate administrative staff on how to provide and accept feedback. The emphasis should be placed on developing an ideal culture where talent may flourish, rather than on managing talent. The objective is to develop a workforce that can use technology effectively and collaborate more, and has independent judgment, high levels of competence and problem-solving abilities.

- **Proper rewards and reinforcement**

Successful innovative ideas should be freely acknowledged and rewarded, and this information should be disseminated across the institution. In order to keep everyone motivated to work for a reward, employees should receive recognition based on their needs. Employees, especially those in administrative positions, should have a clear understanding of the relationship between the reward and the success, and the reward must be given shortly after the achievement. It is crucial for the employees to understand the relationship between the rewards given and the innovative behaviour that is desired and demonstrated. To increase recognition, highly innovative and creative output should have very distinctive rewards.



- **Flexible time and work**

In the workplace, the level of supervision required to do one's own work determines one's level of autonomy. There is a thin alignment between management's vision and strategies, and free time to develop innovative ideas. Therefore, it is important that administrative employees have the freedom to engage in entrepreneurial activities on occasion, and the working atmosphere should be accommodating enough to allow for the exploration of innovative ideas. Such a degree of autonomy encourages employees to be entrepreneurial.

- **Flat hierarchical structure**

It is widely acknowledged that where there are fewer layers or levels in an organisation's structure, entrepreneurship thrives. A more horizontal and less vertical design should be the basic orientation. An organisation can be less bureaucratic and more responsive to creative efforts if it has a decentralised, adaptable structure that can respond swiftly to the changing environment.

- **Tolerance for risks, failure, and mistakes**

It is important to educate employees about the advantages of being proactive as well as safe techniques to take reasonable risks. This support will promote the organisation's innovation and the development of creative concepts. Employees need to feel comfortable trying out novel concepts, taking reasonable risks, and working in a supportive environment where mistakes are tolerated.

## **5.8 Suggestions for future research**

The research undertaken highlighted insights into approaches for improving administrative employee participation in CE at VUT. This study has the potential to benefit the universities in South Africa by offering suggestions and instructions on how to improve employee participation in CE. Future studies carried out in other higher institutions of learning in South Africa might present

current and emerging viewpoints. It is recommended that future studies adopt a mixed methodologies strategy, using both quantitative and qualitative research designs. A qualitative study could include a focus group or individual interview schedule to elicit opinions from participants at the relevant universities. Quantitative data might then be subjected to robust parametric tests in order to get credible and scientific empirical findings for the hypotheses under consideration. To strengthen the study's credibility, top and medium level employees' perspectives and experiences should also be included.

## **5.9 Conclusion**

This study found that the current level of CE among administrative personnel is very low. Areas for improvement are antecedents such as managerial support, organisational structure, time availability, rewards, and work discretion. In general, CE does exist within the institution, however, neither administrative nor lower-level staff are exposed to it. Effective brainstorming sessions would motivate administrative staff to take part in institution-wide entrepreneurial projects. The institution must continue to foster a culture that values flexibility. To create a progressive entrepreneurial culture, management support and employee participation are essential. Favourable attitudes toward CE will be promoted by a positive culture. The results of this study are intended to serve as inspiration and guidelines for other institutions as well as businesses in South Africa to evaluate their entrepreneurial climate and level of CE in an effort to cultivate CE and innovation among lower-level employees.

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# APPENDIX A: LETTER OF INFORMATION AND CONSENT FORM



## LETTER OF INFORMATION

**Title of the Research Study:** Approaches for improving participation of administrative staff in Corporate Entrepreneurship at Vaal University of Technology.

**Principal Investigator/s/researcher:** Ms Mashuto Lebyane, PGD Higher Education and B-Tech BA

**Co-Investigator/s/supervisor/s:** Dr CJ Nyide, DBA

### Brief Introduction and Purpose of the Study:

My current research is titled **Approaches for improving participation of administrative staff in Corporate Entrepreneurship at Vaal University of Technology**. Through my research, I aim to propose approaches that can be used at VUT to improve administrative staff's participation in corporate entrepreneurship.

### Dear Research Participant

#### Introduce yourself to the participant

My name is Mashuto Lebyane, student number **22173861** and I am currently completing a Master of Management Sciences in the discipline of Administration and Information Management at the Durban University of Technology, Pietermaritzburg campus.

#### Invitation to the potential participant

You are invited to participate in a research survey that forms part of my formal Masters studies. This leaflet will help you to decide if you would like to participate. Before you agree to take part, you should fully understand what is involved. You should not agree to take part unless you are completely satisfied with all aspects of the study.

#### What is Research

Research is a systematic search or enquiry for generalized new knowledge.

#### Outline of the Procedures:

This study will be conducted at Vaal University of Technology and will involve all administrative staff. Approximately 110 participants will be included in this study.

The objectives of this research are as follows:

- To investigate the CE challenges facing VUT,
- To examine the role currently played by administrative employees in CE at VUT,
- To determine factors affecting the participation of administrative staff in CE at VUT, and
- To propose approaches that can be used at VUT to improve administrative staff's participation in CE.

You are being invited to participate in a research survey and to respond to questions based on how you have been feeling recently. This questionnaire will be sent to your work email and may require at least 20 minutes of your time to complete (e.g. during your free time at work or at home). You will be given a response period of two weeks. A follow up email will be sent again after two weeks. No specific requirements. In particular, the questionnaire is designed to examine the role that you are currently playing in Corporate Entrepreneurship at VUT, to determine factors affecting your participation in CE. You were chosen to participate because you were deemed relevant for this study in order to acquire thorough understanding of CE at this level. Please note that you can ask as many questions as you wish because it is important that you fully understand the study. You are allowed to discuss the study with your family and friends and are under no obligation to commit at this stage. If you decide to take part in the study, you are not to sign or disclose your particulars on the consent form or questionnaire.

#### **Risks or Discomforts to the Participant:**

There are no risks or discomforts related to this research as the questionnaire will be completed during your own time with no right or no wrong answers. No personal interview will be conducted with you.

#### **Explain to the participant the reasons he/she may be withdraw from the Study:**

Your participation in this study is entirely voluntarily and you can be assured that your personal details will remain anonymous throughout this study. You as the participant have the right to withdraw from this study if in any instance you feel uncomfortable. You don't even have to provide the reason/s for your decision. Your withdrawal will in no way influence your employment relationship with Vaal University of Technology.

#### **Benefits:**

This study will be of great value to the university community if the management decides to implement the results.

#### **Remuneration:**

By being a participant in this study you will not receive payment.

#### **Costs of the Study:**

I will be responsible for the study's costs. In addition, you won't have to pay any money to participate.

#### **Confidentiality:**

Only the researcher and the supervisor will have access to the filled out questionnaires. Your answers will be totally anonymous as your identity is not to be disclosed. The information you disclose will be used in the research report.

#### **Results:**

The findings of the study will form part of a Master degree in the discipline of Management Sciences dissertation and will be available through the University's website. Should you require a summary of the study; the researcher can make it available to you.

**Research-related Injury:**

The study and procedures involve no foreseeable physical discomfort or inconvenience to you. The questions are designed in a simple and understandable language to avoid misinterpretations.

**Storage of all electronic and hard copies including tape recordings**

All data collected from the respondents in a form of a survey monkey will be accessed by the researcher in a secure HTTPS connection, and user logins will be protected. Upon the successful completion of the analysis and coding, the university regulations will be followed and the online link will be deleted. Printed data will be kept in a locked cabinet at a DUT storage facility within the Department in which the project is based. After the 5-year span has passed, all printed data will be shredded/deleted by the department.

**Persons to contact in the Event of Any Problems or Queries:**

Should you have any further questions or queries you are welcome to contact me on (0734477707) or [Mashutol1@gmail.com](mailto:Mashutol1@gmail.com) or my supervisor Dr CJ, Nyide (0338458805.) [nyidec@dut.ac.za](mailto:nyidec@dut.ac.za) or the Institutional Research Ethics Administrator on 031 373 2375. Complaints can be reported to the Acting Director: Research and Postgraduate Support Prof K Motaung on [TtiDirector@dut.ac.za](mailto:TtiDirector@dut.ac.za).

I appreciate your assistance in completing the attached questionnaire. It will take you approximately 20 minutes to complete the questionnaire.



## CONSENT

**Full Title of the Study: Approaches for improving participation of administrative staff in Corporate Entrepreneurship at Vaal University of Technology.**

**Names of Researcher/s: Ms Mashuto Lebyane**

### Statement of Agreement to Participate in the Research Study:

- I hereby confirm that I have been informed by the researcher, Ms Mashuto Lebyane, about the nature, conduct, benefits and risks of this study - Research Ethics Clearance Number: **FRECMS-03082022-117**
- 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 /**

**Time Right**

**Signature**

**Thumbprint**

I, Mashuto Lebyane herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

Mashuto Lebyane

17 August 2022

*M. Lebyane*

**Full Name of Researcher**

**Date**

**Signature**

**Full Name of Witness (If applicable)**

**Date**

**Signature**

**Full Name of Legal Guardian (If applicable)**

**Date**

**Signature**

## APPENDIX B: QUESTIONNAIRE

### QUESTIONNAIRE

#### **Section A: Biographical details**

In this section, please tick (✓) inside the box which is relevant to you.

1. Please specify your gender

	<b>Gender</b>	<b>Tick</b>
1.1	Male	
1.2	Female	

2. What is your age category?

	<b>Age category</b>	<b>Tick</b>
2.1	Under 25 years	
2.2	25 – 34 years	
2.3	35 – 44 years	
2.4	45 – 54 years	
2.5	55 years and older	

3. What is your highest academic qualification?

	<b>Qualification type</b>	<b>Tick</b>
3.1	Diploma	
3.2	3-year degree	
3.3	4-year degree	
3.4	Honour's degree	
3.5	Master's degree	
3.6	PhD	

4. For how long have you served as a VUT employee?

	<b>Work experience</b>	<b>Tick</b>
4.1	Less than 5 years	
4.2	5-10 years	
4.3	11- 15 years	
4.4	16-20 years	
4.5	21-30 years	
4.6	31 years or more	

5. Please indicate your current position as VUT employee.

5.1	Departmental Secretary	
5.2	Faculty Administrator	
5.3	Admission Officer	
5.4	Examination Officer	
5.5	Financial Administrator	
5.6	Senior Administrator	
5.7	Other	

### **Section B: Corporate Entrepreneurship (CE) Challenges**

Below are statements about Corporate Entrepreneurship Challenges (CEC). You can indicate the extent to which you agree or disagree with the statement by ticking the corresponding number in the 5-point scale below:

**1=strongly disagree, 2= disagree, 3= moderately agree, 4= agree and 5= strongly agree**

***Please tick only one number for each statement***

CEC1	The institution does not accept flexible institutional structures to increase innovation.	1	2	3	4	5
CEC2	Innovative and creative thinking is not promoted or trained in this institution.	1	2	3	4	5
CEC3	In our institution, there are no dedicated funds to launch entrepreneurial initiatives	1	2	3	4	5
CEC4	In my institution, there is no focus on research and development, technological leadership, or innovative practices	1	2	3	4	5
CEC5	In general, the top managers at our institution have little interest towards high-risk projects (with chances of very high returns).	1	2	3	4	5

### **Section C: The Role currently played by employees in CE**

Below are statements about the role played by admin employees in CE (RAS). You can indicate the extent to which you agree or disagree with the statement by ticking the corresponding number in the 5-point scale below:

**1=strongly disagree, 2= disagree, 3= moderately agree, 4= agree and 5= strongly agree**

***Please tick only one number for each statement***

RAS1	My duties involve the creation of new ideas that in turn lead to the creation of new services that are offered by my University.	1	2	3	4	5
RAS2	My duties involve the creation of new ideas and solutions that are used in the improvement of processes used by my University.	1	2	3	4	5
RAS3	Even though I have a job description, however, I am allowed to act as an innovator.	1	2	3	4	5
RAS4	Employees are able to describe vividly how things could be in the future and what is needed to get the firm there.	1	2	3	4	5



RAS5	Employees encourage their colleagues to take initiative for their own ideas.	1	2	3	4	5
RAS6	Through "bureaucratic red tape", employees efficiently get proposed actions into practice	1	2	3	4	5
RAS7	Employees create an environment where people get excited about making improvements	1	2	3	4	5
RAS8	Employees display an enthusiasm for acquiring skills.	1	2	3	4	5
RAS9	Employees give support for the good ideas of their colleagues.	1	2	3	4	5
RAS10	Employees dedicate time to helping other colleagues find ways to improve our products and services.	1	2	3	4	5
RAS11	Employees quickly change course of action when results are not being achieved.	1	2	3	4	5

### **Section C: Factors affecting staff participation in CE**

Below are statements about Admin staff participation in CE (FASP). You can indicate the extent to which you agree or disagree with the statement by ticking the corresponding number in the 5-point scale below:

**1=strongly disagree, 2= disagree, 3= moderately agree, 4= agree and 5= strongly agree**

***Please tick only one number for each statement***

FASP1	My work goals and values are highly valued by the institution	1	2	3	4	5
FASP2	When I am going through a difficult time, I always have the support of the institution.	1	2	3	4	5
FASP3	Whenever I guarantee to accomplish my tasks on time, the institution allows me to be flexible with my working hours, if necessary.	1	2	3	4	5
FASP4	My work schedule allows me to take care of my family matters.	1	2	3	4	5
FASP5	In general, I am satisfied with my work at my institution	1	2	3	4	5
FASP6	My supervisor and co-workers talk to me regularly about how I am doing.	1	2	3	4	5
FASP7	In my institution, I participate in the process of evaluating my performance	1	2	3	4	5
FASP8	In my institution, balance between work and family life is part of our organizational culture.	1	2	3	4	5
FASP9	My institution provides stress management services	1	2	3	4	5
FASP10	I really throw myself into my job and organisation engagement.	1	2	3	4	5
FASP11	I am proud of the work I do, so leaving this institution is hard	1	2	3	4	5
FASP12	I am willing to help others who need help with work-related issues.	1	2	3	4	5

FASP13	My job description specifies the duties I must perform.	1	2	3	4	5
FASP14	Employees with innovative ideas receive management encouragement and feedback	1	2	3	4	5
FASP15	Our institution provides spaces (e.g., brainstorming rooms, laboratories) and tools (e.g., software, technical equipment) for developing new ideas, prototypes, and projects	1	2	3	4	5
FASP16	Employees with a good idea are given free time to develop it	1	2	3	4	5
FASP17	Our institution promotes participative leadership and decision-making	1	2	3	4	5
FASP18	Our institution encourages employees to suggest improvements to processes, products, and practices	1	2	3	4	5
FASP19	Our institution organizes initiatives (e.g., courses, seminars, workshops) to develop entrepreneurial behaviours and competencies in the employees	1	2	3	4	5
FASP20	Individuals with successful innovative projects receive additional rewards and compensation beyond the standard reward system	1	2	3	4	5
FASP21	Employees have a good attitude towards risk-taking	1	2	3	4	5
FASP22	Employees are flexible against changes and are comfortable with complexity	1	2	3	4	5
FASP23	Employees have a feel for discovering and experimentation	1	2	3	4	5
FASP24	Our institution promotes delegation and empowerment of employees	1	2	3	4	5
FASP25	Management is keen to involve subordinates in decision-making	1	2	3	4	5
FASP26	I have the power and authority to make decisions about my work without needing to consult anyone else and take responsibility	1	2	3	4	5

**THANK YOU**

## APPENDIX C: GATEKEEPER LETTER FROM VUT



Research Directorate  
Central Research Ethics Committee

Vanderbijlpark Campus  
Andries Potgieter Blvd  
Vanderbijlpark, 1900, South Africa  
Private Bag X021  
Vanderbijlpark, 1911, South Africa  
[www.vut.ac.za](http://www.vut.ac.za)

+27(0)16 950 7773  
+27(0)16 950 9779  
[deborah@vut.ac.za](mailto:deborah@vut.ac.za)

### GATEKEEPER'S LETTER

OFFICE OF THE REGISTRAR

15 August 2022

Dear Ms. Mashuto Lebyane,

**Ethics Reference Number: FRECMS-03082022-117**

**PROJECT TITLE:** *Approaches for improving participation of administrative staff in Corporate Entrepreneurship at Vaal University of Technology.*

**RESEARCHER / PRINCIPLE INVESTIGATOR:** Ms. M Lebyane

**SUPERVISORS:** Dr CJ Nyide

**APPLYING INSTITUTION:** Durban University of Technology

**FACULTY:** Accounting & Informatics

**QUALIFICATION:** Master's in Administrative & Information Management

I am pleased to inform you that your application has been scrutinized by our structures and has been successful. You may proceed with your research on our campus.

Please note that, in all correspondence both with the university and participants you are required:

1. To make use of the Research Ethics Clearance Number, and
2. To remain strictly within the parameters of the application that you made to us (and which has been approved).

We wish you well with your research.

Sincerely,

16/08/2022

Dr D Mokoena (REGISTRAR)  
Vaal University of Technology

## APPENDIX D: ETHICAL CLEARANCE FROM DUT



**FACULTY OF  
ACCOUNTING &  
INFORMATICS**

Faculty Research Office  
Durban University of Technology  
Ritson Campus  
P O Box 1334, Durban, 4000,  
South Africa

Tel: +27 31 373 6767

12 December 2022

Student Name: M. Lebyane  
Student Number: 22173861  
Degree: Master of Management Sciences in Administration and Information Management  
Email: [22173861@dut4life.ac.za](mailto:22173861@dut4life.ac.za)  
Supervisor: Dr C.J. Nyide  
Supervisor email: [nvidec@dut.ac.za](mailto:nvidec@dut.ac.za)

Dear Ms. M. Lebyane,

### **ETHICAL APPROVAL: LEVEL 2**

I am pleased to inform you that the Faculty Research Ethics Committee (FREC) following feedback from two reviewers, has granted preliminary permission for you to conduct your research "*Approaches for improving participation of administrative staff in Corporate Entrepreneurship at Vaal University of Technology*".

#### **When ethics approval is granted:**

You are required to present the letter at your research site(s) for permission to gather data. Please also note that your research instruments must be accompanied by the letter of information and the letter of consent for each participant, as per your research proposal.

This ethics clearance is valid from the date of provisional approval on this letter for one year. A student must apply for recertification 3 months before the date of this expiry.

Recertification is required every year until after corrections are made, after examination, and the thesis is submitted to the Faculty Registrar.

A summary of your key research findings must be submitted to the FRC on completion of your studies.

Yours sincerely

Dr. M. Rajkoomar  
Faculty Research Ethics Committee Chairperson  
Faculty of Accounting and Informatics  
Durban University of Technology  
Email: [nvidec@dut.ac.za](mailto:nvidec@dut.ac.za)

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## APPENDIX E: LETTER FROM THE LANGUAGE EDITOR

126 Sandown Village

27 Harvey Road

Manors

Pinetown

3610

02 July 2023

### Proof of Editing

This is to confirm that the attached dissertation by **Mashuto Lebyane** has been formally edited for language by Dr Jane Skinner, who is a qualified teacher of English with several years' experience in editing academic dissertations and theses.

Dr Jane Skinner

083 658 5951



## APPENDIX F: TURNITIN REPORT

