



**ANTECEDENTS OF EMPLOYEE MOTIVATION AT THE PERISHABLE PRODUCTS
EXPORT CONTROL BOARD IN SOUTH AFRICA**

By

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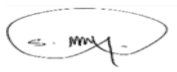
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DATE: April 2023

DECLARATION

I, Sbongiseni Mkhungo, declare that the research project at this moment handed in for the qualification Master's in Business Administration at the UFS Business School at the University of the Free State is my independent work and that I have not previously submitted the same work, either as a whole or in part, for a qualification at/in another university/faculty.



30th March 2023

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Date

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ABSTRACT

The study aimed to identify predictors of employee motivation at the Perishable Products Export Control Board (PPECB). The study's objectives were to determine, using structural equational modelling, whether a relationship exists between employee motivation (dependent variable), job characteristics and supervisor support at the PPECB. The study also sought to determine, employing ANOVA, whether statistically significant differences exist in employee motivation across regions at PPECB.

The study utilised an *ex post facto* correlational research design to test the relationships between the variables. The target population were full-time and temporary PPECB employees, and a non-probability convenience sampling was used. The Job Characteristic Scale (JCS), Work Extrinsic and Intrinsic Motivation Scale (WEIMS) and perceived Supervisory Support Scale (PSSS) measurement instruments were used to collect data. A sample of $n = 275$ completed the questionnaire. Psychometric properties of the measurement scales utilised in the questionnaire were examined through item and factor analysis. All measurement scales yielded satisfactory reliability coefficients. Furthermore, Structural Equation Modelling (SEM) was utilised to evaluate the structural model. The close fit null hypothesis was rejected, and it was revealed that the proposed model provided a permissible explanation of the relationships between the variables.

From the findings, autonomy, experiencing meaningfulness, and supervisory support affected employee motivation, while feedback did not significantly affect employee motivation. The secondary objective investigates the data that did not support differences in motivation levels across regions/divisions. The study recommends that job characteristics and supervisory support be considered in the planning and designing of employees' jobs. Increased freedom in decision-making and job rotation were cited as ways Perishable Products Export Control Board (PPECB) could increase employees' motivation.

Key words: *Job Characteristics, Employee Motivation and Perceived Supervisory Support.*

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LIST OF ABBREVIATIONS AND ACRONYMS

ANOVA	Analysis of Variance
AVE	Average Variance Extracted
CEO	Chief Executive Officer
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
COO	Chief Operations Officer
ICT	Information Computer Technology
JCM	Job Characteristics Model
JCS	Job Characteristics Scale
PPECB	Perishable Products Export Control Board
POS	Perceived Organisational Support
PSS	Perceived Supervisory Support
PSSS	Perceived Supervisory Support Scale
R & D	Research and Development
RMSEA	Root Mean Square Error of Approximation
SDT	Self-Determination Theory
SEM	Structural Equation Modelling
SRMR	Standardised Root Mean Square Residual
TLI	Tucker – Lewis Index
W- SDI	Work - Self-Determination Index
WEIMS	Work Extrinsic and Intrinsic Motivation Scale

CHAPTER 1: INTRODUCTION

1.1 BACKGROUND OF THE STUDY

It is a common idea that motivated employees play a pivotal role in attaining organisational goals (Asante Boadi et al., 2020; Gottert et al., 2021). This explains why companies strive to keep their employees as motivated as possible, where it is hypothesised that high employee motivation positively correlates with productivity and business performance (Goball et al., 2018). The significance of employee motivation is centred around the fact that all corporate activities require either direct or indirect human effort to be realised. Implementing a business idea or strategy requires professional skills and personal attributes such as knowledge, skills, and willingness or motivation (Adeola & Adebisi, 2016).

Research on employee motivation spans many decades and has been widely associated with employee motives and needs (Maslow & Lewis, 1987), employee productivity (Aruma and Hanachor (2017), and business performance (Ganta, 2014). Malik and Naeem (2013) describe employee performance as a combined product of individual ability and motivation. One of the key challenges managers face is keeping employees motivated to the extent that they perform at their optimum level (Adeola & Adebisi, 2016). Aruma and Hanachor (2017) describe work motivation as the internal and external forces that initiate work-related behaviour and determine its form, direction, intensity, and duration. Three important components of motivation have been noted in this definition: the influence of environmental forces, such as organisational reward systems and the nature of the work, the existence of forces inherent in the person, such as individual needs and motives and the impact of work-related behaviour.

With globalisation and heightened competition in the business landscape, human resources management and performance have emerged as decisive factors in providing companies with a competitive advantage (Ganta, 2014). However, Mishra and Gupta (2009) assert that understanding employee motivation is complex and challenging since various factors motivate employees differently. Moreover, while some employees are motivated by intrinsic rewards (Adeola & Adebisi, 2016), others are inclined toward extrinsic rewards (Lehmann-Willenbrock et al., 2017).

The Perishable Product Export Control Board (PPECB) was established in 1926. The PPECB is a public entity mandated in terms of the Perishable Products Export Control Act (PPEC Act), No 9, of 1983, to provide independent service of quality certification and cold-chain management services for producers and exporters of the perishable products industry (PPECB, 2022). The PPECB Operational Services Programme is responsible for delivering integrated inspection and cold chain services for the export market. This programme is divided into 3 sub-programmes namely; North, South and Coastal. The Programme aims to deliver an effective and efficient service to all PPECB stakeholders. The programme is further committed to ensuring the achievement of the PPECB's strategic objectives (PPECB, 2022).

The North sub-programme executes PPECB's mandate in northern regions, including Mpumalanga, Limpopo, Gauteng, Free State, and Port of Maputo, focusing on citrus, subtropical fruit, grains, groundnuts, and minor products. The South sub-programme, covering Western and Northern Cape provinces, handles pome, table, and stone fruit, canned, dried, and rooibos tea exports for the export market. The Coastal sub-programme provides services to Montague Gardens, KwaZulu Natal, and Eastern Cape provinces, with national responsibility for cold chain and citrus. It focuses on intensive inspections, primarily involving citrus and pome products in Eastern Cape and KwaZulu Natal (PPECB, 2022).

Based on the employee perception survey conducted by the PPECB in 2017, it was evident that there is variability in employee motivation in the PPECB regions, which hinders employees' performance towards achieving organisational objectives. Without a motivated workforce, a business cannot compete successfully (Cheng et al., 2015). Motivated and excited workers carry out their responsibilities to the best of their ability, and production numbers increase (Koster, 2017). Employee motivation has always been a central problem for leaders and managers (Malik & Naeem, 2013).

Understanding employee motivation is further compounded when a company has offices and operations in multiple regions. In addition to ensuring that employee motivation is optimised, Perishable Products Export Control Board (PPECB) regions are further challenged by the imperative to ensure equitable employee motivation across various operation sites. This explains the motivation of this study to compare employee motivation across the operating regions of the PPECB.

Motivating employees may be critical to an organisation's survival and success in an increasingly competitive environment (De Sousa Sabbagha et al., 2018). Motivated employees contribute to the organisation's growth and survival in rapidly changing environments (De Sousa Sabbagha et al., 2018). Highly motivated employees can provide superior customer service in a service industry like the Perishable Products Export Control Board (PPECB). Employee motivation is widely used in today's business world, regardless of the organisation's size. Motivation energises human resources, increases employee efficiency, enables organisations to maintain a sustainable competitive edge, and achieves organisational goals (Stella Rae, 2019).

Almaskari and Marni (2020) argue that managers should be aware of human psychology when dealing with internal or external energy factors that affect employee motivation. Internal energies manifest as individual characteristics, resulting in a wide range of job motivation levels among employees (Koster, 2017). Additionally, such internal forces include the skills and abilities of employees used in the workplace (Peters, 2015). Regarding external factors influencing work motivation, the organisational environment, work policies, teamwork, supervisory methods, work environment, assignment types, and communication channels are the most obvious external factors (Peters, 2015).

The Job Characteristics Model (JCM) was developed by Hackman and Oldham (1976) as a framework for understanding the key job characteristics that can influence employee motivation (Findsrud et al., 2018). According to Hackman and Oldham (1976), five core job characteristics can influence employee motivation: skill variety, task identity, task significance, autonomy, and feedback. Skill variety refers to the extent to which a job requires different skills and abilities. Task identity refers to the extent to which a job requires the completion of a whole and identifiable piece of work. Task significance refers to the extent to which a job has a meaningful impact on others. Autonomy refers to the extent to which a job provides employees with freedom, independence, and discretion. Feedback refers to the extent to which employees receive clear and direct information about their performance.

While the JCM was developed over 40 years ago, it is still widely used and relevant today (Lunenburg, 2011). Many studies have shown that the JCM is a useful framework for understanding employee motivation and that the five core job

characteristics can have a significant impact on employee outcomes (Findsrud et al., 2018). In addition, the JCM has been adapted and expanded over the years to include other important job characteristics, such as social support and task interdependence (Allil et al., 2021). Furthermore, recent developments in technology and the changing nature of work have made the JCM even more relevant today (Lunenburg, 2011). With the rise of remote work and the gig economy, it is important to understand how job characteristics can influence employee motivation in these new work arrangements (Allil et al., 2021). Overall, the JCM provides a comprehensive framework for understanding the key job characteristics that can influence employee motivation (Findsrud et al., 2018).

According to Ann and Blum (2020), managers and leaders of organisations must learn to understand and effectively manage their employees' motivation because motivated individuals are the pillars of a successful firm in the current and future centuries. Ann and Blum (2020) claim that unmotivated individuals are likely to put in minimal effort at work, avoid going to work as frequently as possible, leave the company, and/or produce substandard work. Rahman et al. (2018) assert that keeping employees motivated is a manager's most challenging duty because what motivates people shifts frequently.

The support received from the supervisor has been shown to increase employees' levels of motivation and trust in the organisation as supervisors embody the organisation's goals, mission and values that positively influence the employee-employer relationship (Cheng et al., 2022). Supervisory support is among the highest predictors of employee motivation (Cheng et al., 2015). In addition, supervisory support promotes individual-level outcomes such as career satisfaction, employee motivation, low exhaustion and lower turnover intention (Kok et al., 2018). When supervisors combine the role of bridging the gap between upper management and employees while meeting organisational goals, it will result in positive outcomes for the overall organisation, employee performance, and employee motivation (Cheng et al., 2015).

Supervisory support plays a crucial role in improving employees' motivation in the workplace (Ann and Blum, 2020). When employees feel supported by their supervisors, they are more likely to be engaged and invested in their work. Supervisors

can provide this support by setting clear expectations, providing feedback and recognition for a job well done, offering opportunities for growth and development, and creating a positive work environment (Cheng et al., 2022). When supervisors take the time to provide regular feedback and recognition, employees feel valued and appreciated for their contributions (Kok et al., 2018). This recognition can come in many forms, such as verbal praise, public recognition, or tangible rewards (Ann and Blum, 2020). When employees feel that their hard work is noticed and appreciated, they are more likely to feel motivated to continue performing at a high level (Ann and Blum, 2020). Supervisors can also provide support by creating a positive work environment. This can include fostering open communication, providing resources for employees to do their jobs effectively, and promoting work-life balance (Kok et al., 2018). When employees feel that their needs are being taken into consideration, they are more likely to feel motivated and committed to their work (Cheng et al., 2022).

Unmotivated employees are likely to spend little or no effort in their jobs, avoid the workplace as much as possible, exit the organisation if given the opportunity and produce low-quality work (Ann & Blum, 2020). On the other hand, employees who feel motivated to work are likely to be persistent, creative and productive, turning out high-quality work that they willingly undertake (Al-Douri et al., 2020). Employers must get to know their employees well and use different tactics to motivate them based on their wants and needs. This study emphasises the importance of motivation in the workplace to improve employee performance and productivity.

1.2 PROBLEM STATEMENT

The problem is that there is variability in employee motivation in the PPECB regions, which hinders employees' performance towards achieving organisational objectives. If the problem is not addressed, it can substantially impede PPECB's ability to achieve its strategic objectives and meet its performance targets. It is, therefore, critical to understanding strong predictors of employee motivation.

1.2.1 Research questions

- Do statistically significant relationships exist between employee motivation (dependent variable), job characteristics and supervisor support at the PPECB?

- Do statistically significant differences exist in employee motivation across regions at PPECB?

1.3 PRIMARY AND SECONDARY OBJECTIVES

1.3.1 Primary objective

Identifying predictors of employee motivation by presenting a theoretical framework and determining using structural equational modelling whether a relationship exists between employee motivation (dependent variable), job characteristics and supervisor support at the Perishable Products Export Control Board (PPECB).

1.3.2 Secondary Objectives

- To determine whether statistically significant differences exist in employee motivation across regions at PPECB.

1.4 HYPOTHESIS

The following hypothesis will be investigated:

Hypothesis 1: Overall model fit is determined by how well the predictor variables account for significant variation in motivation and by how well the proposed model explains the data.

Hypothesis 2: There is a statistically significant relationship between autonomy and motivation.

Hypothesis 3: There is a statistically significant relationship exists between experiencing meaningfulness and motivation.

Hypothesis 4: There is a statistically significant relationship between feedback and motivation.

Hypothesis 5: There is a statistically significant relationship between supervisory support and motivation.

Hypothesis 6: There are significant differences in motivation levels across regions/divisions at PPECB.

1.5 CHAPTER LAYOUT

This study will be presented in the following chapters:

Chapter 2: Literature review

Chapter 3: Research methodology

Chapter 4: Results

Chapter 5: Conclusion and recommendations

1.6 CHAPTER SUMMARY

This chapter informed the reader about the importance of employee motivation, especially at PPECB and suggested possible predictors. This study will help PPECB correctly identify the antecedents of employee motivation. The findings and recommendations of this study will be presented to the PPECB management.

CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION

The literature review is important in research study as it provides a foundation for the research, helps to identify gaps in the existing knowledge, and informs the design and methodology of the study, which ultimately enhances the quality of research and contributes to the advancement of knowledge in the field (Adu-Gyamfi et al., 2022).

This chapter discusses the variables relevant to the study and the relationship between the dependent variable (employee motivation) and the independent variables (Job characteristics and supervisory support). Two main theoretical perspectives form the study's foundation: the self-determination theory, which helps explain how employee motivation works, and the JCM, which helps explain what characteristics of the job context influence employee motivation.

2.2 EMPLOYEE MOTIVATION

2.2.1 Introduction

In a world that is getting more competitive, keeping employees motivated may be essential for an organisation to thrive (De Sousa Sabbagha et al., 2018). In a service sector like the PPECB, highly motivated staff deliver first-class customer service (Shahzadi et al., 2014). The achievement of organisational objectives is made possible by motivation, which energizes human resources, boosts worker productivity, and gives businesses the ability to keep a sustainable competitive edge (Stella Rae, 2019). Omollo and Oloko (2015) assert that motivation is essential for a successful organisation since it permits continuity and survival.

2.2.2 Conceptualising motivation

Sheehan et al. (2018) posit that motivation originates from the Latin word *movere*, which means “to move”, suggesting that hard-working people are noticed by their movements. Similarly, Shaban et al. (2017) refer to motivation as intentional and persistent behaviour to achieve a goal. Black and Allen (2018) take a more reflective view by describing motivation as a set of energetic forces both within and outside an employee, with a physical manifestation evident in the work-related effort. This paradigm perceives motivation as a direction, intensity and persistence determinant.

The employee exerts towards accomplishing a given task (Bakar et al., 2022). Elnaga and Imran (2013) assert that in a work context, motivation is the force that pushes employees to attain defined personal goals, as well as organisational targets.

Similarly, Good et al. (2022) describe motivation as the desire to strengthen the effort to achieve a goal or objective. Adeola and Adebisi (2016) analyse the concept of motivation from an intrinsic and extrinsic perspective. They argue that while intrinsic motivation involves employees' satisfaction from doing their job, extrinsic motivation derives from factors outside the individual. Hence, benefits such as bonuses, promotions, and performance incentives also form part of the motivation process (Grigorescu, 2020). Grigorescu (2020) posit that companies benefit from intrinsic and extrinsic motivation because motivated employees tend to work more independently. This explains why corporations and ordinary businesses invest substantial resources in employee motivation, as studies (Good et al., 2022) illustrated the link between motivation and hard work, team spirit and attaining organisational goals. Similarly, Koster (2017) postulates that employee motivation is central to increased productivity, greater efficiency, and retention.

Kabuka (2019) refer to motivation as the degree of willingness to maintain and exert an effort to reach certain organisational goals, which also, to some extent, can be categorised as an energising effect. It is important not to equate work motivation with job satisfaction, even though the concepts are closely related. Greater job satisfaction is often related to increased work commitment and willingness to consume personal resources for job achievements, which is not a prerequisite for work motivation.

Guided by the philosophy of the self-determination theory (SDT), several models and frameworks of work motivation have emerged, yet all frameworks that have been studied so far acknowledge one theme that says there are extrinsic and intrinsic motivational factors (De Sousa Sabbagha et al., 2018; Goball et al., 2018; Kabuka, 2019). SDT provides a holistic framework of human motivation that has been effectively applied across contexts, including education, healthcare, sports, psychotherapy, virtual worlds, work motivation, and management (Ryan & Deci, 2017). SDT theory and its definition of motivation as a multidimensional construct was used in this study.

2.2.3 The Self-determination theory (SDT)

Many theories within social psychology and organisational behaviour concern motivation in a more general meaning and concerning the work environment. SDT, developed by Ryan and Deci (2017), is an influential framework for studying human motivation that has generated much research during the last decades. Given the purpose of this study, SDT is a useful theory since it provides a multifaceted picture of motivation (Kabuka, 2019). It deconstructs the concept of work motivation, unlike other theories in the field that are focused on the total amount of motivation (Ryan & Deci, 2017).

SDT derives from a few key concepts from which it organises a theoretical framework that helps to understand motivation outcomes, determinants, and processes in many different contexts (Goball et al., 2018). An underlying assumption within the SDT is that humans are driven and growth-oriented (De Sousa Sabbagha et al., 2018). The SDT contributes to an increased knowledge of human behaviours and processes in many different areas, which is useful for improving human conditions (for example, work motivation) (Vallerand, 2021). Tremblay et al. (2010) argue that SDT focuses on the “nature” of motivation and what motivates people to behave in a certain way, which makes it an important concept in this study. A theory on motivation needs to distinguish between different types of motivation since they influence the outcomes in different ways (Gagné & Deci, 2005), which makes it an important theory in this study. The various subdimensions of motivation according to the SDT are discussed below.

2.2.3.1 Autonomous and controlled motivation

A central notion within SDT, distinguishing it from other theories in the field, is the focus on autonomous versus controlled motivation (Vallerand, 2021). Autonomy, which is argued to be a core aspect of PPECB workers’ motivation, means that the employee experiences a feeling of influence over the work situation (Tremblay et al. 2010). Controlled motivation is the opposite of autonomous; it involves a feeling of pressure when one has to engage in activities (Vallerand, 2021). One of the main findings of SDT is that an environment that supports autonomy implies a higher level of self-determination and a more form of motivation, which results in more innovative thinking and behavioural outcomes as well as favourable effects on motivation that are desirable for organisations (Kabuka, 2019). In SDT, autonomous motivation enhances

and facilitates effective performance, including employee well-being. Controlled motivation, on the other hand, can decrease those outcomes (Gagné & Deci, 2005).

2.2.3.2 Intrinsic and extrinsic motivation

Within SDT, the origin of motivation is divided into intrinsic and extrinsic motivation. Intrinsic motivation implies that it originates from within (an inherent satisfaction and interest that derives from the activity itself). Intrinsic motivation is an example of autonomous motivation and relates to moving inner psychological needs. According to this, there are instrumental reasons for a person to be motivated and to behave in a certain way. The most obvious example might be the salary, in that one works because they get paid. Extrinsic motivation refers to engaging in the activity for instrumental reasons, such as receiving rewards and approval, avoiding punishments or criticism, boosting one's self-esteem, or reaching a personally valued goal. (Gagné & Deci, 2005).

2.2.3.3 Self-determination continuum

The motivations discussed in the previous section create a self-determination continuum, as shown in Figure 2.1 (Ryan and Deci (2017)). It ranges from *Amotivation*, followed by four extrinsic (external) motivations: *External*, *Introjected*, *Identified*, and *Integrated Regulations*. The fullest representation of integrated regulation is intrinsic motivation. Each step to the right means that the individual, to a larger extent, is autonomously (intrinsically) motivated. Non-self-determined subscale is created by motivation, external, and introjected regulation, while the self-determined subscale is created by identified, integrated, and intrinsic regulation, which will be further discussed in the method section.

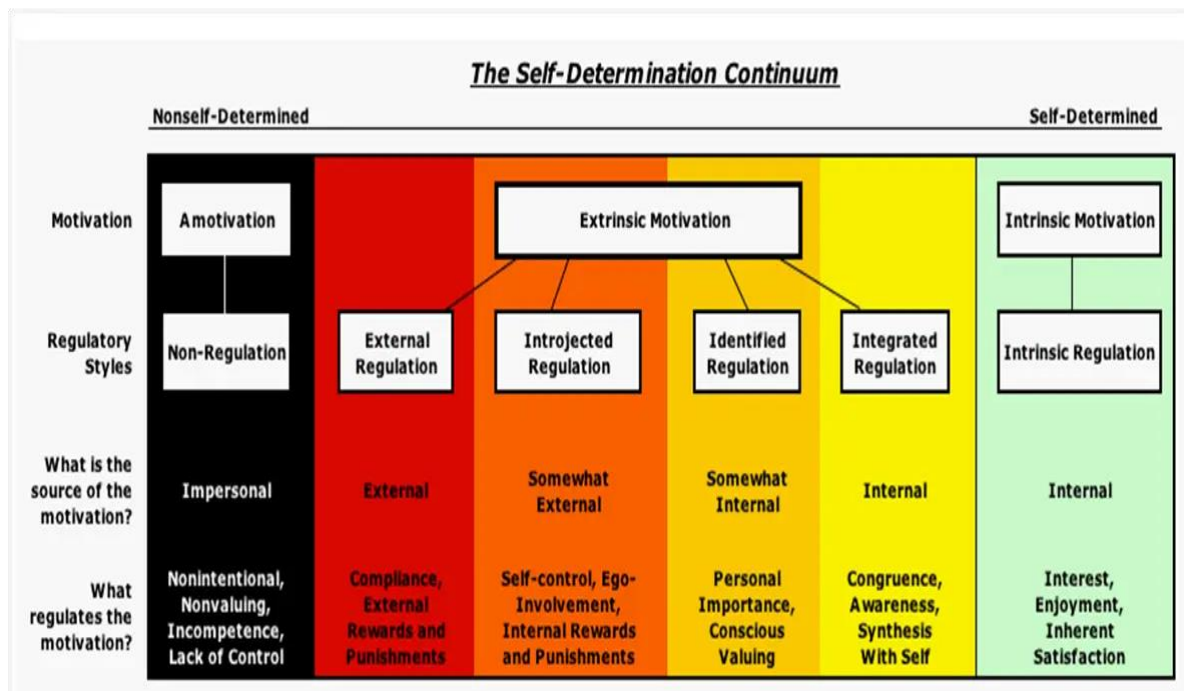


Figure 2.1: The Self-determination continuum (Gagné & Deci, 2005)

Amotivation implies no motivation towards an activity, or the employee does not possess the needed competence for the activity (Gagné & Deci, 2005). This is followed by external regulation, which can be seen as the prototype of controlled motivation, i.e., no internalisation of external regulations has occurred. This motivation arises from the intention to either reach the desired outcome (rewards) or avoid an undesired one (punishment) (Gagné & Deci, 2005).

The next form of regulation, where the attitudes, values and regulation have become more internalised compared to the previous, is introjected regulation. The regulation is now internalised within the person, but still, the regulator controls the person – the employee does not fully accept the regulation as their own (Gagné & Deci, 2005; Ryan & Deci, 2017).

When moving along the self-determination continuum, the person becomes more autonomously motivated, yet the motivation remains extrinsic, introducing the next motivation regulation: the identified regulation. This implies that the employee, to a larger degree, identifies with their surroundings' values, attitudes, and structures and are congruent with their personal, self-selected goals and identities. A practical example is when a nurse performs seemingly uninteresting, routine activities but feels

that she does it for the patient's well-being. This would make the nurse feel autonomous when doing the task (Gagné & Deci, 2005).

Integrated regulation is the most autonomous example of extrinsic motivation. The regulation has now become fully integrated into the self. Intrinsic motivation can be described as the self-determined type of motivation originating from an inner thrive and interest in the task.

2.2.3.4 The three basic psychological needs

Gagné and Deci (2005) describe intrinsic motivation and internalisation as natural processes and make a parallel to the fact that natural processes need nutrients for optimal functioning. Within SDT, three basic psychological needs are important to enhance these processes: autonomy, competence, and relatedness. These needs are the foundation from which intrinsic motivation and internalisation originate. In an organisational setting, a work climate that enhances the three basic needs also promotes employees' intrinsic motivation and optimal internalisation of extrinsic motivation (Ganta, 2014; Kabuka, 2019).

The two most central aspects of the concept of basic needs are the fulfilment of autonomy and competence (Vallerand, 2021). The concept of autonomy has already been touched on regarding autonomous and controlled motivations. However, it also constitutes a basic psychological need concerning how much employees can influence their work environment. Autonomy is negatively influenced by surveillance, deadlines, tangible rewards and evaluations (controlled motivation). The aspect of competence relates to a sense of challenge for the employee in the workplace, and the tasks should be optimal in their difficulty and be efficiency-promoting (Ryan & Deci, 2017).

Relatedness is the third factor that enhances intrinsic motivation and integration. It refers to a feeling of security and belonging in a work situation where social relationships and relatedness are important for intrinsic motivation to flourish (Ryan & Deci, 2017).

When employees feel that these psychological needs are being met in their work environment, they are more likely to be motivated and engaged (Ryan & Deci, 2017). For example, when employees are given autonomy in their work, they feel a sense of

control and ownership over their tasks, which can increase their motivation (Ganta, 2014; Kabuka, 2019). When employees are provided with opportunities to develop their skills and competencies, they feel a sense of accomplishment and pride in their work, which can also increase motivation (Ganta, 2014; Kabuka, 2019). When employees feel connected to their colleagues and the overall mission of the organisation, they are more likely to be committed to their work and motivated to contribute to its success (Vallerand, 2021).

2.2.3.5 Criticism of SDT

One central assumption within SDT is that extrinsic rewards can sometimes negatively affect intrinsic motivation, as they can shift the focus away from the enjoyment and satisfaction of the task itself and towards the reward. This can lead to individuals feeling like they are only doing the task because of the reward rather than because they enjoy it (Vallerand, 2021). According to Smith and Williams (2021), extrinsic rewards can reduce creativity and innovation by encouraging individuals to focus on the specific outcome or reward rather than exploring different approaches and ideas. Extrinsic rewards can create a "fixed mindset," meaning that individuals become more focused on getting the reward rather than learning and growing from the experience. This can block their enjoyment of the task and reduce their motivation (Ryan & Deci, 2017). As the theory of SDT suggests, an organisation should strive to enhance intrinsic motivation among the employees. However, it might not be possible to achieve this for the simple reason that some tasks in organisations are not intrinsically motivating. In those cases, tangible rewards might be the best choice as a motivational strategy (Gagné & Deci, 2005). These findings challenge the traditional knowledge in the field and assumptions within SDT.

2.2.4 Conclusion

In the present study, motivation was defined as internal and external factors that stimulate the desire and energy in people to be continually interested and committed to a job, role or subject or to make an effort to attain a goal (Gottert et al., 2021). The SDT was used as the main theoretical framework to guide the study and the inclusion of the other predictor variables, with a large focus on factors that might influence intrinsic motivators (like the Job Characteristic Model).

2.3 JOB CHARACTERISTICS

2.3.1 Introduction

The Job Characteristics Model (JCM) is a theory based on the idea that a task is key to the employee's motivation. In short, a boring and monotonous job is disastrous to an employee's motivation, whereas a sufficiently challenging, versatile job positively affects motivation (Allil et al., 2021). The JCM specifies the conditions under which employees remain motivated to perform their job to the best of their ability. Considering the importance of work motivation, the JCM can serve as a useful framework to identify the components of a job that can be redesigned to enhance the work motivation of PPECB employees (Good et al., 2022). The idea behind the model is to enrich the components of a job which affect the psychological states of the job holder by generating meaningfulness in the job, increasing the level of responsibility for outcomes of the work and providing feedback on the outcomes of work activities (Lunenburg, 2011).

Although the JCM is relatively old, it is still widely used today (Allil et al., 2021). The model specifies the conditions under which employees remain motivated to perform their job to the best of their abilities (Akinwale & George, 2020). The JCM also naturally builds into many facets of the SDT, emphasising the intrinsic motivational aspect of work tasks (Allil et al., 2021). For this study, the emphasis of JCM is based on the three psychological states: experienced meaningfulness, autonomy (experienced responsibility), and feedback (knowledge of results).

2.3.2 Conceptualising Job Characteristics

Hackham and Oldham (1976) developed the job characteristics model (JCM), as a framework for describing the workplace and the critical determinants of employee motivation. The JCM enables the creation of a description or insight into job characteristics and their relationship to employees' psychological and other characteristics. The JCM is based on the premise that all workplaces can be described in terms of five fundamental dimensions known as job characteristics (Omollo & Oloko, 2015), as illustrated in Figure 2.2.

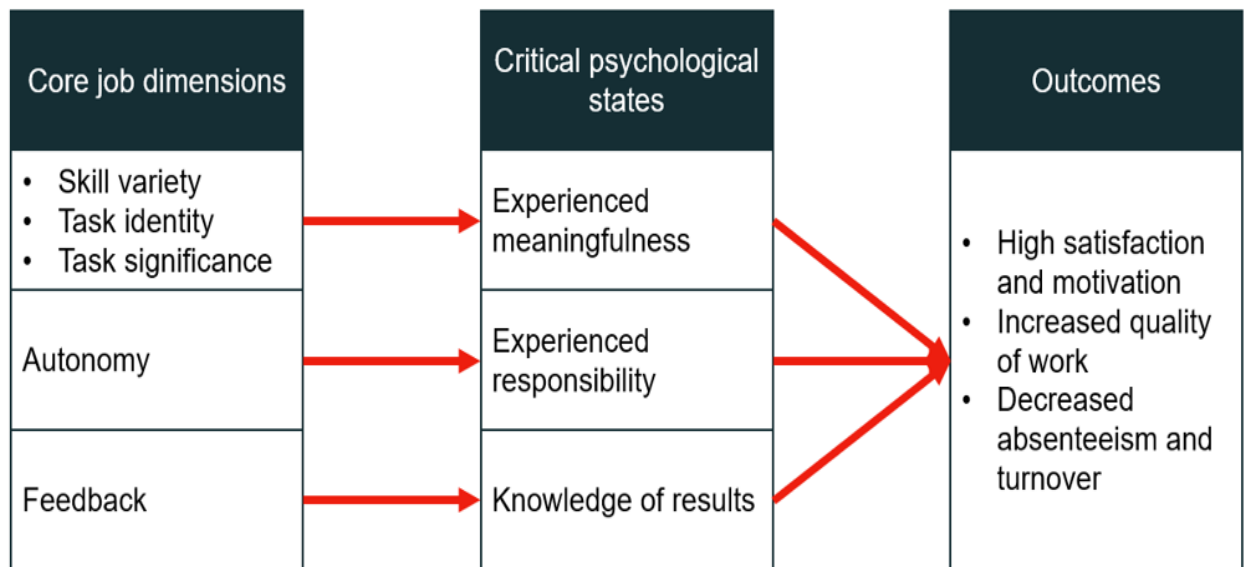


Figure 2.2: Job characteristics model (Nixon & Jaramillo, 2003)

According to Allil et al. (2021), Turner and Lawrence developed the first version of job characteristics dimensions, including interpersonal interaction and friendship opportunities. These two dimensions, however, were later omitted due to their lack of relevance to the job characteristics construct. Most studies investigating job characteristics use Hackman and Oldham's model (Allil et al., 2021). The JCM model considers five job characteristics: task identity, skill variety, task significance, autonomy, and feedback. Hackham and Oldham (1976) identified five job characteristics discussed below.

2.3.2.1 Skill variety

When jobs require employees to use multiple skills and abilities, they are more likely to feel challenged and engaged. This can lead to increased motivation and job satisfaction. PPECB employees can experience more meaningfulness in jobs that require several different skills and abilities than when jobs are elementary and routine. The PPECB employee must apply various skills to carry out daily tasks (Allil et al., 2021).

2.3.2.2 Task identity

When employees work on a meaningful task, they can see the impact of their work and feel more connected to their job. This can result in higher levels of motivation and job satisfaction. PPECB employees will experience more meaningfulness in a job

when they are involved in the entire process rather than just being responsible for a part of the work (Allil et al., 2021).

2.3.2.3 Task significance

When jobs are meaningful and contribute to the organisation's goals, employees will likely feel a sense of purpose and pride in their work. This can lead to higher levels of motivation and job satisfaction. The influence can be in either the immediate organisation or the external environment. PPECB employees will feel more meaningfulness in a job that substantially improves their psychological or physical well-being than in a job with limited effect. Tasks that allow individuals to collaborate and work together as part of a team can encourage a sense of relatedness and foster a greater sense of shared purpose and meaning. On the other hand, tasks that are monotonous, repetitive, or provide little opportunity for skill development or growth may inhibit meaningfulness (Omollo & Oloko, 2015).

2.3.2.4 Autonomy

When employees have the freedom and discretion to make decisions about their work, they are more likely to feel empowered and engaged in their work. This can result in higher levels of motivation and job satisfaction. For jobs with a high level of autonomy, work outcomes depend on employees' efforts, initiatives, and decisions rather than on instructions from managers or standard operating procedures. In such a case, the PPECB employees will experience greater personal responsibility for their successes and failures at work (Omollo & Oloko, 2015).

2.3.2.5 Feedback

When employees receive clear and direct feedback on their performance, they can understand how their work contributes to the organisation's larger goals. This can lead to higher levels of motivation and job satisfaction. When PPECB employees receive clear, actionable information about their work performance, they will have better overall knowledge of their work activities and what specific actions they need to take to improve their productivity (Omollo & Oloko, 2015).

2.3.2.6 Psychological states

According to the job characteristics model, a job influences an employee's performance when the employee encounters three psychological states: a) experienced meaningfulness, b) experienced responsibility, and c) experienced knowledge of one's performance. Tough jobs with a high degree of autonomy, skill variety, identity, significance, and feedback can positively affect employee motivation and performance (Ganta, 2014). When jobs have variety, employees are more likely to be excited and invested in engaging in and completing work activities. As a result, employees are more likely to devote their full attention and effort to their jobs, making them more receptive to new ideas and alternatives. This will eventually improve job performance (Good et al., 2022).

Research has shown that when employees experience high levels of meaningfulness, responsibility, and knowledge of results, they are more likely to be motivated. Specifically, when employees perceive their work as meaningful, they are more likely to experience intrinsic motivation - a type of motivation that comes from within. When employees have a high degree of responsibility, they are more likely to feel in control of their work and are more likely to take ownership of their job tasks. Finally, when employees receive feedback on the effectiveness of their work, they are more likely to feel a sense of accomplishment and are more likely to be motivated.

Therefore, the JCM suggests that by designing jobs that incorporate the five core job characteristics and promote the psychological states of meaningfulness, responsibility, and knowledge of results, employers can increase employee motivation. As such, this study emphasises the three psychological states described by the JCM when investigating employee motivation at PPECB.

2.3.3 Relationship between job characteristics and motivation.

According to a study by Tan and Rajah (2019), motivation and job characteristics are closely related in the workplace. Employees are more likely to be motivated when their job characteristics align with their needs and preferences (Putra et al., 2020). Employees are more motivated when they can use multiple skills in their work. Employees who can use various skills to perform their job tend to feel engaged and challenged. Employees who feel a strong sense of ownership and completion over

specific tasks are more likely to be motivated. Tasks with identifiable outcomes or achievements can help employees feel a sense of pride and accomplishment in their work (Tan & Rajah, 2019). Employees are more motivated when they control their work (Nolen, 2020). Employees with autonomy over their tasks will likely take ownership of their work and feel more motivated to perform their best (Findsrud et al., 2018). Employees who receive regular feedback about their work are more likely to be motivated to improve their performance. Feedback helps employees understand where to improve and identify when their work meets expectations (Findsrud et al., 2018).

The JCM emphasises the importance of designing jobs to become meaningful and valuable to employees (Li et al., 2021). This means there should be job enrichment, job enlargement, and job rotation (Lunenburg, 2011). Rahman (2015) advances the view that job enlargement ensures that additional challenges or responsibilities are attributed to the employee's current job. Good et al. (2022); (Nolen, 2020; Rahman, 2015) postulated that job rotation reduces boredom and increases motivation.

When employees set new procedures and plan each workday, the sense of responsibility increases, improving motivation (Yeboah & Abdulai, 2016). This is mainly common in employees at higher positions in an organisation. Non-managerial employees can also have a strong sense of autonomy when initiating and carrying out tasks independently (Altheeb, 2020). The feedback on an employee's performance can have a positive effect on their performance. If the impact of their work is very good, they are motivated to work even more efficiently and effectively; alternatively, if there are some drawbacks, one may be eager to improve their performance (Oerlemans & Bakker, 2018).

The amount of autonomy a job offers and demands leads to the formation of the experienced feeling of responsibility (Liere-Netheler, 2017). If they have been underperforming, it motivates them to learn from their mistakes, but if they have been performing well, it helps them to maintain that level of efficiency in the work (Rahman et al., 2018).

Jobs with a high potential for motivation must excel in at least one of the three factors (skill variety, task identity, task significance) that contribute to a sense of work

significance and provide a high level of autonomy and feedback in the workplace (Li et al., 2021). The job characteristics affecting motivation vary depending on the employee's needs and preferences and employers must identify the job characteristics that motivate their employees (Black & Allen, 2018).

2.3.4 Conclusion

Employees whose jobs have been optimised under the job characteristics model feel responsible for their work and find it more meaningful. Ultimately, job characteristics must align with employees' needs and preferences. When employees' jobs incorporate the job characteristics that motivate them, they are more likely to be satisfied with their work, stay with the organisation longer, and perform better (Findsrud et al., 2018).

2.4 PERCEIVED SUPERVISOR SUPPORT

2.4.1 Introduction

Perceived supervisory support (PSS) refers to the level of support that employees feel they receive from their supervisors or managers (Yusof et al., 2016). PSS includes how much supervisors care about their employees, value their contributions, and provide them with guidance and feedback (Querol et al., 2015). supervisory support is largely focused on the employee's perception and is considered a unidimensional construct (Yusof et al., 2016). The level of PSS can impact employees' attitudes and behaviours at work, as well as their job satisfaction and well-being (Cheng et al., 2015).

PSS is important because employees who feel supported by their supervisors are generally more engaged, satisfied, and committed to their work (Yusof et al., 2016). They are also more likely to exhibit positive behaviour and performance, such as increased productivity, better quality work, and decreased absenteeism (Querol et al., 2015). Some factors that can influence an employee's perception of supervisory support include the supervisor's communication style, responsiveness to employee needs and concerns, availability and accessibility, fairness and consistency in decision-making, and willingness to provide guidance and feedback (Yusof et al., 2016). In essence, perceived supervisory support is the degree to which an employee feels that their supervisor is invested in their success and well-being and actively works to support them in achieving their goals (Yusof et al., 2016).

2.4.2 Conceptualising perceived supervisory support.

Perceived supervisor support is the extent to which an employee feels supported and respected by their supervisor and the willingness a supervisor has to help the employee (Tuzun & Kalemci, 2012). The continuous effort to find efficient ways to retain talented employees remains a key factor in organisations. According to Burns (2016), positive work outcomes have been led by two types of support, namely, perceived organisational support (POS) and perceived supervisor support (PSS). Perceived organisational support refers to the perceived support employees receive from the organisation, whereas perceived supervisor support refers to the perceived support employees receive from their supervisor (Burns, 2016).

POS and PSS concepts rely on employees' perceptions of their supervisor and organisation. Perception forms an important part of how an individual views their reality and forms individual attitudes and opinions based on the view of their reality (Lamprinou et al., 2021). Ramus and Steger (2000) define supervisory support as the perception an employee has of the extent to which supervisors value their contributions and care for their wellbeing. Otara (2011) noted that perception is how individuals interpret their experiences. Individual differences are therefore important for management to understand as they directly influence employee behaviour. Individuals with different perceptions will have different characteristics and needs, interact differently and view the world differently (Abou Elnaga, 2012). As a result, individual perceptions (including that of leaders, managers and employees) influence organisational behaviours and shape the conditions for an effective working environment (Abou Elnaga, 2012; Bakar et al., 2022).

2.4.3 Relationship between perceived supervisory support and motivation.

Perceived supervisory support (PSS) has been found to have a positive relationship with employee motivation (Abou Elnaga, 2012). When supervisors provide support, care about their employees, and value their contributions, employees are likelier to feel motivated and engaged (Malik & Naeem, 2013).

Supervisory support can contribute to employee motivation in several ways. First, when employees feel supported by their supervisors, they are more likely to have a positive attitude towards their work and the organisation (Elnaga & Imran, 2013). This

positive attitude can increase motivation to perform well and contribute to the organisation's goals (Otara, 2011). Second, when supervisors provide guidance and feedback, employees feel more confident performing their tasks. This can increase motivation as employees feel more competent and willing to take on challenging tasks (Nohria et al., 2008). Third, when supervisors show care for their employees, they create a more positive work environment. This positive environment promotes a sense of belonging and connectedness among employees, leading to higher levels of motivation and engagement (Azman et al., 2009). According to Ellinger (2013), research has consistently found a positive relationship between PSS and employee motivation, highlighting the importance of supervisors and managers in supporting their employees. In summary, when supervisors provide support and care for their employees, they can positively impact their motivation and engagement (Kuvaas et al., 2014).

Dysvik et al. (2014) emphasised that employees' perceptions of their immediate managers are important in workplace motivation. They further indicate that supervisors who maintain good working relations with employees under their supervision tend to foster highly motivating work environments. Nohria et al. (2008) point out that supervisors who are more supportive of autonomy and less controlling of their subordinates demonstrate higher levels of intrinsic motivation.

2.4.4 Conclusion

Research has found that when employees perceive higher levels of supervisory support, they are more likely to experience positive workplace outcomes such as higher job satisfaction, increased motivation, job commitment, and better physical and psychological well-being (Nohria et al., 2008). On the other hand, low levels of supervisory support can lead to negative outcomes such as decreased job satisfaction, higher turnover rates, and absenteeism (Ryan, 2017).

In conclusion, perceived supervisory support is an essential component of employees' work experience, and the level of support provided by managers and supervisors significantly impacts employees' attitudes, behaviours, and well-being in the workplace (Nolen, 2020). Supervisory support is largely focused on the employee's perception and is considered a unidimensional construct.

2.5 HYPOTHESISED STRUCTURAL MODEL OF THE ANTECEDENTS OF EMPLOYEE MOTIVATION

As mentioned, the variables can be inserted into a proposed structural model (see Figure 2.3). The proposed model illustrates the network of antecedents hypothesised to influence employee work motivation as set out in the theoretical arguments above. The antecedents include the three psychological states described by the JCM and perceived supervisory support.

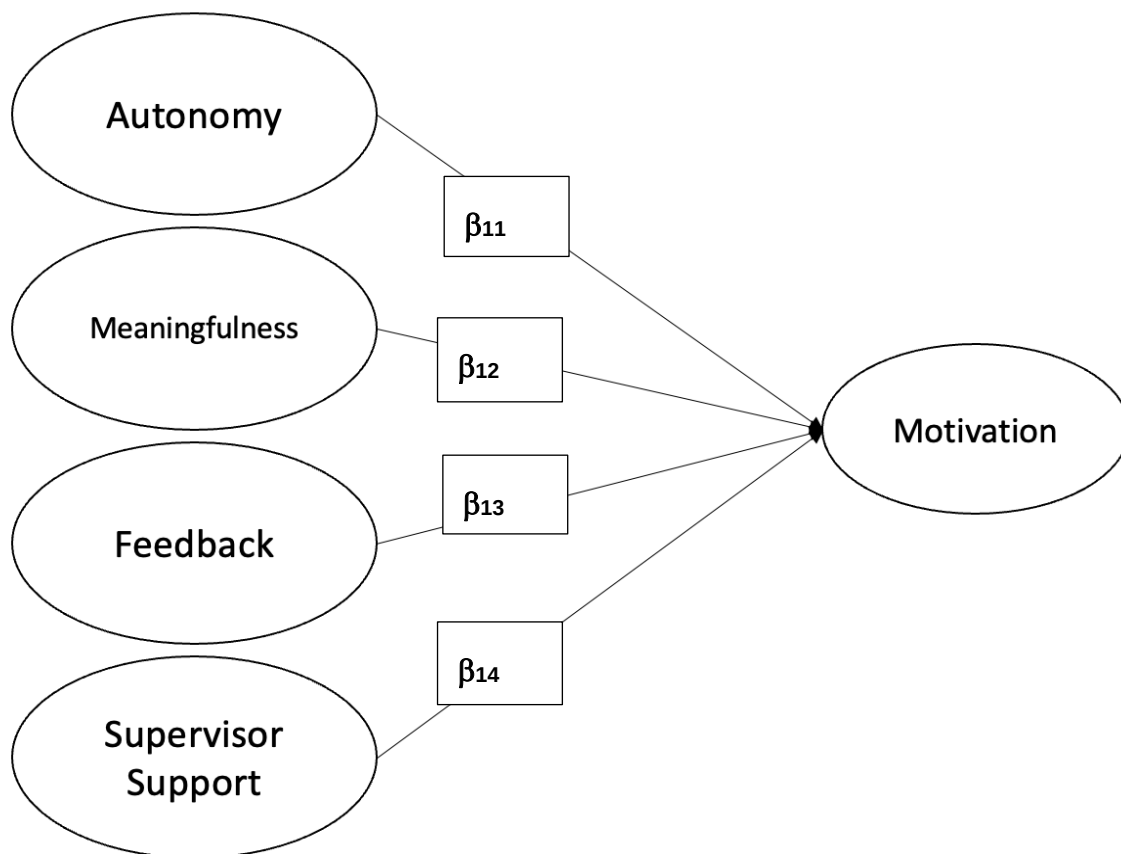


Figure 2.3: A proposed integrated structural model for the antecedents of employee motivation at the PPECB

2.6 CHAPTER SUMMARY

This chapter reviewed the literature on employee motivation, job characteristics, and perceived supervisor support and provided a relationship between the variables. These variables were presented in a structural model that will ultimately test the research hypotheses of the study.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 INTRODUCTION

The research method is an investigation strategy that progresses from fundamental assumptions to research design and data collection (Brink et al., 2018). This section discusses the study's philosophy, methodology, sampling strategy, data collection methods, and statistical analysis.

Research methodology collects data to provide accurate and reliable information and evidence of effectiveness. It contributes significantly to academic fields through systematic, logical, and theoretical techniques. The researcher employs research methods to address issues and uncover new facts and theories. That is why authors such as Goddard and Melville (2004) state that research entails not simply collecting data or presenting facts for the sake of it but collecting and systematically interpreting data with the intent of guiding the inquiry. Houghton et al. (2013) add to that definition by stating that solving those problems requires numerous plans, procedures, and steps. Lewis (2015) also describes research processes such as developing a research proposal, designing, collecting and analysing data, determining results and drawing conclusions, and research ethics. The main aim of the research methodology is to produce valid and reliable conclusions that can benefit the epistemic ideal of the social sciences (Brink et al., 2018).

3.2 RESEARCH PHILOSOPHY

This study took a positivistic approach to research. According to the Positivism research philosophy, only "factual" knowledge gathered through observation (measurement) is trustworthy (Davies & Fisher, 2018). Positivists believe in a single objective truth that we can anticipate and influence if we understand it (Kaushik & Walsh, 2019). Surveys and experimental designs have been the primary methodologies used in positivist approaches, with statistical techniques used to achieve population generalisation (Snyder, 2019). Positivism emphasises the inherent worth of what is given, emphasising unadulterated data and facts free of human interpretation (Rinjit, 2020).

3.3 RESEARCH DESIGN

The term "research design" refers to the clearly defined framework within which the study is conducted (Babbie, 2010). According to Bloomfield and Fisher (2019), the research design plans, structures, and research so that the findings are as valid as possible. It guides all aspects of research design and data collection, from underlying philosophical assumptions to research design and data collection. Mey (2022) add that, colloquially, a research design is a road map for getting from here to there, with 'here' referring to the initial set of questions to be answered and 'there' referring to some set of (conclusions) answers. This study employed a quantitative, ex post facto design, which is part of the explanatory research approach.

3.3.1 Quantitative explanatory ex post facto design

According to Creswell (2014), quantitative research entails quantifying and analysing variables to obtain results. According to Lewis (2015), quantitative research is the precise counting of specific phenomena, opinions, or attitudes and provides statistical data suitable for frequency analysis to address the issue. McGloin (2008) defines a quantitative study as a research approach elucidating a phenomenon by collecting numerical data and statistical analysis. It is a methodological approach in which the investigator employs inquiry strategies such as experiments and surveys and collects data using predefined instruments that generate statistical.

Quantitative research's greatest strength is its methods generate reliable and quantifiable data that can be potentially generalised to a large population. Additionally, testing hypotheses constructed before data collection is appropriate for testing and validating previously constructed theories about how and why phenomena occur (Creswell, 2014). An explanatory research approach was used to accomplish this study's proposed research objectives and questions because it provides a more complete and comprehensive understanding of the research problem than a single method does (McGloin, 2008). Ex-post facto research is an empirical investigation in which the researchers lack direct control over the independent variables because they have already produced effects that cannot be modified. Conclusions about the relationship between the variables are inferred without intervening or varying the independent or dependent variable (Ragulina et al., 2019). In an ex-post-facto study,

the researcher cannot use randomisation because they lack direct control over the cause and must infer possible causes from the observed effect (Bell & Waters, 2018).

3.3.2 Statistical Hypotheses

Various hypotheses were formulated to test the relationships between these variables empirically. The proposed integrated structural model set out in Figure 2.3 accurately describes the antecedents of employee motivation at PPECB. To test the validity of the overall structural model as set out in Figure 2.4, the researcher formulated the following overarching substantive hypothesis.

For this study based on the theoretical discussion in Chapter 2, six hypotheses were tested as shown below:

Hypothesis 1: Overall model fit:

$$H_{01}: RMSEA > .05$$

$$H_{a1}: RMSEA \leq .05$$

The statistical hypotheses for the path-specific hypotheses are as follows:

Hypothesis 2: There is a statistically significant relationship between autonomy and motivation.

$$H_{02}: \beta_{11} = 0$$

$$H_{a2}: \beta_{11} > 0$$

Hypothesis 3: There is a statistically significant relationship exists between experiencing meaningfulness and motivation.

$$H_{03}: \beta_{12} = 0$$

$$H_{a3}: \beta_{12} > 0$$

Hypothesis 4: There is a statistically significant relationship between feedback and motivation.

$$H_{04}: \beta_{13} = 0$$

$$H_{a4}: \beta_{13} > 0$$

Hypothesis 5: There is a statistically significant relationship between supervisory support and motivation.

$$H_{05}: \beta_{14} = 0$$

$$H_{a5}: \beta_{14} > 0$$

The secondary research objective can be translated into the following statistical hypothesis:

Hypothesis 6: There is a statistically significant differences in motivation levels across regions/divisions at PPECB.

$$H_{06}: \mu_1 = \mu_2 = \mu_3 \dots = \mu_k$$

$$H_{a6}: \mu_1 \neq \mu_2 \neq \mu_3 \dots \neq \mu_k$$

3.4 SAMPLING STRATEGY

Bell and Waters (2018) state that a research population is "the entire group of people, events, or objects of interest that the researcher wishes to investigate." The population for this study comprised all PPECB permanent and temporary employees. The Chief Executive Officer, Chief Operation Officer, Chief Financial Officer, Human Capital Executive and the Board of directors were excluded to avoid potential biases and conflicts of interest that can affect the results of the research. According to available company data, PPECB employs 785 people (N=785), as illustrated in Table 3.1.

Table 3.1: Number of PPECB employees

	Permanent Employees	Temporary Employees
Grand Total	534	251

(PPECB, 2022).

A sample is a subset of the population composed of randomly selected individuals (Easterby-Smith et al., 2021). This implies that the sample does not include every member of the population. According to Sekaran and Bougie (2016), a sample size (S) of approximately 260 respondents can adequately represent a population size (N) of 785 employees.

3.4.1 Sampling design

A non-probability sampling strategy was employed based on the method of convenience. In non-probability sampling designs, the elements in the population have no probabilities attached to them being chosen as sample subjects (Sekaran & Bougie, 2016). This means that the findings from the study of the sample cannot be confidently generalised to the population (Sekaran & Bougie, 2016). According to Sekaran and Bougie (2016), non-probability sampling is less complicated than a probability sampling design. Therefore, researchers may sometimes be less worried about generalisability than obtaining several preliminary pieces of information quickly and inexpensively. Certain non-probability sampling plans are more dependable than others and may offer some important leads to potentially useful information concerning the population (Sekaran & Bougie, 2016).

Convenience sampling was used to collect data. The advantages of convenience sampling are that it is "quick, convenient, cost-effective, and time-efficient" (Sekaran & Bougie, 2016, p. 261). On the other hand, convenience sampling cannot be confidently generalised to the entire population of employees in all PPECB regions (Tremblay et al., 2010).

3.4.2 Recruitment criteria

On behalf of the researcher, the human resources manager distributed the link to the questionnaire via email to all PPECB permanent and temporary employees in all regions (North, South and Coastal regions), after the appropriate gatekeeper permission had been obtained.

The principle of participation in this study was based on a free and informed decision about the nature, implications and risks of this participation. Employees were informed that their participation was voluntary and confidential. There was no conflict of interest between the researcher and participants. The purpose and scope of the study were explained to the participants. They had access to this information before accessing the questionnaire and again at the beginning of the questionnaire. Data were collected after obtaining ethical clearance from the University of the Free State and approval from PPECB.

3.5 DATA COLLECTION METHOD

To support the research design, this study collected data quantitatively. Quantitative data collection is required for quantitative procedures, and quantitative approaches require questionnaires (Bell & Waters, 2018). Questionnaires were used to collect data from respondents. According to Bell and Waters (2018), a questionnaire is a preformulated written set of questions to which respondents record their responses, typically within fairly precisely defined alternatives.

Bell and Waters (2018), maintain that there are advantages associated with the use of questionnaires:

- The cost per questionnaire is relatively low.
- Structured information in the questionnaire and a few open questions make analysing data quicker.
- Questionnaires are relatively straightforward.
- Questionnaires give respondents extended time to formulate accurate responses.
- This method of data collection produces quick results.
- Questionnaires are a stable, consistent and uniform method of collecting data.

For this study, the questionnaire consisted of four sections structured in the manner outlined below:

Section A: Demographics information

Section B: The Work Extrinsic and Intrinsic Motivation Scale (WEIMS).

Section C: Job Characteristics Scale (JCS).

Section D: Perceptions of Supervisory Support Scale (PSSS).

3.5.1 Measuring instruments of variables

"Measuring instruments" refers to a researcher's various technical methods to elicit reliable data from respondents or participants in a research study (Bell & Waters,

2018). When using measuring instruments, it is critical to ensure that the instrument is appropriate for the type of research being conducted. This ensures accurate data collection and conclusions validity.

In this section, measuring instruments of variables will be discussed.

3.5.1.1 Demographics information

Demographic information means characteristics of the human population, such as age, ethnicity, race, sex, disability, and socioeconomic information. For this study, the following personal information about PPECB employees was included:

- Gender
- Educational level
- Years of service at the Perishable Products Export Control Board
- Region

The above demographic information describes the study population and helped the researcher to identify any differences or variations in responses based on their characteristics.

3.5.1.2 Motivation

The Work Extrinsic and Intrinsic Motivation Scale (WEIMS) is an 18-item work motivation measure theoretically grounded in self-determination theory (Bell & Waters, 2018). The WEIMS is divided into three-item across six subscales, corresponding to the six types of motivation postulated by SDT (i.e., Intrinsic Motivation, Integrated, Identified, Introjected and External Regulations, and Amotivation). Each dimension's items are rated on a seven-point Likert scale, where 1 equals 'not at all', 2 equals 'very little', 3 equals 'a little', 4 equals 'moderately', 5 equals 'strongly', 6 equals 'extremely strongly', and 7 equals 'completely' (Bell & Waters, 2018).

3.5.1.3 Job characteristics

The Job Characteristics Scale (JCS) is based on the Job Characteristics Theory (JCT), which suggests that five core job characteristics contribute to employee motivation and

satisfaction: skill variety, task identity, task significance, autonomy, and feedback. The JCS measures these five core job characteristics using a 15-item questionnaire.

The JCS consists of two parts: the first part measures the five core job characteristics using three items for each characteristic, and the second part measures the individual's psychological states and work outcomes associated with the job characteristics. The psychological states include experienced meaningfulness of work, experienced responsibility for outcomes, and knowledge of results, while the work outcomes include job satisfaction, absenteeism, and turnover. Respondents rate each item on a 7-point scale, ranging from "very low" to "very high". The scores on the JCS are then used to calculate various measures, including the Job Diagnostic Survey (JDS) scores for each job, which provide an overall measure of the extent to which a job is high or low in motivating potential.

The JCS has been used in a wide range of research studies and is reliable and valid in a variety of settings. It has been used to examine the relationship between job characteristics and employee motivation, job satisfaction, absenteeism, turnover, and other work-related outcomes. The JCS has also been used in interventions aimed at improving job design and increasing employee motivation and satisfaction. (Fried & Ferris, 1987).

According to Fried and Ferris (1987), Cronbach's alpha values within 0.606 and 0.818 for all subscales are satisfactory. The overall internal consistency reliability for the Job Characteristics scale, indicating high reliability, was 0.756 (Judge et al., 2000). The Job Characteristics Scale (JCS) is considered a reliable research instrument. Reliability refers to the consistency and stability of the results obtained from a research instrument. In the case of the JCS, several studies have examined its reliability and have found it to be a reliable measure of job characteristics.

For example, a study by Fried and Ferris (1987) examined the reliability and validity of the JCS in a sample of 200 employees from various organisations. They found that the JCS had high internal consistency, indicating that the items in the scale were measuring the same construct. They also found that the JCS had high test-retest reliability, indicating that the results obtained from the scale were stable over time. Similarly, a study by Oldham and Hackman (1980) examined the reliability and validity

of the JCS in a sample of 658 employees from a variety of jobs. They found that the JCS had high internal consistency and test-retest reliability, indicating that the results obtained from the scale were consistent and stable over time.

In addition, the JCS has been used in numerous studies over the years, and its reliability has been consistently supported. Overall, the JCS is considered a reliable research instrument for measuring job characteristics and has been widely used in organizational research.

3.5.1.4 Perceived supervisor support.

The Perceived Supervisor Support Scale (PSSS) consisted of 13 items on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), which was previously used by Burns (2016). Higher scores indicate that participants perceived their supervisors as more supportive (Burns, 2016). Examples of items included in the questionnaire (Burns, 2016) were: “My manager fosters genuine and trusting relationships on the team” and “My manager supports my overall success and achievement”. A Cronbach Alpha of 0.94 was achieved, indicating the high reliability of the scale (Burns, 2016). The overall reliability test showed Cronbach’s Alpha of .94, which suggests that the expectancy component has a good internal consistency.

3.6 STATISTICAL ANALYSES

This section discusses descriptive statistics, inferential statistics, confirmatory factor analysis and structural equation model analysis.

3.6.1 Descriptive statistics

Descriptive statistics assist researchers in summarising data in an easily digestible format (Mishra et al., 2019). This study employed descriptive statistics such as means, frequencies, percentages, and standard deviations. The means and standard deviations for the responses to the Motivation, Job Characteristics, and supervisory variables were calculated using frequency tables and graphical illustrations. According to Kock (2011), the mean measures central tendency, yielding an arithmetic average of the score distribution. However, standard deviation indicates a distribution's spread or the variability of data (Sekaran & Bougie, 2016).

3.6.2 Inferential statistics

To test the research hypotheses, inferential statistics were used. This study used the Analysis of Variance (ANOVA), Regression Analysis and Structural Equation Modelling as inferential tests.

3.6.2.1 Analysis of Variance (ANOVA)

Comparisons between groups can be made in this type of analysis, such as those discovered through biographical data analysis when comparing findings regarding work motivation, for example (Amrhein et al., 2019). According to Amrhein et al. (2019), this analysis method has the distinct advantage of comparing mean scores across all groups simultaneously. According to Amrhein et al. (2019), the following are the foundations for ANOVA:

- The groups must be normally distributed.
- The groups must be independent.
- The population variance must be homogeneous.
- The population distribution must be normal.

To determine whether statistically significant differences exist in employee motivation across regions at PPECB, the researcher used Kruskal-Wallis, a one-way ANOVA (Non-parametric) test, because the data did not meet the normality assumptions as set out above.

3.6.2.2 Regression Analysis

According to Desboulets (2018), multiple regression reveals two things: how well a pair of variables explains a dependent variable and the direction and magnitude of each variable's influence on the dependent variable. According to Desboulets (2018), it is a technique for determining the effect of two or more independent variables on a single dependent variable. Multiple regression will determine the relationship between the three variables in this study (Brook & Arnold, 2018).

3.6.3 Reliability

Reliability refers to a technique's capacity to consistently produce the same result when applied to the same object (Bell & Waters, 2018). According to Fitzner (2007), reliability refers to a measurement instrument's dependability or the degree to which

the instrument consistently produces the same results after repeated trials. Four variables influence the reliability of observations or data: the researcher, the individual, the measuring instrument, and the research context.

The literature review's reliability is ensured using readily available sources, theories, and models. A valid and reliable instrument and a representative sample ensure the empirical study's reliability. The data collection techniques ensured participants' anonymity by creating a web link to access and complete the questionnaire. The data collected was used to evaluate the instrument's reliability and validity as developed and adjusted for the study's needs.

The Cronbach alpha (α) and McDonald's Omega (ω_1) were assessed to identify the internal reliability of the test items and should be as close to 1 as possible. However, an internal reliability value of .70 or higher is still deemed acceptable as a rule of thumb (Myburgh & Theron, 2014). Another indicator of internal reliability was the Average Variance Extracted (AVE) which measures the level of variance captured by a construct versus the level due to measurement error. Values above 0.70 are considered very good, whereas 0.5 is considered acceptable (Myburgh & Theron, 2014)

3.6.4 Confirmatory Factor Analysis (CFA)

Confirmatory Factor Analysis (CFA) was performed on all measurement scales and the overall model. Confirmatory factor analysis is used in the later stages of the research when the researcher can specify how variables might relate given some underlying psychological process (Tabachnick et al., 2013). The goal of CFA is to test the ability of the hypothesised measurement model to reproduce the observed correlation or covariance matrix. The CFA creates a series of fit indices, showing how close the measurement model fits the collected data with its parameter estimates. In simple terms, CFA confirms whether the proposed or hypothesised factor structure is present. Therefore, it is a tool to confirm or reject the measurement theory. Statistical tests are required in CFA to determine the adequacy of the model fit to the data (Moyo & Theron, 2011).

3.6.5 Structural Equation Modelling (SEM)

Structural Equation Modelling (SEM) was employed to test the overall fit of the structural model to the data and evaluate the level of support for the research hypotheses. SEM uses CFA as the estimation method. Both measurement and structural models are tested using CFA. The two sound quite similar; however, the measurement model deals with how equivalent observed variables operationalise the latent variable, whereas the structural model describes the relationships between the latent variables. Structural equation modelling aims to understand the patterns of correlation or covariance among a set of variables and to explain their variance in detail as captured by the structural model (Hooper et al., 2008). Therefore, the key purpose of structural equation modelling is to examine the model's overall goodness of fit to understand the degree to which the whole model is consistent with the empirical data.

3.7 ETHICAL CONSIDERATIONS

Ethics refers to the quality of research procedures concerning their adherence to professional, legal, and social obligations to the research participants. The branch of philosophy deals with morality (Connelly, 2014). As this research involves human participants, it is, therefore, necessary that the following ethical principles be adhered to:

3.7.1 Permission obtained

The researcher obtained permission from the PPECB management and the University Free State's General/Human Research Ethics Committee (UFS-HSD2022/1167/22) to conduct this research study.

3.7.2 Informed consent

According to Bell and Waters (2018), respondent participation should be based on informed consent and voluntary. The participation of all the respondents involved in the study was voluntary; that is, no respondent was forced to participate. The relevant information outlining the research was explained to all the respondents before the commencement of the survey; the questionnaires were in a language the respondents could understand, and the respondents signed the consent forms before the data

collection began. All the respondents were informed of their rights, which included the right to withdraw from the study at any stage if they wished to do so.

3.7.3 Confidentiality and anonymity

The respondent or the organisation could remain anonymous in terms of confidentiality (Saunders et al., 2012). No respondents' records, which could identify them, were made available unless they permitted others to see them. The researcher also complied with the Protection of Personal Information Act (POPIA).

3.7.4 No harm

According to Bell and Waters (2018), respondents should not be harmed in any way whatsoever. The researcher took responsibility and was aware of all potential harm to the respondents, such as harming their reputation, loss of income, or legal harm, and also took explicit actions to minimise the risks to the respondents during the research study.

3.7.5 Conflict of Interest

In research, conflicts of interest occur when professional objectivity is jeopardised, or perceived to be jeopardised, due to competing for financial, personal, or professional connections or personal values and positions (Bell & Waters, 2018). The researcher knew all affiliations, funding sources, and potential conflicts of interest must be declared. The employer-funded the researcher to study MBA at the University of the Free State. Throughout the study, the researcher maintained objectivity and impartiality.

3.8 CHAPTER SUMMARY

This chapter describes the research methodology, including the philosophy, research design sample size, the data collection method, and the data collection instruments. The statistical analysis of the related reliability and validity of instruments, followed by ethical considerations, was also outlined in this chapter.

CHAPTER 4: RESULTS

4.1 INTRODUCTION

This chapter deals with the data analysis, interpretation, and presentation of findings of the research study conducted at the Perishable Products Export Control Board (PPECB). Sample distribution and demographic characteristics were assessed. The researcher used the maximum likelihood with robust standard errors because the data did not follow the normal distribution; some were skewed to the left or right. Confirmatory Factor Analysis for each scale full measurement model, full structural model and One-Way ANOVA (Non-parametric) results were outlined in this chapter.

4.2 RESPONSE RATE

Table 4.1 shows the respondents' response rate per region/department. The response rate proportion consisted of the following respondents: 35% from Operations: Coastal, 25% from Operations: North, 21% from Operations: South, 6% from Human Capital, 4% from the Finance Department, 3% from ICT and COO: Business Optimisation I R & D respectively, 2% from CEO Office and only 1% did not respond. The Human Capital, Finance, ICT and COO: Business Optimisation I R & D are support services based in the Coastal region.

Table 4.1: Sample distribution

Department (s)	Counts	Percentage
CEO Office	5	2%
COO: Business Optimisation I R&D	7	3%
Finance	11	4%
Human Capital	17	6%
ICT	9	3%
Operations: Coastal	95	35%
Operations: North	70	25%
Operations: South	59	21%
Not Answered	2	1%
Total	275	100%

4.3 DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

This section provides key data on gender, region, education level, and employment status, years served in the organisation. Table 4.2 represents the gender profile of respondents. The study's respondents were 50% male, 47% female, and 3% indicated other.

4.3.1 Gender of Respondents

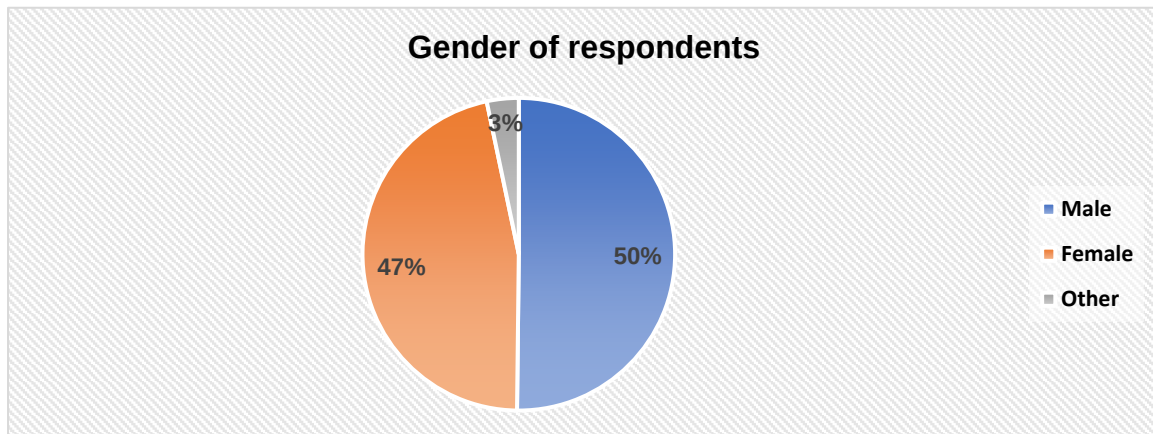


Figure 4.1: Gender of respondents

4.3.2 Education level of respondents

Figure 4.1 represents the education profile of the respondents; (119) 44% have national diplomas, (107) 40% have bachelor's degrees, (17) 6% have high school certificates, (15) 5% have postgraduate degrees, (10) 4 % have master's degrees, and only (2) 1% not answered. The results indicate that most respondents have a national diploma and a bachelor's degree, respectively.

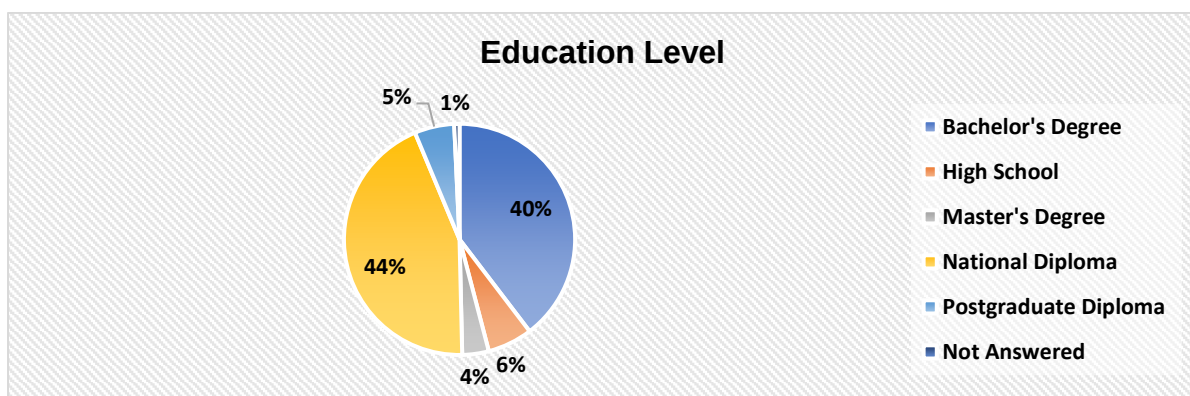


Figure 4.1: Education level of respondents

4.3.3 Employment status

Figure 4.2 shows that 72% of respondents were full-time employed, and 22% were on fixed-term employment contracts. The results indicate that most respondents were full-time employees. Furthermore, 5% of respondents and 1% were part-time employees. Limitations in generalising findings to part-time employees are therefore noted.

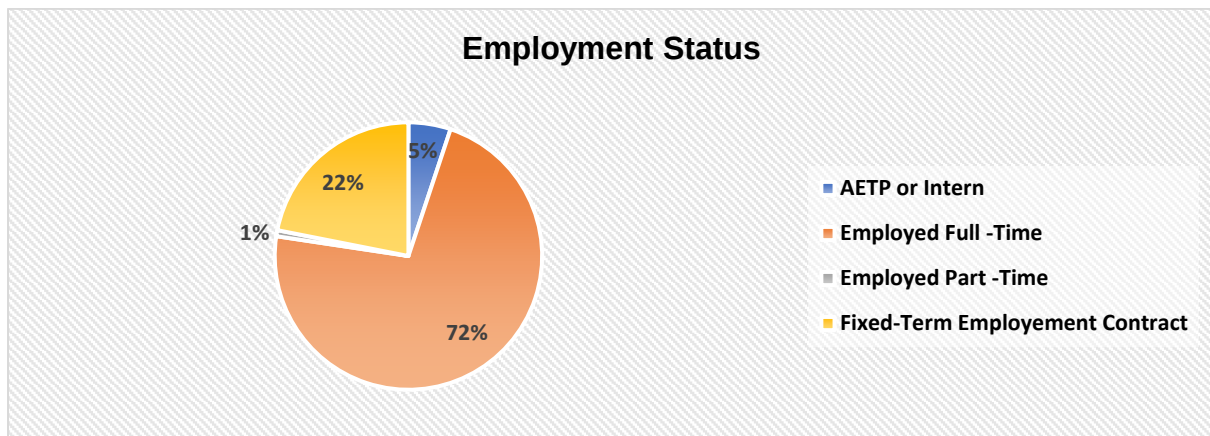


Figure 4.1: Employment status

4.3.4 Years served in the organisation

Figure 4.3 illustrates that 33 % of respondents have been with PPECB for over 10 years, 26 % have worked for PPECB for 2 – 5 years, 24% have worked for PPECB for 6 -10 years, and only 17% have been working for 0 -1 year. This indicates that most respondents have been working for PPECB for quite some time when they completed the survey.

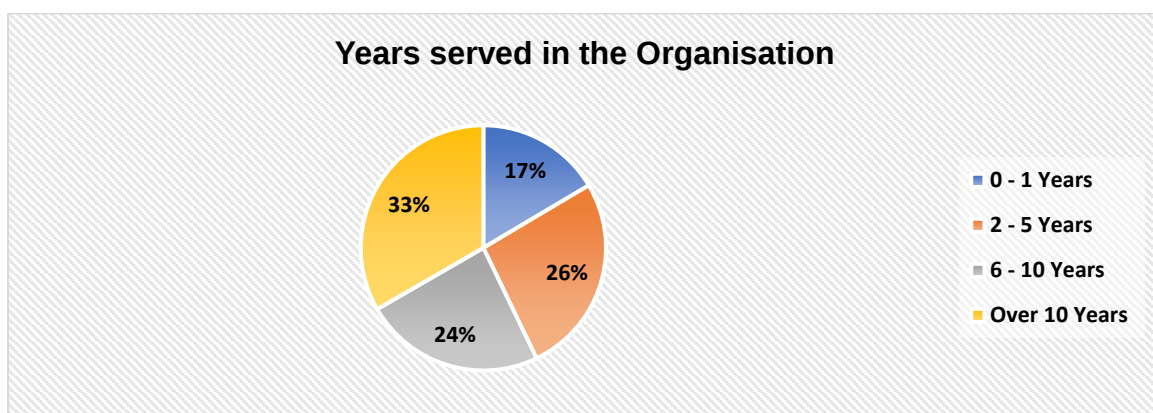


Figure 4.2: Years served in the organisation

4.4 RELIABILITY AND CONFIRMATORY FACTOR ANALYSIS (CFA) OF JOB CHARACTERISTICS

This section deals with the reliability and dimensionality of the Job Characteristics measurement. The Cronbach alpha (α) and McDonald's Omega (ω_1) were assessed to identify the internal reliability of the test items and should be as close to 1 as possible. However, an internal reliability value of .70 or higher is still deemed acceptable as a rule of thumb (Myburgh & Theron, 2014). Another indicator of internal reliability was the Average Variance Extracted (AVE) which measures the level of variance captured by a construct versus the level due to measurement error. Values above 0.70 are considered very good, whereas 0.50 is acceptable (Myburgh & Theron, 2014).

Table 4.2 shows that all items exceeded the cut-off point, indicating an acceptable level of internal consistency within the scales and seeming reliable (Myburgh & Theron, 2014).

Table 4.2: Reliability and Validity of Job Characteristics

Reliability indices					
Variable	α	ω_1	ω_2	ω_3	AVE
AUTOM	0.864	0.869	0.869	0.871	0.689
TASKV	0.904	0.904	0.904	0.903	0.759
TASKS	0.830	0.831	0.831	0.831	0.622
FBACK	0.827	0.836	0.836	0.844	0.630

The goodness of fit of the second-order confirmatory factor for Job Characteristics was evaluated by utilising CFA. Various fit indices with the following cut-off scores were evaluated (Table 4.3), including the RMSEA ($< .08$), the SRMR ($< .08$), the CFI ($> .90$), and the TLI ($> .90$) (Hair et al., 2006). The RMSEA value of 0.039 indicated a satisfactory fit, and the RMSEA p-value of 0.795 indicated that the model rejects the poor fit assumptions. All fit indices point to an acceptable model fit.

Table 4.3: The goodness of fit statistics of the second-factor order Job Characteristics Model

Type	SRMS	RMSEA	Lower	Upper	RMSEA p	CFI	TLI
Scaled	0.065	0.039	0.012	0.059	0.795	0.954	0.939

Table 4.5 shows that the beta coefficient of all items range between (0.548 to 0.881) above the prescribed cut-point of 0.5; this indicates that the items all accurately reflect their underlying constructs (Hair et al., 2006). Furthermore, the first-order factors also load satisfactorily onto their higher-order factor, confirming the theorised factor structure of the Job Characteristics Model. In this case, all relationships are statistically significant.

Table 4.4: Estimates of the Job Characteristics Model

Label	Latent	Observed	Estimate	SE	95% Confidence Intervals		β	z	p
					Lower	Upper			
p1	AUTOM	JC1	1.000	0.0000	1.000	1.00	0.734		
p2		JC2	1.202	0.1147	0.978	1.43	0.872	10.48	<.001
p3		JC3	1.200	0.0903	1.023	1.38	0.876	13.28	<.001
p4	TASKV	JC4	1.000	0.0000	1.000	1.00	0.881		
p5		JC5	1.046	0.0664	0.916	1.18	0.891	15.75	<.001
p6		JC6	0.976	0.0603	0.858	1.09	0.841	16.20	<.001
p7	TASKS	JC7	1.000	0.0000	1.000	1.00	0.684		
p8		JC8	1.131	0.1018	0.931	1.33	0.873	11.10	<.001
p9		JC9	1.043	0.0959	0.855	1.23	0.825	10.87	<.001
p10	FBACK	JC10	1.000	0.0000	1.000	1.00	0.749		
p11		JC11	1.165	0.1016	0.966	1.36	0.874	11.47	<.001
p12		JC12	1.072	0.1221	0.833	1.31	0.756	8.78	<.001
p13	JCM	AUTOM	1.000	0.0000	1.000	1.00	0.548		
p14		TASKV	1.659	0.2401	1.189	2.13	0.867	6.91	<.001
p15		TASKS	1.560	0.2641	1.042	2.08	0.881	5.91	<.001
p16		FBACK	0.864	0.1348	0.600	1.13	0.742	6.41	<.001

Figure 4.4 illustrates all standardised beta coefficients and factor loadings. A standardised beta coefficient compares the strength of the effect of each independent variable to the dependent variable (or items to their appropriate factors). All beta coefficient values range between 0.73 to 0.88, above the cut-off of 0.5, meaning they are satisfactory. The higher the value of the beta coefficient, the stronger the effect. It can therefore be established that the JCM was successfully operationalised.

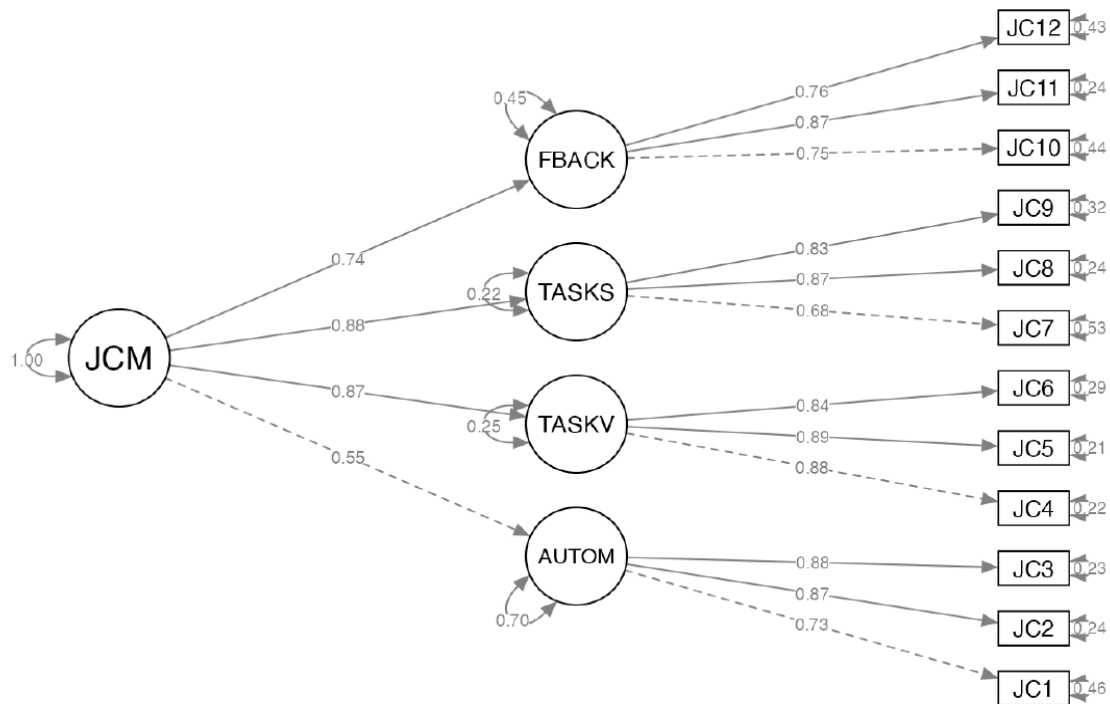


Figure 4.3: Second-order confirmatory factor analysis of Job Characteristics

4.5 RELIABILITY AND CONFIRMATORY FACTOR ANALYSIS (CFA) OF PERCEIVED SUPERVISORY SUPPORT.

Based on the reliability analysis results (Table 4.5), the scale for Perceived Supervisory Support showed good internal consistency with a Cronbach alpha (α) of 0.967 and McDonald's Omega (ω_1). The Average Variance Extracted (AVE) value of 0.696 also indicates good internal consistency (Myburgh & Theron, 2014).

Table 4.5: Reliability Indices of Supervisory Support

Variable	α	ω_1	ω_2	ω_3	AVE
SSUP	0.967	0.967	0.967	0.966	0.696

The goodness of fit for Perceived Supervisory Support was examined using CFA. Various fit indices with the following cut-off scores were evaluated, including the RMSEA ($< .08$), the SRMR ($< .08$), the CFI ($> .90$), and the TLI ($> .90$) (Hair et al.,

2006). The RMSEA value of 0.053 indicated a satisfactory fit, and the RMSEA p-value of 0.929 indicated that the model rejects the poor fit assumptions. All fit indices indicate an acceptable model fit, as seen in Table 4.7.

Table 4.6: The goodness of fit statistics for the Perceived Supervisory Support

Type	SRMS	RMSEA	Lower	Upper	RMSEA p	CFI	TLI
Scaled	0.037	0.053	0.036	0.070	0.367	0.929	0.915

Table 4.8 shows that the beta coefficient of all items ranges between 0.697 to 0.894, above the prescribed cut-off point of 0.5 (Hair et al., 2006). This indicates that the relationships are significant. In this case, all the items load statistically significantly onto the unidimensional factor.

Table 4.7: Estimates of the Perceived Supervisory Support Model

Label	Latent	Observed	Estimate	SE	95% Confidence Intervals		β	z	p
					Lower	Upper			
p1	SSUP	SS1	1.000	0.0000	1.000	1.000	0.807		
p2		SS2	1.045	0.0497	0.948	1.143	0.880	21.05	<.001
p3		SS3	1.047	0.0571	0.935	1.159	0.885	18.33	<.001
p4		SS4	1.071	0.0551	0.963	1.179	0.894	19.43	<.001
p5		SS5	1.061	0.0624	0.938	1.183	0.894	17.01	<.001
p6		SS6	0.853	0.0731	0.710	0.996	0.765	11.67	<.001
p7		SS7	1.019	0.0580	0.905	1.133	0.856	17.55	<.001
p8		SS8	1.099	0.0613	0.979	1.219	0.867	17.93	<.001
p9		SS9	1.107	0.0752	0.959	1.254	0.831	14.71	<.001
p10		SS10	1.117	0.0698	0.980	1.253	0.857	15.99	<.001
p11		SS11	0.965	0.0733	0.821	1.108	0.851	13.17	<.001
p12		SS12	0.863	0.0812	0.704	1.022	0.741	10.62	<.001
p13		SS13	0.911	0.1018	0.711	1.110	0.697	8.95	<.001

Figure 4.5 illustrates all standardised beta coefficients of Perceived Supervisory Support. All beta coefficient values ranged between 0.7 to 0.89, which was above the cut-off of 0.5, meaning they are satisfactory. It can therefore be concluded that PSS was successfully operationalised.

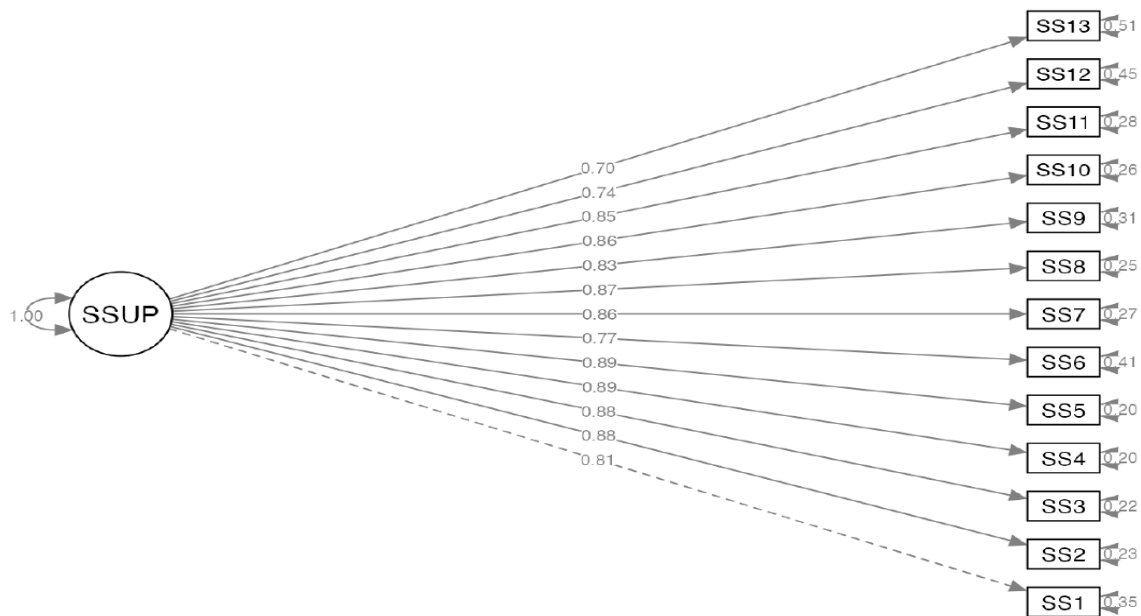


Figure 4.4: Confirmatory factor analysis of Perceived Supervisory Support

4.6 RELIABILITY AND CONFIRMATORY FACTOR ANALYSIS (CFA) OF WORK MOTIVATION.

Table 4.9 shows that: the identity regulation (IDREG) subscale had ($\alpha = 0.755$, $\omega_1 = 0.763$, and $AVE = 0.529$), the external regulation (EREG) subscale had ($\alpha = 0.743$, $\omega_1 = 0.747$, and $AVE = 0.496$), the motivation (AMOTI) subscale had ($\alpha = 0.545$, $\omega_1 = 0.562$, and $AVE = 0.313$), the intrinsic motivation (INTREG) had ($\alpha = 0.835$, $\omega_1 = 0.835$, and $AVE = 0.629$), the Integrated regulation (INTEGREG) had ($\alpha = 0.796$, $\omega_1 = 0.795$, and $AVE = 0.564$) and the introjected regulation (INTROREG) had ($\alpha = 0.810$, $\omega_1 = 0.819$, and $AVE = 0.602$) all factors except (AMOTI) exceeded the cut-off point, which was an indication of an acceptable level of internal consistency within the scales. (AMOTI) had ($\alpha = 0.545$ and $AVE = 0.313$) values, the Cronbach Alpha below 0.7 indicates that this specific scale has relatively low reliability, and the AVE below 0.5 could signal convergent validity issues (Myburgh & Theron, 2014). Respondents could find the item wording confusing (This is especially evident with the two items that start with “I do not know...”). The Amotivation subscale items seem unable to capture the underlying construct accurately. Negatively phrased items have been found to function aberrantly, producing artificial factors and lowering the internal consistency of scales. Thus, rather than improving validity, mixing positive and negative items may hurt measurement accuracy (Myburgh & Theron, 2014).

Table 4.8: Confirmatory factor analysis of Perceived Supervisory Support

Variable	α	ω_1	ω_2	ω_3	AVE
IDREG	0.755	0.763	0.763	0.754	0.529
EREG	0.743	0.747	0.747	0.749	0.496
AMOTI	0.545	0.562	0.562	0.562	0.313
INTREG	0.835	0.835	0.835	0.833	0.629
INTEGREG	0.796	0.795	0.795	0.795	0.564
INTROREG	0.810	0.819	0.819	0.826	0.602

The goodness of fit of the second-order confirmatory factor for Motivation was evaluated by utilising CFA. Various fit indices (Table 4.9) with the following cut-off scores were evaluated, including the RMSEA ($< .08$), the SRMR ($< .08$), the CFI ($> .90$), and the TLI ($> .90$) (Hair et al., 2006). The RMSEA value of 0.033 indicated a satisfactory fit, and the RMSEA p-value of 0.979 indicated that the model rejects the poor fit assumptions. Most fit indices indicate an acceptable model fit, except for the CFI (.891). This is likely due to the Amotivation subscale not operationalising as intended.

Table 4.9: The goodness of fit of the second-factor order for Motivation

Type	SRMS	RMSEA	Lower	Upper	RMSEA p	CFI	TLI
Scaled	0.072	0.033	0.015	0.047	0.979	0.891	0.871

Table 4.11 shows that the beta coefficients of all items are sufficiently strong, with all items being statistically significant indicators. Although some motivation items loaded adequately onto the first-order factor, the Amotivation subdimension did not have a statistically significant relationship with the second-order factor Motivation (See Figure 4.6). The low beta coefficient (.186) also indicates that this specific subdimension does not contribute much to the explained variance in the model. Its deletion is therefore warranted.

Table 4.10: Estimates of the Motivation Model

Label	Latent	Observed	Estimate	SE	95% Confidence Intervals		β	z	p
					Lower	Upper			
p1	IDREG	M1	1.0000	0.0000	1.000	1.000	0.4653		
p2		M7	1.6474	0.2344	1.188	2.107	0.8199	7.029	<.001
p3		M14	1.6029	0.2207	1.170	2.035	0.8917	7.262	<.001
p4	EREG	M2	1.0000	0.0000	1.000	1.000	0.6771		
p5		M9	1.1142	0.1529	0.814	1.414	0.7350	7.287	<.001
p6		M16	1.0747	0.1406	0.799	1.350	0.6986	7.643	<.001
p7	AMOTI	M3	1.0000	0.0000	1.000	1.000	0.3380		
p8		M12	1.8142	0.5422	0.752	2.877	0.6269	3.346	<.001
p9		M17	1.8193	0.5982	0.647	2.992	0.6783	3.041	0.002
p10	INTREG	M4	1.0000	0.0000	1.000	1.000	0.7282		
p11		M8	1.1512	0.0821	0.990	1.312	0.8435	14.020	<.001
p12		M15	0.9839	0.1034	0.781	1.186	0.8072	9.518	<.001
p13	INTEGREG	M5	1.0000	0.0000	1.000	1.000	0.7587		
p14		M10	0.9813	0.0775	0.830	1.133	0.7571	12.669	<.001
p15		M18	0.9981	0.0774	0.846	1.150	0.7387	12.889	<.001
p16	INTROREG	M6	1.0000	0.0000	1.000	1.000	0.7605		
p17		M11	1.0057	0.0670	0.874	1.137	0.8323	15.015	<.001
p18		M13	0.8597	0.0831	0.697	1.023	0.7320	10.345	<.001
p19	MOTIVATION	IDREG	1.0000	0.0000	1.000	1.000	0.9126		
p20		EREG	0.9202	0.1504	0.625	1.215	0.6581	6.117	<.001
p21		AMOTI	0.0182	0.0977	-0.173	0.210	0.0171	0.186	0.852
p22		INTREG	1.3371	0.1957	0.954	1.721	0.9185	6.833	<.001
p23		INTEGREG	1.5823	0.2526	1.087	2.077	0.9822	6.264	<.001
p24		INTROREG	1.4578	0.2212	1.024	1.891	0.8408	6.589	<.001

Figure 4.6 illustrates all standardised beta coefficients of the second-order model of motivation. A standardised beta coefficient indicates the strength of the relationship. Most beta coefficient values range between 0.68 to 0.83, above the cut-off of 0.5, meaning they are satisfactory. Again, the relationship between the motivation subdimension and the higher-order factor (motivation) is practically non-existent. Including this subdimension in the final analyses could create a lot of error variance in the overall measurement model. Therefore, it was decided to exclude it from the overall measurement model.

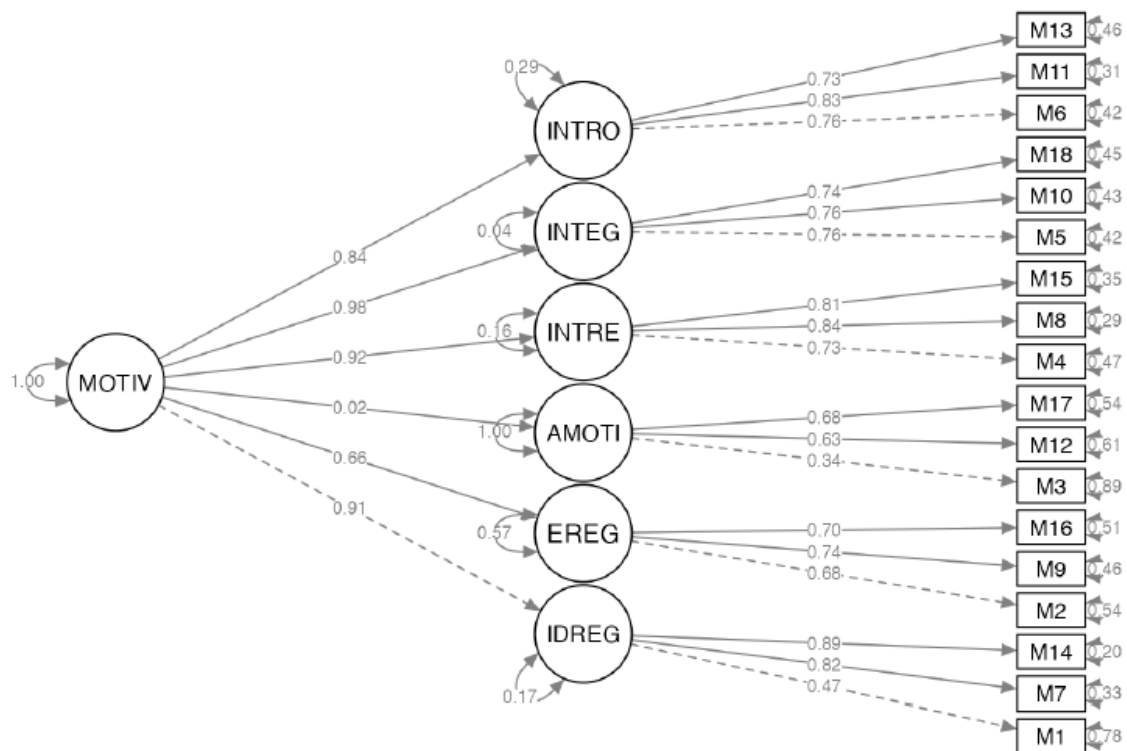


Figure 4.5: Second-order confirmatory factor analysis of Motivation

4.7 FULL MEASUREMENT MODEL

As part of the Structural Equation Modelling (SEM) process, two models were specified, namely the measurement model (representing how measured variables come together to represent constructs) and the structural model (showing how constructs are associated with each other). After evaluating the measurement properties of the individual scales, the overall measurement model comprising various variables was analysed. According to Myburgh and Theron (2014), it was important first to inspect the fit of the measurement model to determine whether the model was a valid representation of the constructs and their respective indicators. Only once a satisfactory fit was confirmed the fit of the structural model could be examined to determine how the constructs and their respective indicators in the measurement model relate to each other (Myburgh & Theron, 2014). Confirmatory Factor Analysis (CFA) was therefore conducted on the combined indicator-latent variable relationships to test the fit of the measurement model.

Large models with many different items can become increasingly difficult to analyse, and as such parcelling techniques have been suggested. Parcelling is a measurement practice commonly used with latent-variable analysis techniques such as Confirmatory Factor Analysis (CFA) and Structural Equation Modelling (SEM). Parcels are ‘aggregate-level indicators comprised of the sum (or average) of two or more items.’ Parcelling can alleviate numerous psychometric issues in individual items, such as lower reliability, lower commonality, a smaller ratio of common-to-unique factor variance, and a greater likelihood of distributional violations (Myburgh & Theron, 2014). Item indicators may also have fewer or larger equal intervals between scale points. Furthermore, it has also been found that parcels can stabilise parameter estimates and improve model fit (Myburgh & Theron, 2014).

For meaningfulness, task variety and task significance were combined as per the original conceptualisation of the JCM. For motivation, facet-representative parcelling (all items within a subdimension create a parcel) was used, resulting in subscales being indicated as indicator variables in the final tested model (Hair et al., 2006). For supervisor support, domain representative parcelling was used since there were no subdimensions to naturally form parcels with (parcel 1 consists of items 1, 4, 7, 10, 13, parcel 2 consists of items 2, 5, 8, 11 and finally parcel 3 items 3, 6, 9, 12). Individual items were used as indicators for autonomy and feedback, as shown in **Error! Reference source not found..**

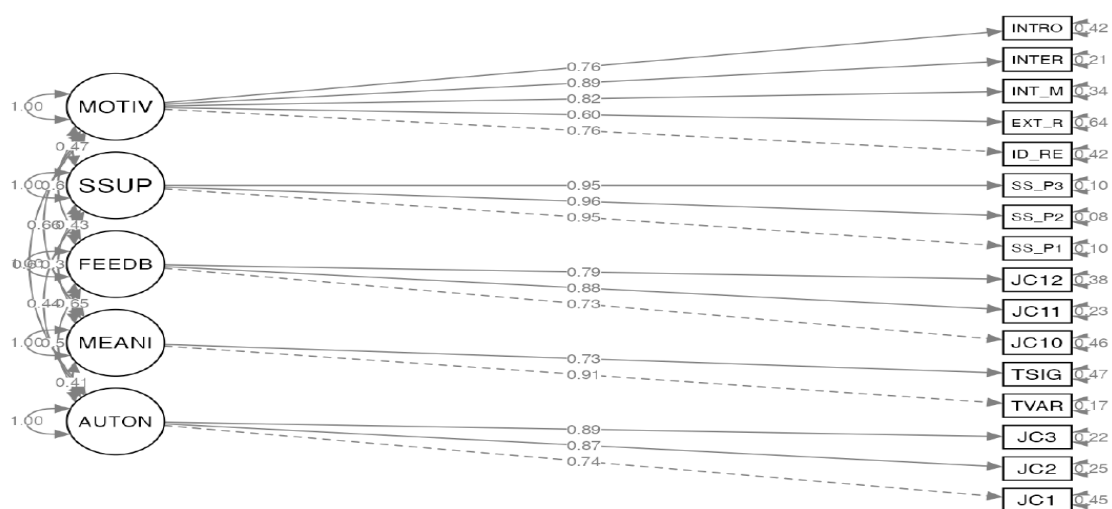


Figure 4.6: Full Measurement Model

Table 4.11 shows that all variables in the model met the critical cut-off points, indicating an acceptable level of internal consistency within the scales (Myburgh & Theron, 2014).

Table 4.11: Reliability indices

Variable	α	ω_1	ω_2	ω_3	AVE
AUTONOMY	0.868	0.872	0.872	0.875	0.696
MEANING	0.798	0.806	0.806	0.806	0.677
FEEDBACK	0.832	0.841	0.841	0.850	0.640
SSUP	0.967	0.968	0.968	0.968	0.909
MOTIVATION	0.876	0.880	0.880	0.878	0.598

Various fit indices with the following cut-off scores were evaluated, including the RMSEA (< .08), the SRMS (< .08), the CFI (> .90), and the TLI (> .90) (Hair et al., 2006). The RMSEA value of 0.035 indicated a good fit, and the RMSEA p-value of 0.916 indicated that the model rejects the poor fit assumptions. The SRMS value of .0053, the CFI value of 0.944, and the TLI value of .929 indicate a reasonably good fit, as seen in Table 4.13.

Table 4.12: The goodness of fit of the full measurement model

Type	SRMS	RMSEA	Lower	Upper	RMSEA p	CFI	TLI
Scaled	0.053	0.035	0.012	0.052	0.916	0.944	0.929

Table 4.14 shows that the beta coefficient of all items ranges between 0.6 to 0.95, which is good; this indicates that the relationships are statistically significant. In this case, most of the beta coefficients are quite strong, meaning that all the items load statistically onto their subdimension and that the subdimensions. The measurement model has no hierarchy of factors loading onto one another, as seen in Figure 4.7 (Myburgh & Theron, 2014).

Table 4.13: Estimates of the Full Measurement Model

Label	Latent	Observed	Estimate	SE	95% Confidence Intervals		β	z	p
					Lower	Upper			
p1	AUTONOMY	JC1	1.000	0.0000	1.000	1.000	0.744		
p2		JC2	1.158	0.1201	0.922	1.393	0.865	9.64	<.001
p3		JC3	1.194	0.0931	1.011	1.376	0.885	12.83	<.001
p4	MEANING	TVAR	1.000	0.0000	1.000	1.000	0.912		
p5		TSIG	0.814	0.0819	0.654	0.975	0.728	9.95	<.001
p6	FEEDBACK	JC10	1.000	0.0000	1.000	1.000	0.732		
p7		JC11	1.202	0.1248	0.957	1.447	0.876	9.63	<.001
p8		JC12	1.133	0.1464	0.846	1.420	0.786	7.74	<.001
p9	SSUP	SS_P1	1.000	0.0000	1.000	1.000	0.950		
p10		SS_P2	1.024	0.0427	0.941	1.108	0.962	23.98	<.001
p11		SS_P3	0.954	0.0447	0.867	1.042	0.947	21.35	<.001
p12	MOTIVATION	ID_REG	1.000	0.0000	1.000	1.000	0.763		
p13		EXT_REG	0.751	0.0827	0.588	0.913	0.600	9.08	<.001
p14		INT_MOT	0.982	0.0784	0.829	1.136	0.815	12.53	<.001
p15		INTER_REG	1.172	0.0808	1.013	1.330	0.888	14.49	<.001
p16		INTRO_REG	1.009	0.0860	0.840	1.178	0.763	11.73	<.001

4.8 FULL STRUCTURAL MODEL

After obtaining a satisfactory fit of the measurement model, the structural model was then evaluated. The integrated structural model of this study represents the hypothesised antecedents of motivation. The fit of the structural model examines the overarching substantive hypothesis and the various path-specific hypotheses to determine whether they are supported by the data (Hooper et al., 2008). The model's fit was tested through Structural Equation Modelling (SEM). Through SEM, the fit indices were evaluated, together with the significance and strength of the estimated parameters, and the variance accounted for in the endogenous variables (Weston & Gore Jr, 2006). Table 4.15 shows that all variables met the critical cut-off points, indicating an acceptable level of internal consistency within the scales (Weston & Gore Jr, 2006).

Table 4.14: Reliability indices

Variable	α	ω_1	ω_2	ω_3	AVE
AUTONOMY	0.868	0.872	0.872	0.875	0.696
MEANING	0.798	0.806	0.806	0.806	0.677
FEEDBACK	0.832	0.841	0.841	0.850	0.640
SSUP	0.967	0.968	0.968	0.968	0.909
MOTIVATION	0.876	0.880	0.880	0.878	0.598

Various fit indices with the following cut-off scores were evaluated, including the RMSEA ($< .08$), the SRMS ($< .08$), the CFI ($> .90$), and the TLI ($> .90$) (Hair et al., 2006). The RMSEA value of 0.035 indicated a good fit, and the RMSEA p-value of 0.916 indicated that the model rejects the poor fit assumptions. The SRMS value of 0.053, the CFI value of 0.944, and the TLI value of .929 all indicate a reasonably good fit, as seen in Table 4.16.

Table 4.15: The goodness of fit of the full structural model

Type	SRMS	RMSEA	Lower	Upper	RMSEA p	CFI	TLI
Scaled	0.053	0.035	0.012	0.052	0.916	0.944	0.929

Table 4.17 illustrates the parameter estimates of the pathways between variables. The dependent variable was motivation, while supervisory support, autonomy, meaning and feedback were all predictors. Autonomy had the strongest relationship with motivation. Meaningfulness of the task had a slightly strong relationship with motivation, and Feedback had a weak relationship and was not statistically significant ($p > 0.05$). Supervisory support had a weaker relationship, but a relationship nonetheless was still statistically significant.

Table 4.16: Estimates of the Predictors of Motivation

Label	Dep	Pred	Estimate	SE	95% Confidence Intervals		β	z	p
					Lower	Upper			
p17	MOTIVATION	SSUP	0.129	0.0629	0.00566	0.252	0.136	2.05	0.040
p18	MOTIVATION	AUTONOMY	0.280	0.0699	0.14267	0.416	0.310	4.00	<.001
p19	MOTIVATION	MEANING	0.360	0.0883	0.18685	0.533	0.387	4.08	<.001
p20	MOTIVATION	FEEDBACK	0.241	0.1504	-0.05341	0.536	0.162	1.60	0.109

Table 4.18 shows that the beta coefficient of all items ranges between 0.6 to 0.95, which is good. This indicates that the relationships are statistically significant. In this case, most of the beta coefficients are quite strong, meaning that all the items load statistically onto their subdimension and that the subdimensions also load statistically onto the higher order factor (Hair et al., 2006).

Table 4.17: Estimates of the Measurement model

Label	Latent	Observed	Estimate	SE	95% Confidence Intervals		β	z	p
					Lower	Upper			
p1	AUTONOMY	JC1	1.000	0.0000	1.000	1.000	0.744		
p2		JC2	1.158	0.1201	0.922	1.393	0.865	9.64	<.001
p3		JC3	1.194	0.0931	1.011	1.376	0.885	12.83	<.001
p4	MEANING	TVAR	1.000	0.0000	1.000	1.000	0.912		
p5		TSIG	0.814	0.0819	0.654	0.975	0.728	9.95	<.001
p6	FEEDBACK	JC10	1.000	0.0000	1.000	1.000	0.732		
p7		JC11	1.202	0.1248	0.957	1.447	0.876	9.63	<.001
p8		JC12	1.133	0.1464	0.846	1.420	0.786	7.74	<.001
p9	SSUP	SS_P1	1.000	0.0000	1.000	1.000	0.950		
p10		SS_P2	1.024	0.0427	0.941	1.108	0.962	23.98	<.001
p11		SS_P3	0.954	0.0447	0.867	1.042	0.947	21.35	<.001
p12	MOTIVATION	ID_REG	1.000	0.0000	1.000	1.000	0.763		
p13		EXT_REG	0.751	0.0827	0.588	0.913	0.600	9.08	<.001
p14		INT_MOT	0.982	0.0784	0.829	1.136	0.815	12.53	<.001
p15		INTER_REG	1.172	0.0808	1.013	1.330	0.888	14.49	<.001
p16		INTRO_REG	1.009	0.0860	0.840	1.178	0.763	11.73	<.001

Figure 4.8 shows that Autonomy ($\beta=0.31$) and meaningfulness ($\beta = 0.39$) had the strongest relationship with motivation, while supervisory support had a weak relationship ($\beta = 0.14$), but the relationship was still statistically significant, nonetheless. Feedback ($\beta = 0.16$) had a weak relationship and was not statistically

significant ($p > 0.05$); therefore, the null hypothesis cannot be rejected, suggesting that feedback does have a significant impact on motivation (Weston & Gore Jr, 2006).

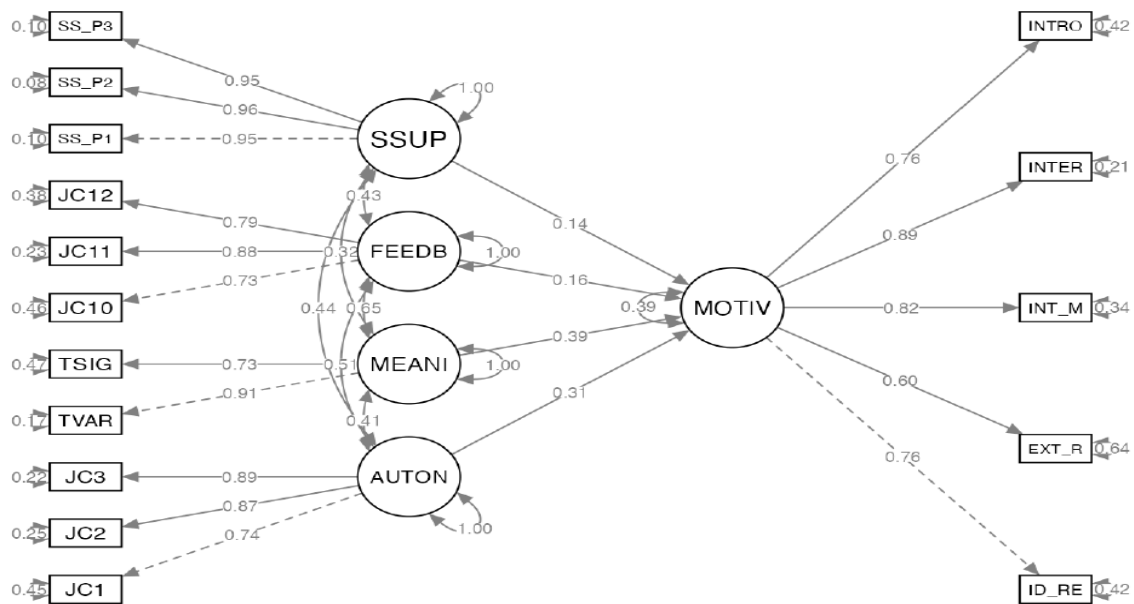


Figure 4.7: Full Structural Equation Model

4.8.1 Mean differences across the regions

Table 4.18 shows the mean score range between (88.0 – 96.4) and the mean range between (90.0 – 96.0), the standard deviation range between (10.1 – 14.2) and the minimum (61.0 – 87.0) and the maximum for motivation across the regions (106 – 122). The Human Capital, Finance, ICT and COO: Business Optimisation I R & D are support services based in the Coastal region.

Table 4.18: Mean differences across the regions

Descriptives		REGION	N	Missing	Mean	Median	SD	Minimum	Maximum
TOT_MOT	CEO Office		5	0	96.4	94.0	10.1	87.0	108
	COO: Business Optimization I R&D		7	0	94.4	92.0	12.9	80.0	112
	Finance		9	2	91.3	92.0	12.2	67.0	106
	Human Capital		16	1	90.6	92.0	12.2	70.0	112
	ICT		9	0	88.0	84.0	12.7	72.0	114
	Operations: Coastal		87	8	93.7	96.0	13.9	66.0	120
	Operations: North		68	2	92.4	91.0	14.1	61.0	122
	Operations: South		54	5	93.0	90.0	14.2	71.0	122

The scatterplot in Figure 4.9 displays how the data is distributed. The operations coastal, north and south had the most dots meaning there were many individuals in those regions. The Human Capital, Finance, ICT and COO: Business Optimisation I R & D had few dots meaning there very few individuals in those supporting department within the Coastal region. Fitted line plots are a special type of scatterplot that present assessment of the assumptions for anova. Thus, normality and homogeneity of variance.

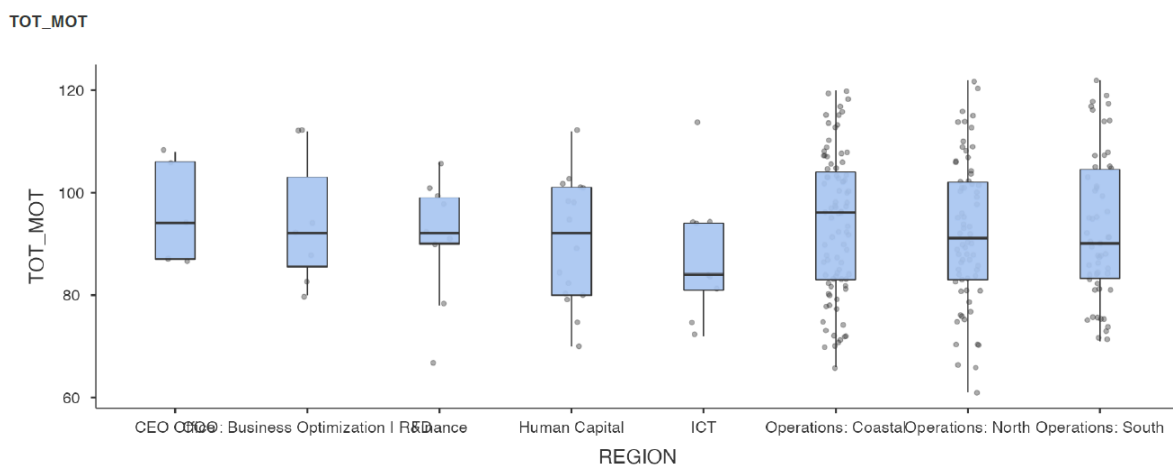


Figure 4.8: Scatterplots

4.8.2 One-way ANOVA (non-parametric)

The non-parametric Kruskal-Wallis test was used to investigate the differences across mean scores because the data did not meet the normality assumptions. Table 4.19 indicates the p-value is 0.90 if ($p > 0.5$), the null hypothesis cannot be rejected for hypothesis 6. This means there is no statistical difference between overall motivation scores across the different regions.

Table 4.19: Kruskal-Wallis

	χ^2	df	p	ϵ^2
TOT_MOT	2.77	7	0.905	0.0109

4.9 EVALUATION OF THE HYPOTHESISED FRAMEWORKS

Based on the Structural Equation Modelling (SEM) findings, the statistical significance of the four path-specific research hypotheses, as explained in Chapter 3, is discussed below. The results of these hypotheses are further elaborated on in Chapter 5, together with what this implies for the study and future research and organisational interventions.

Hypothesis 1: Overall model fit: There is a statistically significant relationship between autonomy, experiencing meaningfulness, feedback, supervisory support and motivation.

The reproduced covariance matrix is closely associated with the observed covariance matrix from the data.

The RMSEA value of 0.035 indicated a good fit, and the RMSEA p-value of 0.916 indicated that the model rejects the poor fit assumptions. The SRMS value of 0.053, the CFI value of 0.944, and the TLI value of .929 indicated a reasonably good fit.

Hypothesis 2: There is a statistically significant relationship between autonomy and motivation.

The parameter estimate for the relationship between autonomy and motivation was significant (beta coefficient = 0.310 and $p < 0.05$) in the hypothesised direction. The null hypothesis, $H_{02}: \beta_{11} = 0$, was therefore rejected in favour of the alternative hypothesis, $H_{a2}: \beta_{11} > 0$, confirming the existing theorised relationship.

Hypothesis 3: A statistically significant relationship exists between experiencing meaningfulness and motivation.

The parameter estimates for the relationship between experiencing meaningfulness and motivation were significant (SEM path beta coefficient = 0.387 and $p < 0.05$) in the hypothesised direction. Therefore, the null hypothesis, $H_{03}: \beta_{12} = 0$, was rejected in favour of the alternative hypothesis, $H_{a3}: \beta_{12} > 0$, confirming the theorised relationship to exist.

Hypothesis 4: There is a statistically significant relationship between feedback and motivation.

The data did not support the parameters between feedback and motivation and showed a non-significant relationship (SEM path beta coefficient= 0.162 and $p>0.05$). These results were not in favour of the theorised hypothesis. Consequently, the null hypothesis, $H_{04}: \beta_{13} = 0$, could not be rejected, dismissing the theorised relationship. Possible reasons for this contradiction will be discussed in Chapter 5.

Hypothesis 5: There is a statistically significant relationship between supervisory support and motivation.

The parameter estimate for the relationship between supervisory support and motivation was significant (SEM path beta coefficient = 0.136 and $p<0.05$) in the hypothesised direction. The null hypothesis, $H_{05}: \beta_{14} = 0$, was therefore rejected in favour of the alternative hypothesis, $H_{a5}: \beta_{14} > 0$, confirming the theorised relationship to exist.

From the results shown in Figure 4.7, all the predictors, except feedback, have a significant relationship with motivation.

Hypothesis 6: There are significant differences in motivation levels across regions/divisions at PPECB.

The secondary objective investigated differences in motivation levels across regions/divisions that were not supported by the data and showed a non-significant relationship ($p>0.05$). These results were not in favour of the theorised hypothesis. Consequently, the null hypothesis could not be rejected.

4.10 CONCLUSION

Before examining the measurement and structural model, evaluating each scale through item and dimensionality analysis was necessary. The scales were found to be satisfactory in measuring the specified latent variables. However, amotivation was removed before evaluating the final model, as it had difficulty capturing its underlying

psychological construct. After that, CFA was utilised to examine the fit of the full measurement model, which yielded satisfactory results.

Based on this, it was possible to continue with SEM to measure the fit of the structural model and examine the causal relationships between the specified latent variables. The results of the path-specific research hypotheses formulated in Chapter 3 were also discussed.

CHAPTER 5: DISCUSSION AND CONCLUSION

5.1 INTRODUCTION

This chapter discusses the main theoretical implications and recommendations of the study. It also highlights some of the limitations and future considerations.

5.2 THEORETICAL IMPLICATIONS

In the hypothesised direction, the relationship between autonomy and motivation was significant (beta coefficient = 0.310 and $p < 0.05$). The null hypothesis, $H_{02}: \beta_{11} = 0$, was therefore rejected in favour of the alternative hypothesis, $H_{a2}: \beta_{11} > 0$, confirming the existing theorised relationship. Previous research findings corroborate this relationship. According to Ryan and Deci (2017), employees with control and decision-making authority over their work are more likely to be motivated and committed to their job as they feel a higher sense of ownership and control over their tasks. Enacting new policies and guidelines that allow staff more control over the timing and sequence of work will likely increase employee job control. On the other hand, employees are more likely to experience decreased intrinsic motivation and increased work-related stress if they work in a low autonomy environment where there is little freedom in how to work on the task and little control over the process of executing the task (McCarthy et al., 2015). Several authors found that a lack of workplace autonomy diminishes personal performance and fosters a depersonalised mindset in workers that causes burnout (Battistelli et al., 2013). Instead, more autonomy is linked to better teamwork, personal development, stronger morale, and more responsibility at work, all of which lead to higher motivation levels (Galletta et al., 2019).

The relationship between experiencing meaningfulness and motivation was significant (SEM path beta coefficient = 0.387 and $p < 0.05$) in the hypothesised direction. Therefore, the null hypothesis, $H_{03}: \beta_{12} = 0$, was rejected in favour of the alternative hypothesis, $H_{a3}: \beta_{12} > 0$, confirming the theorised relationship to exist. Results of a previous study conducted by Galletta et al. (2019) support these findings of the current study. Humphrey et al. (2007) demonstrated that skill variety is positively related to motivation because it leads employees to experience a higher chance of performing a challenging and interesting job. Variation in work tasks positively correlates with job satisfaction even when there is a high-stress level (Humphrey et al., 2007). According

to past research investigations by Humphrey et al. (2007), experiences of meaning result in several important attitudinal and motivational outcomes. Meaningfulness has been linked to psychological well-being, better commitment, contentment, and enhanced job motivation while decreasing absenteeism (Humphrey et al., 2007). For instance, Gagné and Deci (2005) used path analysis to demonstrate the high correlation between meaningful work and motivation ($r = 0.73$) as an explanation. From a JD-R perspective, Rahman (2015) found that employees who comprehend the value and purpose of their work are more likely to be energised, motivated, and engaged. Meaningfulness is a psychological link between employees' feelings about their job and their motivation (Elnaga & Imran, 2013).

The data did not support the relationship between feedback and motivation but rather showed a non-significant relationship (SEM path beta coefficient= 0.162 and $p > 0.05$). These results were not in favour of the theorised hypothesis. Consequently, the null hypothesis, $H_{04}: \beta_{13} = 0$, could not be rejected, dismissing the theorised relationship. Theoretically, this makes sense since feedback likely acts more like a hygiene factor than a pure motivator, following Herzberg's motivational theory. This would then suggest that feedback on job tasks is expected from employees. Although the lack thereof would result in demotivation, the presence of such feedback might not be sufficient to motivate employees into action. However, these results do not agree with an earlier study conducted by Battistelli et al. (2013), who demonstrated that immediate feedback through one-minute objectives, one-minute compliments, and one-minute re-directs significantly adds to the performance of businesses. Employees feel better about themselves and generate better outcomes when given more information about how well they performed, what they should do, and how their manager feels about it (Lamprinou et al., 2021).

In the hypothesised direction, the relationship between supervisory support and motivation was significant (SEM path beta coefficient = 0.136 and $p < 0.05$). The null hypothesis, $H_{05}: \beta_{14} = 0$, was therefore rejected in favour of the alternative hypothesis, $H_{a5}: \beta_{14} > 0$, confirming the theorised relationship exists. These results are in support of earlier research findings. Encouraging and supportive leaders are seen as team players who drive employee enthusiasm, while less supportive leaders can lead to withdrawal-like behaviours (Elnaga & Imran, 2013). These withdrawal-like behaviours

may harm the welfare of the subdivision, other employees, and the welfare of the customers they are supposed to serve (Galletta et al., 2019). As supervisors live out the organisation's goals, mission, and values, which benefit the employee-employer relationship, support from the supervisor has been demonstrated to enhance employees' levels of trust in the company (Lamprinou et al., 2021). Supervisors can improve employee performance and motivation by bridging the gap between senior management and employees while achieving organisational goals (Galletta et al., 2019).

Finally, the secondary objective investigated differences in motivation levels across regions/divisions that were not supported by the data and showed a non-significant relationship ($p > 0.05$). These results were not in favour of the theorised hypothesis. Consequently, the null hypothesis could not be rejected. The study by Nohria et al. (2008) revealed variances in motivation between the public and private sectors, where it was discovered that the public sector had high motivation in an encouraging environment as compared to the private sector. A stimulating work atmosphere and social hierarchy make up this supportive workplace (Nohria et al. 2008). McCarthy et al. (2015) discuss employee motivation and emphasise how crucial it is for managers to recognise motivation as the core element of the business. The main finding from a study by Shaban et al. (2017) was that numerous public companies located in regions in Pakistan's had variations in job motivation. Similar differences across regions/divisions were therefore expected at PPECB. However, the findings did not corroborate this. It, therefore, suggests that the factors which impact employee motivation at PPECB are uniform and consistent across various regions and divisions (Buelens & Van den Broeck, 2007).

5.3 LIMITATIONS OF THE RESEARCH STUDY

The ex post facto design was employed in this study. The limits of this strategy were considered, even though it had benefits such as being affordable and time-saving. One of the main limitations of ex post facto design is that it does not allow the researcher to establish causality. Since the independent variable is not manipulated, it is difficult to determine whether a particular outcome is directly caused by the independent variable or other factors that were not measured or controlled. Another

limitation is that the researcher has little control over the quality and quantity of data available.

Data may be incomplete or unreliable, making it difficult to conclude from the results. Finally, ex post facto design is also limited in terms of generalisability. The results may only apply to a specific population or context and may not be generalisable to others.

The researcher was also unable to provide clear evidence of causal effects since the researcher could not manipulate the independent variables. However, SEM allows theorised causal relationships to be tested, providing some support for causal relationships to exist.

This study also made use of the non-probability convenience sampling method. This limited generalisability of results since the participants may not have been fully representative of the target population due to the researcher using a non-randomised sample (Babbie, 2010).

Another limitation was the interpretation of the questionnaire which was distributed. As a result of the questionnaire only being available in English, which was most likely not each participant's first language, coupled with a lack of opportunity for the researcher to explain the content of the survey to each participant individually, it was not easy to ensure that each statement was interpreted correctly. Furthermore, ensuring participants answered honestly and thoroughly was difficult since they could complete it independently without supervision. It was, therefore, critical that the researcher informed all participants of the importance of answering truthfully and to the best of their abilities. Some statistical techniques evaluated the consistency with which participants responded to similar question items. There were no clear indications of dishonesty or deliberate distortion of responses.

Since this study relied on self-report questionnaires, another limitation was response bias. Response bias describes a variety of conscious or unconscious biases that might affect survey replies and make the data less valuable because they are seen as erroneous (Moormann et al., 2021). Also known as social desirability, response bias describes how individuals' replies are modified to make them seem more appealing to others (Moormann et al., 2021). Since workers could wish to appear proactive to impress their employer, this may have impacted the validity of this research's results.

Since the replies were kept anonymous, informing the participants that only the researcher and supervisor could access them was crucial to reduce possible response bias.

5.4 RECOMMENDATIONS FOR FUTURE RESEARCH

A convenience sampling method was used for the current study and is considered a limitation. For this reason, another sampling method that provides the study with a more representative sample could yield different findings that are more generalisable to the population and other agricultural service agencies in South Africa. One such recommendation would be to utilise a stratified random sample that will likely introduce less bias and ensure a greater representation across the various groups within the population.

To improve issues of generalisability, a bigger sample size can also be used, and employees across all departments and even across more than one organisation can be used to represent agricultural service agencies in South Africa better.

Along with the quantitative data-gathering method, a qualitative method can also be utilised to generate richer findings and enhance the quality of responses. Mixed method approaches might therefore be better suited to tap into the nuances of employee motivation. Data gathering methods adapted to other languages, not just English, can be employed to improve the accuracy of the responses.

Further research might benefit from including additional variables when investigating employee motivation to give recognition to the complexity surrounding employee behaviour. Specific attention should be given to the mediating variables in the process since motivation is likely a complex phenomenon relying on various interdependent factors between the individual and their work environment.

5.5 PRACTICAL CONSIDERATION/MANAGERIAL IMPLICATIONS

Managers and supervisors should collaborate with the appropriate organisational leaders and employee representatives to create and execute changes if it is possible to enhance job characteristics in a way that better supports the motivation factors discussed in this study. Extending the responsibilities of a job to require more

knowledge and skill sets, rotating workers around positions to broaden their skill sets, or enriching employment by giving workers more autonomy, accountability, and responsibility are all improvements.

Managers are encouraged to assign employees to work tasks that they find interesting and meaningful, allowing them to perform various tasks that require a wide range of knowledge, skills, and abilities. Structure assignments to enable employees to complete work from beginning to end or participate in every project stage.

Supervisors should set clear goals and expectations for their employees to help them understand what is expected of them and how their work contributes to the organisation's success. This clarity can motivate employees to work harder and achieve their goals. Supervisors should provide timely and specific feedback to let employees know when they've done well and where to improve. Supervisors should provide opportunities for employees to learn and grow within their roles. This can include training, mentoring, or development programs. Supervisors should recognise and reward employees for their hard work, to drive motivation and encourage employees to continue performing at a high level.

Furthermore, giving employees autonomy in areas such as scheduling work and determining how and when to do job tasks is recommended. This could include seeking employees' input on strategies for effectively completing work, allowing employees to be involved in and make decisions about their work processes, and generally, having more control over their jobs. Structure and direction are important, but an excess of either can be counterproductive. Jobs composed of tasks that are overly constricted by rules and procedures or require supervisor authority for small variations may reduce employee motivation and result in suboptimal performance levels.

5.6 CONCLUSION

This study aimed to identify predictors of employee motivation at the Perishable Products Export Control Board (PPECB). The target population were full-time and temporary PPECB employees, and a non-probability sample was used to collect data. Psychometric properties of the measurement scales were examined through item and factor analysis, and Structural Equation Modelling (SEM) was used to evaluate the

structural model. Results showed that autonomy, experiencing meaningfulness, and supervisory support statistically affect employee motivation, while feedback did not significantly affect employee motivation. The study recommends that job characteristics be considered in the planning and evaluation of employees' jobs and that managers are trained to be more supportive of staff to improve motivation.

REFERENCES

- Abou Elnaga, A. (2012). The Impact of perception on Work behavior. *Kuwait Chapter of the Arabian Journal of Business and Management Review*, 2(2), 56.
- Adeola, M. M., & Adebisi, S. O. (2016). Employee motivation, recruitment practices and banks performance in Nigeria. *International Journal of Entrepreneurial Knowledge*, 4(2).
- Adu-Gyamfi, R., Kuada, J., & Asongu, S. A. (2022). An Integrative Framework for Formal and Informal Entrepreneurship Research in Africa. *Journal of African Business*, 1-21.
- Akinwale, O. E., & George, O. J. (2020). Work environment and job satisfaction among nurses in government tertiary hospitals in Nigeria. *Rajagiri Management Journal*, 14(1), 71-92.
- Al-Douri, J. A., Aldabbagh, I., Mohammad, M. M., & Qawasmeh, R. (2020). The impact of Islamic work ethics on job performance with mediating role of intrinsic motivation. *Academy of Strategic Management Journal*, 19(2), 1-11.
- Allil, K., Gharib, M., Durrah, O., & Alsatouf, M. (2021). How core job characteristics impacts employees' creativity? *Calitatea*, 22(180), 116-119.
- Almaskari, M. S. N. S., & Marni, N. B. (2020). Human Resource Management Role in Improving Employees' Performance in the United Arab Emirates' Health Sector. *Journal of Southwest Jiaotong University*, 55(3).
- Altheeb, S. A. (2020). Leadership Style and Employee Motivation: A Study of Saudi Arabian Work Environment. *Journal of Educational Psychology-Propositos y Representaciones*, 8.
- Amrhein, V., Trafimow, D., & Greenland, S. (2019). Inferential statistics as descriptive statistics: There is no replication crisis if we don't expect replication. *The American Statistician*, 73(sup1), 262-270.
- Ann, S., & Blum, S. C. (2020). Motivating senior employees in the hospitality industry. *International Journal of Contemporary Hospitality Management*, 32(1), 324-346.
- Aruma, E., & Hanachor, M. E. (2017). Abraham Maslow's hierarchy of needs and assessment of needs in community development. *International Journal of Development and Economic Sustainability*, 5(7), 15-27.
- Asante Boadi, E., He, Z., Bosompem, J., Opata, C. N., & Boadi, E. K. (2020). Employees' perception of corporate social responsibility (CSR) and its effects on internal outcomes. *The Service Industries Journal*, 40(9-10), 611-632.
- Azman, I., Ajis, M. N. e., Dollah, N. F., & Boerhannoeddin, A. (2009). Relationship between supervisor's role and job performance in the workplace training program. *Analee Stiintifice Ale UNIVERSITĂȚII „ALEXANDRU IOAN CUZA” DIN IASI Tomul LVI StiinŃe Economice*, 2009, 1-15.
- Babbie, E. (2010). Research design. *The practice of social research*, 12.

- Bakar, N. A., Alsmadi, M. S., Ali, Z., Shuaibu, A., & Solahudin, M. H. (2022). Influence of Students' Motivation on Academic Achievement Among Undergraduate Students in Malaysia. *Journal of Positive School Psychology*, 6(2), 3443-3450.
- Battistelli, A., Galletta, M., Portoghese, I., & Vandenberghe, C. (2013). Mindsets of commitment and motivation: Interrelationships and contribution to work outcomes. *The Journal of psychology*, 147(1), 17-48.
- Bell, J., & Waters, S. (2018). *Ebook: doing your research project: a guide for first-time researchers*. McGraw-hill education (UK).
- Black, S., & Allen, J. D. (2018). Part 7: Rewards, motivation, and performance. *The Reference Librarian*, 59(4), 205-218.
- Bloomfield, J., & Fisher, M. J. (2019). Quantitative research design. *Journal of the Australasian Rehabilitation Nurses Association*, 22(2), 27-30.
- Brink, H., Van der Walter, C., & Van Rensburg, G. (Eds.). (2018). *Fundamentals of Research Methodology for Health Care Professionals* (4 ed.). Juta.
- Brook, R. J., & Arnold, G. C. (2018). *Applied regression analysis and experimental design*. CRC Press.
- Buelens, M., & Van den Broeck, H. (2007). An analysis of differences in work motivation between public and private sector organizations. *Public administration review*, 67(1), 65-74.
- Burns, K. L. (2016). *Perceived organizational support and perceived supervisor support as antecedents of work engagement*. San José State University.
- Cheng, C.-Y., Jiang, D.-Y., Cheng, B.-S., Riley, J. H., & Jen, C.-K. (2015). When do subordinates commit to their supervisors? Different effects of perceived supervisor integrity and support on Chinese and American employees. *The Leadership Quarterly*, 26(1), 81-97.
- Chng, S., Lu, H. Y., Kumar, A., & Yau, D. (2022). Hacker types, motivations and strategies: A comprehensive framework. *Computers in Human Behavior Reports*, 5, 100167.
- Connelly, L. M. (2014). Ethical considerations in research studies. *Medsurg Nursing*, 23(1), 54-56.
- Creswell, J. W. (2014). *Research design : qualitative, quantitative, and mixed methods approaches*. Sage publication.
- Davies, C., & Fisher, M. (2018). Understanding research paradigms. *Journal of the Australasian Rehabilitation Nurses Association*, 21(3), 21-25.
- De Sousa Sabbagha, M., Ledimo, O., & Martins, N. (2018). Predicting staff retention from employee motivation and job satisfaction. *Journal of Psychology in Africa*, 28(2), 136-140.
- Desboulets, L. D. D. (2018). Local Linear Dependence Measure for Functionally Correlated Variables.
- Dysvik, A., Kuvaas, B., & Buch, R. (2014). Perceived training intensity and work effort: The moderating role of perceived supervisor support. *European Journal of Work and Organizational Psychology*, 23(5), 729-738.

- Easterby-Smith, M., Jaspersen, L. J., Thorpe, R., & Valizade, D. (2021). *Management and business research*. Sage.
- Ellinger, A. D. (2013). Supportive supervisors and managerial coaching: Exploring their intersections.
- Elnaga, A., & Imran, A. (2013). The effect of training on employee performance. *European Journal of Business and Management*, 5(4), 137-147.
- Fan, L., Javed, M. F., & Rao, A. Job characteristics Model and job Satisfaction.
- Findsrud, R., Tronvoll, B., & Edvardsson, B. (2018). Motivation: The missing driver for theorizing about resource integration. *Marketing Theory*, 18(4), 493-519.
- Fitzner, K. (2007). Reliability and validity a quick review. *The Diabetes Educator*, 33(5), 775-780.
- Fried, Y., & Ferris, G. R. (1987). The validity of the job characteristics model: A review and meta-analysis. *Personnel psychology*, 40(2), 287-322.
- Gagné, M., & Deci, E. L. (2005). Self-determination theory and work motivation. *Journal of Organizational behavior*, 26(4), 331-362.
- Galletta, M., Vandenberghe, C., Portoghese, I., Allegrini, E., Saiani, L., & Battistelli, A. (2019). A cross-lagged analysis of the relationships among workgroup commitment, motivation and proactive work behaviour in nurses. *Journal of nursing management*, 27(6), 1148-1158.
- Ganta, V. C. (2014). Motivation in the workplace to improve the employee performance. *International Journal of Engineering Technology, Management and Applied Sciences*, 2(6), 221-230.
- Goball, S., Hassan, M., Goball, S., Baker, R., Yunus, W., & Norazman, I. (2018). The effect of training on job satisfaction: A review paper. The International Conference of Social Sciences and Humanities, University Technology Malaysia,
- Goddard, W., & Melville, S. (2004). *Research methodology: An introduction*. Juta and Company Ltd.
- Good, V., Hughes, D. E., Kirca, A. H., & McGrath, S. (2022). A self-determination theory-based meta-analysis on the differential effects of intrinsic and extrinsic motivation on salesperson performance. *Journal of the Academy of Marketing Science*, 50(3), 586-614.
- Gottert, A., McClair, T. L., Hossain, S., Dakouo, S. P., Abuya, T., Kirk, K., Bellows, B., Agarwal, S., Kennedy, S., & Warren, C. (2021). Development and validation of a multi-dimensional scale to assess community health worker motivation. *Journal of global health*, 11.
- Grigorescu, D. (2020). Curiosity, intrinsic motivation and the pleasure of knowledge. *Journal of Educational Sciences & Psychology*, 10(1).
- Hooper, D., Coughlan, J., & Mullen, M. (2008). Evaluating model fit: a synthesis of the structural equation modelling literature. 7th European Conference on research methodology for business and management studies,
- Houghton, C., Casey, D., Shaw, D., & Murphy, K. (2013). Rigour in qualitative case-study research. *Nurse researcher*, 20(4).

- Humphrey, S. E., Nahrgang, J. D., & Morgeson, F. P. (2007). Integrating motivational, social, and contextual work design features: a meta-analytic summary and theoretical extension of the work design literature. *Journal of applied psychology*, 92(5), 1332.
- Judge, T. A., Bono, J. E., & Locke, E. A. (2000). Personality and job satisfaction: the mediating role of job characteristics. *Journal of applied psychology*, 85(2), 237.
- Kabuka, N. O. (2019). *Assessment on Factors Influencing Employees' Motivation* The Open University of Tanzania].
- Kaushik, V., & Walsh, C. A. (2019). Pragmatism as a research paradigm and its implications for social work research. *Social sciences*, 8(9), 255.
- Kock, N. (2011). Using WarpPLS in e-collaboration studies: Descriptive statistics, settings, and key analysis results. *International Journal of e-Collaboration (IJeC)*, 7(2), 1-18.
- Kok, M. C., Vallières, F., Tulloch, O., Kumar, M. B., Kea, A. Z., Karuga, R., Ndimba, S. D., Chikaphupha, K., Theobald, S., & Taegtmeyer, M. (2018). Does supportive supervision enhance community health worker motivation? A mixed-methods study in four African countries. *Health policy and planning*, 33(9), 988-998.
- Koster, D. (2017). Motivation in the workplace.
- Kottke, J. L., & Sharafinski, C. E. (1988). Measuring perceived supervisory and organizational support. *Educational and psychological Measurement*, 48(4), 1075-1079.
- Kuvaas, B., Dysvik, A., & Buch, R. (2014). Antecedents and employee outcomes of line managers' perceptions of enabling HR practices. *Journal of Management Studies*, 51(6), 845-868.
- Lamprinou, V. D. I., Tasoulis, K., & Kravariti, F. (2021). The impact of servant leadership and perceived organisational and supervisor support on job burnout and work-life balance in the era of teleworking and COVID-19. *Leadership & Organization Development Journal*, 42(7), 1071-1088.
- Lehmann-Willenbrock, N., Rogelberg, S. G., Allen, J. A., & Kello, J. E. (2017). The critical importance of meetings to leader and organizational success: Evidence-based insights and implications for key stakeholders. *Organizational Dynamics*, 47(1), 32.
- Lewis, S. (2015). Qualitative inquiry and research design: Choosing among five approaches. *Health promotion practice*, 16(4), 473-475.
- Li, F., Jiao, R., Liu, D., & Yin, H. (2021). The search for and presence of calling: Latent profiles and relationships with work meaning and job satisfaction. *Frontiers in psychology*, 12, 633351.
- Liere-Netheler, K. (2017). Analysis of Adoption Processes in Industry 4.0. STPIS@ CAiSE,
- Lunenburg, F. C. (2011). Goal-setting theory of motivation. *International journal of management, business, and administration*, 15(1), 1-6.
- Malik, M. E., & Naeem, B. (2013). Towards understanding controversy on Herzberg theory of motivation. *World Applied Sciences Journal*, 24(8), 1031-1036.

- Maslow, A., & Lewis, K. (1987). Maslow's hierarchy of needs. *Salenger Incorporated*, 14(17), 987-990.
- McCarthy, J. M., Treadway, M. T., & Blanchard, J. J. (2015). Motivation and effort in individuals with social anhedonia. *Schizophrenia research*, 165(1), 70-75.
- McGloin, S. (2008). The trustworthiness of case study methodology. *Nurse researcher*, 16(1).
- Mey, G. (2022). Qualitative methodology. In *International Handbook of Psychology Learning and Teaching* (pp. 1-26). Springer.
- Mishra, P., Pandey, C. M., Singh, U., Gupta, A., Sahu, C., & Keshri, A. (2019). Descriptive statistics and normality tests for statistical data. *Annals of cardiac anaesthesia*, 22(1), 67.
- Mishra, S., & Gupta, B. (2009). Work place motivators & employees' satisfaction: a study of retail sector in India. *Indian Journal of Industrial Relations*, 509-519.
- Moormann, L., van de Mortel-Fronczak, J., Fokkink, W., Maessen, P., & Rooda, J. (2021). Supervisory control synthesis for large-scale systems with isomorphisms. *Control Engineering Practice*, 115, 104902.
- Moyo, S., & Theron, C. (2011). A preliminary factor analytic investigation into the firstorder structure of the Fifteen Plus (15FQ+) on a sample of Black south african managers. *SA Journal of Industrial Psychology*, 37(1), 934-956.
- Myburgh, D., & Theron, C. (2014). The development and evaluation of a generic individual non-managerial performance measure. *Management Dynamics: Journal of the Southern African Institute for Management Scientists*, 23(1), 26-57.
- Nohria, N., Groysberg, B., & Lee, L.-E. (2008). Employee Motivation. *harvard business review*, 1.
- Nolen, S. B. (2020). A situative turn in the conversation on motivation theories. *Contemporary Educational Psychology*, 61, 101866.
- Oerlemans, W. G., & Bakker, A. B. (2018). Motivating job characteristics and happiness at work: A multilevel perspective. *Journal of applied psychology*, 103(11), 1230.
- Omollo, P. A., & Oloko, M. (2015). Effect of motivation on employee performance of commercial banks in Kenya: A case study of Kenya Commercial Bank in Migori County. *International journal of human resource studies*, 5(2), 87-103.
- Otara, A. (2011). Perception: A guide for managers and leaders.
- Peters, R. S. (2015). *The concept of motivation*. Routledge.
- Putra, A. S., Waruwu, H., Asbari, M., Novitasari, D., & Purwanto, A. (2020). Leadership in the Innovation Era: Transactional or Transformational Style? *International Journal of Social and Management Studies*, 1(1), 89-94.
- Querol, M. P., Seppänen, L., & Jackson Filho, J. M. (2015). Understanding the motivational perspectives of sustainability: a case of biogas production. *Production*, 25, 266-277.
- Ragulina, Y. V., Alekseev, A. N., Strizhkina, I. V., & Tumanov, A. I. (2019). Methodology of criterial evaluation of consequences of the industrial revolution

- of the 21st century. *Industry 4.0: Industrial Revolution of the 21st Century*, 235-244.
- Rahman, Khan, M. A., & Iqbal, N. (2018). Motivations and barriers to purchasing online: understanding consumer responses. *South Asian Journal of Business Studies*, 7(1), 111-128.
- Rahman, W. (2015). Interrelationship of employee development, organizational commitment, job satisfaction and their impact on turnover intentions. *City University Research Journal*, 5(2).
- Ramus, C. A., & Steger, U. (2000). The roles of supervisory support behaviors and environmental policy in employee "Ecoinitiatives" at leading-edge European companies. *Academy of Management journal*, 43(4), 605-626.
- Rinjit, K. (2020). Research methodology. In.
- Ryan, J. C. (2017). Reflections on the conceptualization and operationalization of a set-theoretic approach to employee motivation and performance research. *Journal of Innovation & Knowledge*, 2(1), 45-47.
- Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. Guilford Publications.
- Saunders, M., Lewis, P., & Thornhill, A. (2012). Research Methods for Business Students, 6th edn, sn. *Essex: Pearson Education Limited*.
- Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach*. John Wiley & Sons.
- Shaban, O. S., Al-Zubi, Z., Ali, N., & Alqotaish, A. (2017). The effect of low morale and motivation on employees' productivity & competitiveness in Jordanian industrial companies. *International Business Research*, 10(7), 1-7.
- Shahzadi, I., Javed, A., Pirzada, S. S., Nasreen, S., & Khanam, F. (2014). Impact of employee motivation on employee performance. *European Journal of Business and Management*, 6(23), 159-166.
- Sheehan, R. B., Herring, M. P., & Campbell, M. J. (2018). Associations between motivation and mental health in sport: A test of the hierarchical model of intrinsic and extrinsic motivation. *Frontiers in psychology*, 9, 707.
- Smith, G. P., & Williams, T. M. (2021). Harnessing motivation for sustainable practice change: From passive receivers to active co-creators. *Australian & New Zealand Journal of Psychiatry*, 55(6), 569-576.
- Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of business research*, 104, 333-339.
- Stella Rae, M. (2019). English immersion: Student motivation and course outcomes.
- Tabachnick, B. G., Fidell, L. S., & Ullman, J. B. (2013). *Using multivariate statistics* (Vol. 6). Pearson Boston, MA.
- Tan, S. K., & Rajah, S. (2019). Evoking work motivation in industry 4.0. *Sage open*, 9(4), 2158244019885132.
- Tremblay, M. A., Blanchard, C. M., Taylor, S., Pelletier, L. G., & Villeneuve, M. (2010). " Work Extrinsic and Intrinsic Motivation Scale: Its value for organizational psychology research": Correction to Tremblay et al (2009).

- Tuzun, I. K., & Kalemci, R. A. (2012). Organizational and supervisory support in relation to employee turnover intentions. *Journal of Managerial Psychology*, 27(5), 518-534.
- ur Rahman, S., Khan, M. A., & Iqbal, N. (2018). Motivations and barriers to purchasing online: understanding consumer responses. *South Asian Journal of Business Studies*, 7(1), 111-128.
- Vallerand, R. J. (2021). Reflections on the legacy of self-determination theory. *Motivation Science*, 7(2), 115.
- Weathington, B. L., Cunningham, C. J., & Pittenger, D. J. (2012). *Understanding business research*. John Wiley & Sons.
- Weston, R., & Gore Jr, P. A. (2006). A brief guide to structural equation modeling. *The counseling psychologist*, 34(5), 719-751.
- Yeboah, M. A., & Abdulai, A. (2016). Evidence of Herzberg's motivation–hygiene theory in small and medium enterprises through the lens of a three-star hotel. *International Journal of Research–GRANTHAALAYAH*, 4(11), 23-36.
- Yusof, H. S. M., Said, N. S. M., & Ali, S. R. O. (2016). A study of organizational culture and employee motivation in private sector company. *Journal of Applied Environmental and Biological Sciences*, 6(3), 50-54.

ANNEXURES

ANNEXURE A: SCIENTIFIC REVIEW



**BUSINESS SCHOOL
SAKESKOOL**
DE WORTH MORE
WERS MEER WERD

Student name:	Sbongiseni Mkhungo	Student number:	2019312657
Module code:	MBRP7900	Department:	Business School
Project title:	Antecedents of employee motivation at the perishable products export control board in South Africa		
Supervisor:	Thinus Delpont		
Reviewer 1:	Luna Bergh	Reviewer 2:	Liezel Massyn
Approved	✓	Minimum scientific issues: can continue to Ethics Application	Significant scientific issues: please address and resubmit

	Yes	No	N/A
1. Introduction, specific aims, Literature study			
The Literature study is adequate	✓		
The aims and objectives are clearly indicated	✓		
Adequate references are provided	✓		
The aims align with the title of the project	✓		
2. Scientific design			
The scientific design selected will answer the research questions/ aims/ objectives	✓		
The chosen design is adequately described and justified	✓		
The aims and objectives of the study is reachable within the time frame	✓		
The student has required academic experience for the topic	✓		
3. Selection of participants			
The choice of participants is appropriate for the study	✓		
The rationale for the selection of participants are clear and justified	✓		
Selection of participants are equitable	✓		
Inclusion and exclusion criteria is clear	✓		
The study does not include vulnerable participants	✓		
The sample selection is clear	✓		
Data saturation has been addressed			✓
4. Recruitment strategy			
Recruitment strategy is clearly explained	✓		
Location for research is feasible and acceptable	✓		
Timing of recruitment is acceptable	✓		
Are there any conflict of interest between the researchers and participants	✓		
Gatekeeper permission will be obtained for research involving students/staff			✓
5. Research procedures			
The research procedures are described in sufficient detail	✓		
The research procedures will address the objectives of the study	✓		
6. Risk-benefits assessment			
The risk(physical, psychological and economical)-benefit (to individuals and community) ratio is adequately:	✓		
- Identified - Evaluated - Described			

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UNIVERSITEIT VAN DIE VRYSTAAT
YUNIBESITHI YA FREISTATA

ANNEXURE B: ETHICAL CLEARANCE



GENERAL/HUMAN RESEARCH ETHICS COMMITTEE (GHREC)

15-Oct-2022

Dear Mr Sbongiseni Mkhungo

Application Approved

Research Project Title:

Antecedents of employee motivation at the Perishable Products Export Board in South Africa

Ethical Clearance number:

UFS-HSD2022/1167/22

We are pleased to inform you that your application for ethical clearance has been approved. Your ethical clearance is valid for twelve (12) months from the date of issue. We request that any changes that may take place during the course of your study/research project be submitted to the ethics office to ensure ethical transparency. Furthermore, you are requested to submit the final report of your study/research project to the ethics office. Should you require more time to complete this research, please apply for an extension. Thank you for submitting your proposal for ethical clearance; we wish you the best of luck and success with your research.

Yours sincerely

Dr Adri Du Plessis

Chairperson: General/Human Research Ethics Committee

Digitally
signed by Dr
Adri du Plessis
Date:
2022.10.17
07:55:43
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ANNEXURE C: GATEKEEPERS' PERMISSION



The Perishable Products Export Control Board

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Platteklouf, Cape Town | F +27 21 939 6868
7560

www.ppecb.com

12 September 2022

LETTER OF ACCEPTANCE BY THE PPECB FOR SBONGISENI MKHUNGO

To whom it may concern:

It is my pleasure to confirm that approval has been granted for Sbongiseni Mkhungo to do his research at the Perishable Products Export Control Board as a registered Master of Business Administration (MBA) student (2019312657) at the University of Free State (Business School). The topic of his research is: The proposed topic of my research is the *"Antecedents of employee motivation at the Perishable Products Export Control Board in South Africa"*.

If you have any further questions with regard to this letter, please do not hesitate to contact me on the below contact details.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Njonggo Duma', is written over a horizontal line.

Njonggo Duma
Human Resources Manager
(021) 930 1134 / 0732037160
Njonggod@ppecb.com

ANNEXURE D: EDITOR'S LETTER



Website: www.chiefeditors.net

Email: info@chiefeditors.net or boldwin@chiefeditors.net

Cell: 063 022 3162 or 072 492 6144

Dear Sir/madam

Re: Confirmation of editing and proofreading

This letter informs the responsible authorities that the work authored by **Sbongiseni Mkhungo (Antecedents Of Employee Motivation At The Perishable Products Export Control Board In South Africa)** has been proofread and edited by our team to the best of its ability. Our editing involves spelling check, punctuation, grammar, sentence construction, word reduction, cross reference citations, basic formatting (general layout), presentation style, indexing, and other mechanics of the English language. No technical alterations have been made.

Corrections were made using track changes, which have been clearly outlined for the author's reference. It is the onus of the author to accept or reject the suggested changes.

Please do not hesitate to contact us on the details provided above for more information.

Disclaimer: The editor will not be held responsible for any errors introduced due to the changes made after editing.

Yours,

B. Mutsvene (Coordinator)