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ORGANISATIONAL CULTURE, INNOVATION, AND ENVIRONMENTAL PERFORMANCE IN SOUTH AFRICAN ISO 14001 CERTIFIED ORGANISATIONS

BY

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A thesis submitted to the Faculty of Commerce, Law and Management, University of the Witwatersrand, Johannesburg, in fulfilment of the requirements of the degree of Doctor of Philosophy.

JOHANNESBURG
SOUTH AFRICA
June 2022

DECLARATION

I now declare that this thesis is my own, unaided work. It is submitted to fulfil the requirements for the degree of Doctor of Philosophy at the University of Witwatersrand, Johannesburg. It has not been previously submitted for any degree or examination at any other university.

_____

TSHEPO ISAIAH MAGADISHE NOKANENG

Signed on this the _____ day of _____, 2022.

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LIST OF ACRONYMS AND ABBREVIATIONS

AGFI	Adjusted goodness-of-fit index
ANOVA	Analysis of covariance
AVE	Average variance extracted
CB-SEM	Covariance-based structural equation modelling
CDT	Cultural Dimensions Theory
CERES	Coalition of Environmentally Responsible Economies
CFA	Confirmatory factor analysis
CFI	Comparative fit index
CMIN/DF	Chi-square/degree of freedom
CQI	Continuous quality improvement
CSR	Corporate social responsibility
CVF	Competing values framework
DFD	Design for disassembly
DFE	Design for environment
DFR	Design for recycling
EFA	Exploratory factor analysis
EMS	Environmental management system
ESF	Extrinsic satisfaction fact ors
FDI	Foreign direct investment
GFI	Goodness-of-fit index
GHRM	Green human resource management
GLOBE	Global Leadership and Organisational Behaviour Effectiveness Research Programme
GSCM	Green supply chain management
HR	Human resources
HRM	Human resource management
HTMT	Heterotrait-monotrait ratio
IBM	International business machine
ICC	Intraclass correlation
IndEP	Individual environmental performance
INNOV	Innovation
ISF	Intrinsic satisfaction factors
ISO 14001	International Organisation for Standardization for Environmental Management System, released in 1996
KMO	Kaiser-Meyer-Olkin
LCA	Life-cycle assessment
MAR	Missing at random
MCAR	Missing completely at random
NFI	Normed fit index
OCAI	Organisation Culture Assessment Instrument
OEP	Organisational environmental performance
OLS	Ordinary least-squares regression
PCA	Principal components analysis
PD	Power distance
PERI	Public Environmentally Reporting Initiative
PLS	Partial Least Squares

PLS-SEM	Partial Least Squares Structural Equation Modelling
Q-Q plot	Quantile-quantile plot
RBT	Resource-based Theory
RMSE	Root mean square error
RMSEA	Root mean square error of approximation
SABS	South African Bureau of Standards
SANAS	South African National Accreditation Scheme
SEM	Structural equation modelling
SHRM	Strategic human resource management
SIV	Schwartz's individual values
SME	Small and medium-sized enterprises
SRMR	Standardised root mean square residual
TLI	Tucker Lewis index
TQM	Total quality management
UAI	Uncertainty index
UNCED	United Nations Conference on Environment and Development
VIF	Variance inflation factor
VRIN	Valuable, rare, inimitable and non-substitutable resources

ABSTRACT

This study investigates the link between organisational culture, innovation, and organisational environmental performance, with a focus on South African ISO 14001-certified organisations. The study uses Hofstede's Cultural Dimensions Theory and the competing values framework to make predictions and collects empirical data from 400 SABS-certified organisations using PLS-SEM. The findings are of interest to academics, organisations, and researchers and have potential for future studies to build upon.

The study found that human resource management (HRM) policies are more effective in cultures that prioritise collectivism, masculinity, uncertainty avoidance, and developmental and rational culture. Labour relations also predict innovation and organisational environmental performance (OEP). The Schwartz individual values (SIV) model shows that age predicts openness to change, and the industrial sector predicts intrinsic satisfaction factors, conservation, and self-enhancement values. Position predicts intrinsic satisfaction, conservation and self-enhancement values, openness to change, self-transcendence, and extrinsic satisfaction. Organisational tenure negatively predicts conservation and self-enhancement values, openness to change, self-transcendence values, and intrinsic and extrinsic satisfaction. The industrial sector positively predicts individual environmental performance. These findings can aid policymakers, managers, students, researchers, and practitioners in enhancing innovation, OEP, individual environmental performance (IndEP) and contributing to sustainability management literature using Hofstede cultural dimensions theory (CDT), competing values framework (CVF), Schwartz's values and motivational factors.

This study provides evidence of the effects of cultural dimensions on OEP and identifies mediating or moderating factors. The findings offer knowledge to improve OEP, inform policymakers, and add value to managers, students, researchers, and practitioners. The study aids in implementing and improving environmental management systems, thus enhancing OEP. It also provides insights into using Schwartz's values and motivational factors that could enhance IndEP and contribute to the sustainability management literature.

CHAPTER ONE
BACKGROUND TO THE RESEARCH

1.1 Introduction and Background

This chapter explains and examines conceptual models and hypotheses that could improve organisational environmental performance due to organisational culture. It also discusses the reasons for this study and outlines its objectives. Moreover, the chapter examines the related objectives and focuses on the study's aim. Thus, this study also derives hypotheses by answering these research questions.

In addition, this chapter presents the hypotheses derived from various theories, that is, Hofstede's Cultural Dimensions Theory (CDT) (1980), the competing values framework (CVF) at the organisational level and Schwartz's Individual Value Theory (SIV) at the individual level. The present study includes the paths that show causal effects. Therefore, this study uses models to assist readers in understanding the moderating and mediating effects of the various variables. Chapter One also discusses theoretical, methodological and empirical contributions. Finally, it outlines and summarises the chapters of the study.

García-Machado and Martínez-Ávila (2019) argue that population and technological growth increase global economic activity. These factors also result in a concomitant worsening of environmental problems. In addition, exploiting natural resources causes ecosystem degradation, resulting in inadequate support for plant and animal life (Ahmed et al., 2018). Entities such as the generation of electricity, heavy industry, land transport, agriculture and the residential sector account for 60% of global greenhouse gas emissions (Gurría, 2019) and include toxic gas emissions into the atmosphere that destroy ecosystems (Ahmed et al., 2018). Consequently, the use of fossil fuels and insufficient policy responses lead to rapid climate change (Balint et al., 2016).

Furthermore, industrial emissions and vehicle exhaust fumes have increased over the past 100 years (Lelieveld et al., 2015). Approximately 55 billion tons of fossil energy, minerals, metals and biomass are extracted annually from the earth (Larsen et al., 2014). In addition, there is a daily destruction of 375 km2 of forest area and an hourly desertification of 1,692 acres of productive drylands. Humankind dumps approximately 4.8 to 12.7 million tons of plastic waste into the ocean (Larsen et al., 2014) because of poor waste management systems, even though up to 3.5 billion people depend on the oceans for food (Noronha et al., 2017). In addition, excessive consumption results in the depletion of many natural resources. According to

Noronha et al. (2017), approximately 6.5 million people die annually because of poor air quality, reducing crop yield by approximately 26% by 2030. Therefore, it is necessary to have an appropriate organisational culture to address environmental issues for organisations to be more sustainable (Magsi et al., 2018).

Furthermore, biodiversity loss, ocean acidification and desertification destabilise natural ecosystems. In addition, the depletion of freshwater resources and pollution threatens human survival (McMichael, 2017). Poor water quality, sanitation, hygiene and agricultural practices also contribute to environmental degradation, resulting in the loss of approximately 57 million years of human life (Noronha et al., 2017). In addition, asbestos exposure affects the health and properties of approximately 64 million people and kills more than 100,000 people annually. Furthermore, people's health is adversely affected by approximately 50 large active landfills (Noronha et al., 2017).

South Africa (SA) requires heroic efforts to promote sustainable development, eradicate poverty (Habiyaremye et al., 2022) and ensure peace and stability. These efforts result from sustainable water and sanitation management and sustainable development goals that pursue inclusive growth. Thus, the implementation of legislation, policies and strategic reports at regional, national and international levels prioritising sustainable growth. According to Messerli and Murniningtyas (2019), sustainable growth has gained traction recently.

Environmental degradation leads to a lack of sustainable employment, including unsatisfactory working conditions affecting developing countries such as SA. Thus, developing countries are lagging in their economies, industrialisation and human development compared to the USA, Europe, the United Arab Emirates and China.

Therefore, organisational culture is critical to comprehending, managing and improving values, norms, behaviours and practices in organisations (Schein, 1996). Furthermore, evidence from Prim et al. (2017) shows that the intrinsic values of a national culture favour innovation and competitiveness because these increase the competitiveness of nations and organisations. Therefore, organisations need to be transparent about environmental accountability, recognise their depletion liabilities and account for the cost of extracting natural resources. Such actions are necessary because organisations are required to build sustainability capabilities to recognise their environmental capabilities and investment costs. Such measures, therefore, serve as the

baseline costs for businesses. OEP management also should include customer environmental education (Gupta & Zhang, 2020).

In addition, industries should redesign their production processes using clean technologies because these processes improve OEP and minimise the wastage of resources (García-Machado & Martínez-Avila, 2019). Furthermore, organisations can improve their OEP and protect their environments by creating a positive, supportive and innovative culture (from now on referred to as an innovation culture) (Magsi et al., 2018). Current environmental challenges require urgent attention, and all sectors must prevent potential environmental disasters. Furthermore, these environmental challenges inform this study's central research question: To what extent are the cultural dimensions or values of the organisation related to OEP and innovation in South African ISO 14001-certified organisations?

A theoretical framework will help answer the research question and assist organisations in determining their current environmental performance (OEP) level, especially organisations striving to start innovation programmes. An innovation programme is an ingenious initiative for reducing the consumption of natural resources and pollution. These innovation programmes assist organisations in achieving the intended cultural values that protect the natural environment by continuously improving their OEP in organisational facets. Such initiatives also include processes, activities and management systems to maintain the organisation's mission and vision.

García-Machado and Martínez-Ávila (2019) suggest that a "green culture" could improve OEP. In addition, green culture provides an economical alternative to organisational operations. However, command-and-control policies can redirect technological change to the green sector. In certain instances, these measures are more effective than market-based interventions (Balint et al., 2016) because they encourage organisations to manage and reduce their environmental footprint (Magsi et al., 2018). Therefore, organisations should strive to meet the requirements of established environmental standards, such as those governing efficient resource use and prevention of generating environmental pollutants, because this process results in a high level of OEP.

Furthermore, organisations should understand the interrelationship between organisational culture and innovation and ensure a more integrated approach to assessing OEP. However,

organisations with inadequate knowledge of innovation and culture adopt environmental protection tools that may only improve their OEP within the legal requirements (Arimura et al., 2015). In addition, there is variation in the effectiveness of environmental governance tools; for example, ISO 14001 certification varies by country and environmental impact. ISO 14001 certification confirms establishing and verifying an organisation's environmental management system. This process also includes how organisations manage their activities to reduce pollution and improve resource use. Thus, ISO 14001 certification could improve OEP (Pinto et al., 2017).

Implementing environmental regulations and compliance seems more costly for industry and government (Coglianese & Nash, 2016) than imposing strict voluntary standards (Arimura et al., 2015). Voluntary programmes, such as ISO 14001, also offer flexibility in taking cost-effective actions, such as rewarding the reduction of environmental impacts instead of levying non-compliance threats (Coglianese & Nash, 2016). However, despite the growing interest in research on efficient OEP, there needs to be more research linking organisational culture and OEP (Magsi et al., 2018). There needs to be more knowledge about the influence of organisational culture and its impact on OEP and how this knowledge improves resource use and prevents pollution. In addition, the relationship between organisational culture and OEP remains to be seen (Magsi et al., 2018).

Culture is a combination of shared and various forms of norms and values in an organisation (García-Machado & Martínez-Ávila, 2019). Therefore, cultures differ in their responsiveness to change, and while some resist or respond slowly to change, others accept it (Treven et al., 2008). Thus, culture in the organisation is the collective adaptation and survival of external threats and opportunities. However, it also manages the relationships among organisation members (Javidan et al., 2006).

Ghannay and Mamlouk (2015) report that researchers and theorists have attempted to develop and build conceptual frameworks or measurement tools for organisational culture. Therefore, these tools identify specific organisational cultures that influence organisational performance. Furthermore, Zakari et al. (2013) indicate that extant literature has various models of organisational culture, e.g., Hofstede's Cultural Dimensions Theory (CDT) (Hofstede, 1991). Most cross-cultural studies use the CDT, highlighting that cultures differ in five dimensions: power distance, individualism versus collectivism, uncertainty avoidance, masculinity versus

femininity and Confucian dynamics (long-versus short-term orientations). Furthermore, CDT focuses on the distinctive culture within an organisation.

Related theories support the concept of conceptual pluralism in cross-cultural studies. spaces (Olteanu, 2021). In addition, pluralism implies that the definition of culture depends on its context and intended purpose (Van der Burg, 2018). Therefore, organisations have different cultures because of the composition of their workforce.

The Global Leadership and Organizational Behaviour Effectiveness Research Program (GLOBE) comprehends, describes and predicts cultural variables. Therefore, these cultural variables affect leadership, organisational processes and effectiveness (House et al., 1999). GLOBE also differentiates between organisational cultures (organisational practices and values) and social cultures (societal practices and values) (Hofstede, 2006).

Alternatively, the Competing Values Framework (CVF) is a theoretical model from organisational empirical analysis and research (Cameron & Quinn, 1999). Therefore, CVF explains how the organisation creates its profile and performance. Hence, organisational values influence employees' attitudes and behaviour. In addition, CVF explains the relationships between the employees and the organisation. Therefore, managers need to understand the alignment of their preferred values with those of employees.

Furthermore, this alignment will influence the organisation's performance and its achievement of the desired OEP. Finally, managers must be sensitive and considerate of cross-cultural values and contexts (Petruzzella et al., 2017). However, in this study, it is still being determined whether managers will follow the CDT and CVF frameworks or if they will follow other frameworks that predict various OEP outcomes. Thus, these theoretical models will also aid managers of ISO 14001-certified organisations in implementing and comprehending innovation.

Furthermore, this study uses Schwartz's values (from now on referred to as SIV) at the individual level. Understanding the relationships between individual values, motivation, and OEP is essential. Therefore, this study seeks to identify the most appropriate theoretical framework that defines the relevant relationship between organisational culture and OEP. This

study anticipated that this framework would emerge from its results, that is, the results of innovation in SABS ISO 14001-certified organisations.

Organisations with high OEP contribute to society, particularly those that achieve OEP through an established environmental management system (EMS). In addition, ISO 14001 compliance can provide insights into innovation barriers. Therefore, organisational culture should also assist innovation in achieving an organisation's environmental goals. Thus, organisations achieve their environmental goals by enforcing specific standards, guiding correct and appropriate behaviour and motivating employees. Given SA's cultural diversity, it needs to be clarified in this study which are the most appropriate cultural values for OEP.

Arimura et al. (2015) show that the effectiveness of ISO 14001 certification varies according to the nature and character of the organisation and country, as well as that of the ISO 14001 certification. These differences also include variations in the magnitude of environmental impacts on air, land or water. Researchers have also developed various conceptual frameworks and models to address environmental challenges, such as those defining the relationship between organisational culture and OEP (Magsi et al., 2018).

The proposed theoretical models used in this study also consider the above relationship, and thus, this study examines various hypotheses relating to organisational culture and OEP. Additionally, this model focuses on ISO14001-certified organisations in SA. This study also examines the relationship between organisational culture and innovation and how organisations achieve OEP through innovation. Furthermore, this study provides an overview of this relationship in the context of SA ISO 14001-certified organisations. Therefore, these models include CDT and CVF at the aggregate level and SIV at the individual level. Unfortunately, extant research literature lacks an adequate cultural framework to address environmental challenges, particularly those governing the implementation of innovation, particularly in SABS ISO 14001-certified organisations.

Furthermore, the CDT and CVF can only provide limited additional information at the organisational level because they only interpret the aggregated results. It, therefore, was necessary to consider two alternative models for comparative testing and a third model that would provide additional information at the individual level based on Schwartz's values (SIV). Thus, organisational culture influences individuals, organisations, groups and behaviour

(Hartnell et al., 2011). In addition, CDT and CVF are the primary and alternative theoretical frameworks for predicting and interpreting the relationships between the various constructs, cultural values and innovation of organisations. Furthermore, CVF provides a detailed analysis of the various cultural levels of the organisation (e.g., organisational, departmental, section or individual level).

Notably, monocultural teams communicate better than multicultural teams because there are fewer language barriers between people who share cultural values and beliefs. However, multicultural teams have different but compatible values and beliefs (Misoc, 2017). Hence, South African organisations need help achieving optimal OEP due to cultural and organisational diversity. In addition, SA has 11 official languages and diverse workplaces. Therefore, organisations must prioritise the challenges within organisational cultures in all decision-making processes relating to environmental concerns. As mentioned, this study examines the relationship between organisational culture and innovation.

According to Magsi et al. (2018), research literature shows insufficient and unsatisfactory empirical results on the relationship between organisational culture and OEP and insufficient analyses at the individual level. Furthermore, this literature needs to show more research on the relationship between organisational culture, innovation, and OEP in South Africa, mainly on how organisational culture affects OEP. Various studies show inconclusive results on performance management and organisational culture (Oberföll et al., 2018).

When organisations adapt and develop a culture to achieve their goals, national culture improves performance through adaptive management practices (Nieves & Mujtaba, 2006a). The organisations also adapt and address their weaknesses and develop beneficial values that align with their strategic plans. Therefore, organisational culture improves the OEP of an organisation (Alharbi & Abedelrahim, 2018). In addition, organisations must find new solutions to enhance their work efficiency and formulate organisational goals focusing on innovation.

Furthermore, organisational cultural constraints make it challenging to implement performance management effectively (Reddy, 2011); therefore, to overcome this problem, organisations should assess their prevalent cultures. For example, an organisational culture with an internal or external focus may seek flexibility and uniqueness, while another culture may seek

competitiveness through stability and control (Zakari et al., 2013). Thus, existing research still needs to provide a cultural framework to address the OEP challenges, such as the barriers to innovation as required by ISO 14001 standards. However, the existing literature does indicate that establishing and enhancing the right culture supports innovation. Therefore, culture is a prerequisite for improving OEP (Bendak et al., 2020). The following section discusses the research problem.

1.2 Research Problem

This section describes the areas of interest in studying innovation and OEP as predicted by organisational culture. This section also highlights the importance of this study, the research context, and the knowledge gaps and contradictions in the current literature. This section also defines the research problem that assists in pinpointing the aims of the study and its related objectives.

Organisations employ various environmental management practices, such as those relating to specific internal organisational factors, including institutional pressure from external stakeholders (Delmas & Toffel, 2003). Therefore, the extant literature needs more evidence for a theoretical framework for these environmental management practices. Thus, there is a need for a framework that considers the associations of organisational culture, innovation and OEP, especially about South African ISO 14001-certified organisations. In addition, this study needs to accurately describe the analysis at the aggregate and individual levels to ensure accurate approaches, accurate data collection and correct definition and testing of the hypotheses (Khastar et al., 2011). However, while extant literature acknowledges culture as a predictor of corporate sustainability (Miska et al., 2018), it implies the presence of mixed results and various findings.

Furthermore, this study analyses the model variables' direct and indirect impact, such as organisational culture's effect on innovation and OEP (Naranjo-Valencia et al., 2016). However, employing the theoretical framework assists this study in comprehending what occurs in reality as predicted by theory.

A key issue in South African ISO 14001-certified organisations is the lack of appropriate cultural values that could predict OEP. Thus, organisations must identify dominant and

preferred norms that predict OEP because an organisational culture guides operations (Almuslamani & Daud, 2018). On the other hand, Đorđević (2016) argues that the influence of organisational culture is weaker than that of national culture, particularly in terms of the core values that determine employees' attitudes and beliefs.

Therefore, managers need sufficient knowledge and skills to select an appropriate organisational culture to improve OEP and should be aware of specific aspects of the organisational culture that relate to innovation to maintain excellent OEP. They must also create an appropriate innovation framework that leads to higher OEP in SABS ISO 14001-certified organisations. The work of Naranjo-Valencia et al. (2016) demonstrated the relationship between innovation and organisational performance and inspires this study's aims.

A lack of knowledge about innovation concerns SABS ISO 1401-certified organisations. This deficiency includes an inadequate theoretical framework for culture to account for innovation and the values that reflect the innovation that influenced this study. However, this study predicts that a theoretical framework of meaningful relationships will emerge from this study, and the results will enable ISO 14001-certified organisations to address environmental challenges. Such a framework will assist managers in managing the organisational culture to improve OEP initiatives.

Interestingly, extant literature offers a consensus that various cultures lead to various leadership styles (Bissessar, 2018) and that organisational culture influences performance, plus the fact that members of an organisation need time to develop and accept new cultural values (Oberföll et al., 2018). Moreover, managers face various challenging issues when deciding how to influence innovation, such as achieving environmental outcomes or goals in a complex business environment.

Managers must understand and appreciate organisational culture because such knowledge will enable them to predict the outcome of their decisions and avoid unintended consequences. Additionally, leaders set measurable goals and objectives over time that significantly impact organisational culture, and if implemented at the right time, these changes in organisational culture will improve OEP (Oberföll et al., 2018). In addition, these actions can also improve competitiveness through changes in the business environment.

Furthermore, an organisation's unique culture provides a distinct advantage over its competitors because these competitors cannot imitate or destroy culture (Oberföll et al., 2018). Managers should understand that organisational culture is a barrier to imitation. As well as how organisational and individual values can restrain innovation. In addition, organisational culture is a critical intangible resource that can adversely affect performance (Oberföll et al., 2018).

Reviewing the existing literature reveals tensions between the various theoretical frameworks, e.g., CDT and CVF. This conflict arises because they assign various priorities to different aspects of OEP. Additionally, research shows that lacking a cultural framework results in an ineffective innovation programme. Therefore, this fact is specifically true in ISO 14001-certified organisations. In addition, innovation depends on skills, abilities and motivation, as well as the integrity of all employees and managers. However, the ineffective implementation of innovation leads to insufficient environmental protection and the inefficient use of natural resources. The ineffective implementation of innovation leaves employees with limited motivation.

Organisational culture influences whether or not an organisation's success is sustained (Nightingale, 2018). The literature must reveal how culture and interaction variables affect an OEP. In addition, extant literature needs to display more knowledge about the relationship between organisational culture, innovation and OEP in ISO 14001-certified organisations in SA. This study, therefore, attempts to address all these knowledge gaps.

1.3 Research Justification

This section discusses the rationale for this study. The research justification is based on existing literature and allows for identifying the knowledge gaps this study aims to fill and highlighting current issues. This study also examined various hypotheses, for example, relating to organisational culture, innovation and OEP. The current study also examines interactions in ISO 14001-certified organisations in the SA because extant literature shows a gap in this research area.

This study's principal value lies in its context's holistic nature. Additionally, HR policies and practices should promote environmental protection and pollution prevention. Hence, it gives organisations a competitive advantage because of its human capital. As well as efficiently

obtaining and producing other resources (Rawashdeh, 2018). In this regard, culture influences people's pro-environmental behaviour through socialisation. Therefore, an analysis of the cultural effects on ecological behaviour is necessary (Nagy & Molnárné, 2018).

Thus, ecological behaviour refers to actions taken to preserve and conserve natural resources. Thus, such behaviour contributes to natural environmental integrity and improvement (Kaiser & Fuhler, 2003). Therefore, an organisation's HR policies and practices positively impact its OEP. For example, an organisation influences employees' development and behaviour (Triguero-Sánchez et al., 2018). In this way, employees identify with the organisational culture. Organisations enhance employees' morale by making the work environment more comfortable (Odour, 2018).

The extant literature investigates the influence of HR policies and practices on various performance measures. Alsafadi and Altahat (2021) examine the impact of human resource management (HRM) practices on employee performance. Ibarra-Cisneros et al. (2020, p976) investigate whether "relational, structural and human capital influences organisational performance". Therefore, this study considers the effectiveness of various HRM practices in the theoretical frameworks and seeks to determine the mediating effect of innovation on OEP.

Existing literature on organisational cohesion helps academics understand how employees behave in a group or organisation. Organisational cohesion includes achieving a shared goal when employees work together to achieve improved OEP. However, a lack of organisational cohesion can adversely affect OEP. Studies conducted by various researchers (Beyene et al., 2016; Kokt & Makumbe, 2020; Kucharska & Bedford, 2019; Wang & Chen, 2017) examine organisational culture using different outcome variables: innovation, performance, knowledge-sharing and management. Additional studies investigated the influence of organisational culture on performance (Banwo et al., 2015; Harun & Mahmood, 2012), organisational effectiveness (Nwizia & Okachi-Okereke, 2020), the association between organisational climate factors and various innovation levels (von Treuer & McMurray, 2012). Other studies found that knowledge management and organisational innovation are mediating factors (Al-Bahussin & Elgaraihy, 2013; Mathur, 2015; Nyameh. 2013) and mediate the relationship between organisational culture and OEP. Triguero-Sánchez et al. (2018) examine the intervention or moderating roles of culture. Other researchers examined the impact of culture on organisational performance. These studies revealed conflicting results regarding the

mediating effects of innovation, some of which were inconclusive. Various other researchers used CDT to study how organisational culture affects organisational performance. (Ahmed & Shafiq et al., 2014; Irfan, 2016; Odor, 2018; Zeqiri & Alija, 2016.

The present study builds on previous research because previous studies have not examined the relationship between organisational culture and OEP. This study examines this phenomenon and innovation as an intervening factor, mainly mediated by innovation in ISO 14001-certified organisations in SA.

The extant literature shows a relationship between organisational culture and traditional performance measures. However, these researchers did not consider OEP in their investigations.

Furthermore, the existing literature studied traditional organisational performance, e.g., financial performance, job satisfaction, productivity and operational efficiency. Various studies identified a link between organisational culture and organisational performance (Aboramadan et al., 2020; Andrijauskienė & Dumčiuvien, 2017; Grenness, 2015; Irfan, 2016; Nikpour, 2017; Wahjudi et al., 2018; Khan & Cox, 2017; ElBadawy et al., 2019; Odetunde & Ufodiama, 2017; Vnoučková & Urbancová, 2020). These studies explained the roles of organisational culture, innovation and performance. Xie and Paik (2018) examined the relationship between organisational culture, creativity and innovation and found that collectivism and power distance influence creativity and innovation.

Industrial relations are shared employee beliefs in employment relationships (Yusof et al., 2019). Previous studies examined the direct relationship between labour relations and performance. However, these previous studies did not examine labour relations as a moderating or modifying (strengthening or weakening effect) variable for innovation and OEP. Therefore, the present study considers labour relations in a theoretical model.

Previous studies examined employment relationships with various outcomes: employees' job performance (Liu & Wan, 2020), organisational performance (Samwel, 2018), organisational performance and employee job satisfaction (Mahesh & Saravanakumar, 2020). Notably, the results of these above studies vary because they used different variables in their models and contexts.

Sang et al. (2014) demonstrated the moderating role of employee engagement and the relationship between performance-based rewards and labour productivity. The unique contribution of this study is that the role of labour relations in the present study is unclear regarding whether labour relations can strengthen or weaken various relationships—for example, the relationship between organisational culture, OEP and innovation. Thus, the knowledge gained from the study conducted by Sang et al. (2014) is valuable and could assist organisations in identifying the role of labour relations, particularly about OEP in SA ISO 14001-certified organisations.

A limitation of these studies is that they need to include innovation and OEP and use CDT and CVF in their investigations. Furthermore, certain precedent studies have yet to be in ISO 14001-certified South African organisations.

However, the following studies are from SA about ISO 14001: Turner and O'Neill (2007) uncovered the rationale for ISO 14001 (EMS) certification in an urban automotive cluster (DAC) and Chummun and Gaffar (2018) examined the factors influencing OEP in waste management, organisational culture and environmental management, plus the pro-environmental behaviour that promotes positive OEP. However, a limitation of Chummun and Gaffar's (2018) study was the small sample size. Thus, the sample did not represent the waste management industry within Kwa-Zulu Natal, SA. Nonetheless, this study suggests that organisational culture and pro-environmental behaviour influence OEP.

Sennago and Ahmed (2020) examined the extent of environmental training and its effectiveness. These researchers also explored various themes: environmental attitudes and culture, training resources and commitment, impediments to environmental training, impact-focused training topics and environmental attitudes. This study also identified challenging areas such as insufficient training topics and organisational prioritisation of environmental training. Importantly, this study highlighted the influence of training on OEP.

Various studies have been conducted in Western and Eastern countries, meaning they have disparate organisational cultures and contexts. These studies also used variables, such as those used in the current study, but not in an integrated manner, nor did they focus on innovation or OEP. Furthermore, these studies are not from South African ISO 14001-certified organisations.

The present study considers the organisational and individual levels of analysis. Therefore, these analyses facilitate the comprehension of the relationships in theoretical models. The current study uses two commonly used organisational culture theories – the CDT and CVF – which are well-founded organisation-level theories. These theories identify specific cultural values for predicting OEP and innovation.

This study uses CVF as an alternative to CDT to further understand the impact of organisational culture on innovation and organismal environmental performance (OEP). Therefore, the knowledge gained from the current study will provide organisations with insight into the specific organisational values that impact innovation and OEP. The GLOBE study operationalised the CDT because of the reliability and validity of its measurement scale at the organisational level (Helfrich et al., 2007). Thus, GLOBE is suitable for organisational culture studies and practical applications.

Previous studies have also examined the relationship between CVF and various outcomes: customers, structures and human capital (Ferreira, 2014); performance (Jabeen & Isakovic, 2018); leadership (Kunert, 2018); innovation and performance (Naranjo-Valencia et al., 2016); superior performance (Oberfőll et al., 2018); and corporate performance (Quang, 2020), including the organisational climate and job satisfaction (Ramadista et al., 2020) and sustainable performance (Taha & Espino-Rodríguez, 2020). However, previous studies have not examined the relationship between competing values (CVF) and OEP or how innovation and HRM practices affect these relationships. Thus, the current study examined the relationship between CVF and OEP and innovation and HRM practices as intervening variables in South African ISO 14001-certified organisations.

In contrast to previous studies, this study included an individual-level analysis based on Schwartz values in ISO 14001-certified organisations in South Africa. De Sousa et al. (2016) argue that finding and decoding individual values is important to organisational culture. Therefore, aligning values and organisational culture helps predict the compatibility between an individual and an organisation. Moreover, values assist a person in assessing potential risks. In addition, organisations must determine the protective mechanisms (measures, processes, systems and actions that an organisation takes to maintain its integrity and existence.) in harmful environments and prioritise goals or solutions (Meuleman et al., 2012). Therefore, this study considers these factors.

Szekeres et al. (2019) show that demographic variables (for example, age, gender, education and income level) affect circumstances. Thus, the expected differences directly impact value priorities. Previous studies examined the relationship between Schwartz's values and other outcomes, for example, between Schwartz's values and task performance (Agras & Ates, 2015) and the perception of social information (González-Rodríguez et al., 2016). Other studies have also examined the relationship between demographic variables and individual outcomes, for example, job satisfaction and employee performance (Nurcahyono & Mardiati, 2019; Sorvali et al.,2022; Szekeres et al., 2019) and the relationships between work performance, motivation, job satisfaction and working conditions (Bashir et al., 2020). However, previous studies did not integrate demographic variables, SIV or motivational factors into a single model. This deficiency is especially true when predicting individual environmental performance (IndEP) in SA ISO 14001-certified organisations. However, the current study integrates demographic variables, SIV and motivational factors to predict IndEP.

This study identifies the values that promote IndEP at the individual level. Thus, the current study findings could assist organisations in implementing motivational strategies to encourage employees to achieve the desired levels of OEP. The study also assesses individual values and demographic factors that could assist organisations in determining employees' values in terms of how these relate to the values of the organisation. In order for these values to promote values consistent with their vision, thereby improving innovation and OEP.

However, previous studies show a lack of correlation between OEP and innovation. This fact is particularly true for South African ISO 14001-certified organisations. Consequently, the extant literature must provide an appropriate theoretical framework for this study. The research problem addresses the relationships and interactions between various variables, including organisational culture, innovation, OEP, organisational morale and cohesion. These factors are in a single conceptual model using CDT and CVF at the organisational level. The current study also used SIV and other variables at the individual level, including demographic variables, motivational factors and IndEP. Thus, more literature should be on performing analyses at various levels. This fact is especially true in ISO 14001-certified South African organisations. Therefore, there is a need for a framework that elucidates the various relationships—for example, identifying if a relationship between organisational culture and OEP exists. This framework should also include the mediating effects of innovation and HRM policy

effectiveness. This study analyses how Schwartz's values affect IndEP and examines the mediating effects of the extrinsic and intrinsic satisfaction factors.

The current study suggests a need to maximise OEP and innovation. Therefore, this result could be possible by responding to the cultural diversity of ISO 14001-certified South African organisations, especially for management practices and skills. Therefore, innovation knowledge could improve organisational culture, management practices and capabilities. In addition, it is necessary to enhance the current knowledge of innovation by showing the actions needed to strengthen the organisational culture, management practices and competencies.

Fundamentally, the current study uniquely examines various interactions and relationships between the investigated variables. These include HRM practices, organisational culture, innovation and OEP. The present study also provides conceptual frameworks for studying such interrelationships in ISO 14001-certified organisations and highlights the importance of SIV, CDT and CVF as objectives. The following section discusses the research aim of this study.

1.4 Research Aim

The research aim of a study is the general purpose or the primary goal of a research project (Thomas & Hodges, 2010). This study aims to answer its research question and test the hypotheses of the proposed theoretical models. Furthermore, this study conducts analyses at various levels and tests the relationships among OEP, innovation, cultural and individual values. The current study uses models as analytical tools that test and represent relationships between constructs to obtain information on OEP, especially about South African ISO 14001-certified organisations. The models of this study can assist managers in solving various environmental challenges and improving and consolidating certified EMS. The present study also aims to identify and examine the key characteristics of organisational culture. Therefore, these critical cultural traits could assist and support management in implementing innovative measures to achieve the desired OEP.

The present study also focuses on innovation to uncover the key characteristics of organisational features that can improve OEP. Hence, these include organisational culture, organisational morale and cohesion, HRM and labour relations. Thus, this study intends to assist organisations to become more competitive by improving their environmental capacity,

knowledge and innovation. Therefore, innovation can ultimately improve OEP. This study also considered other variables and their interactions in the models.

The extant literature indicates that previous studies examined the relationship between organisational culture and other outcomes, such as job satisfaction, innovation, traditional performance, HR practices, morale and cohesion. Nevertheless, these previous studies did not include innovation and OEP. However, the results of the current study will shed light on the critical cultural values. In addition, the present study examines the relationships of various model constructs and integrates innovation into theoretical frameworks. Therefore, these theoretical frameworks provide a comprehensive view of how organisational culture affects OEP.

In contrast, previous studies focused on the use of a single theoretical framework. In addition, these previous studies did not include individual-level analyses to determine motivation, individual values and not their ultimate impact on IndEP. However, the current study builds on previous research and recognises HRM as an asset in achieving organisational goals.

Previous studies also demonstrate the suitability of theoretical frameworks and measurement scales. In addition, previous studies demonstrate the statistical analysis appropriate for the current study and their suitability to achieve its objectives. Thus, this study examines the impact of CDT and CVF at the organisational level and also analyses the impact of Schwartz's values on IndEP. The present study also includes the effects of the extrinsic and intrinsic satisfaction factors in the SIV model.

The extant literature also revealed various relationships among innovation, organisational culture and OEP. The present study likewise shows the role of innovation as an intervening variable in the CDT and CVF models. Thus, innovation is an intervening variable in the organisational culture and OEP relationship. However, the reviewed literature revealed various findings relating to the role of innovation. The extant literature needs to clarify the role of innovation and whether innovation plays an interceding role as it does in the present models. For example, innovation intervenes in the relationship between organisational culture and OEP.

The reviewed literature also needs more evidence on the relationship between organisational culture and innovation. In addition, the reviewed literature needs to provide more information

on whether innovation acts as a mediator. However, the present study considers innovation to be a bridge to the relationship between organisational culture and OEP. Previous studies also examined the effectiveness of HRM policies on various aspects of the organisation because these policies can predict various outcomes. However, this study determines which cultural values predict the effectiveness of HRM policies. In addition, the present study includes the intervening role of HRM policy effectiveness as defined in the theoretical models.

Previous studies also examined the relationship between cohesion and organisational performance. In addition, previous studies presented disparate findings to those of the present study because their context was dissimilar. The present study contributes to the knowledge of South African ISO 14001-certified organisations by developing and testing models based on the CVF, CDT and SIV. Therefore, it is challenging to predict the outcomes of the current study because of the various findings of previous studies, contexts and model differences.

Furthermore, previous studies also revealed that cultural values affect various outcomes. Occasionally, these outcomes led to negative associations depending on the study context. In addition, some existing studies examined the role of labour relations in an organisation and deemed labour relations to have a moderating effect on organisational performance. However, the present study attempts to clarify the influence of labour relations as a moderating factor in the models. Therefore, labour relations are considered a moderating factor in the relationship between organisational culture and OEP and organisational culture and innovation.

This study also conducts analyses at the organisational and individual levels. Therefore, SIV predicts IndEP at the individual level. The study also included motivational features acting as mediating factors in the SIV model. However, the arrangement of the SIV values has an orthogonal structure. Thus, it is difficult to predict the outcomes, especially about the individual OEP.

Extant literature shows that demographic factors play a unique role in value preferences. Therefore, the present study includes demographic characteristics at an individual level. Thus, the results from the current study can assist in measuring a team's success, innovation and OEP. This study also highlights the role of teamwork in improving OEP, which is especially true in SA ISO 14001-certified organisations. Therefore, this study extends knowledge of various organisational factors, including organisational culture, labour relations, HRM policy

effectiveness, organisational cohesion and morale, innovation and OEP. In addition, the present study offers new approaches and models and aims to provide theoretical and empirical insights, especially about OEP. Thus, these insights will fill the knowledge gap because innovation remains a challenge in ISO 14001-certified organisations.

The present study also considers the importance of organisational morale and cohesion. Organisations can improve OEP by incorporating organisational morale and cohesion into the theoretical frameworks. Thus, organisations should also examine the role of individual values via SIV. Organisations should also include the mediating role of intrinsic and extrinsic satisfaction factors in predicting and improving indEP. Therefore, organisations will find it easier to innovate with knowledgeable employees.

Finally, this study tests the theoretical predictions and the role these factors play in the current context, as suggested in the reviewed literature. Furthermore, this study aims to assess the associations between variables in the theoretical models that include the mediation of innovation and HRM policy effectiveness on OEP, together with the moderation effect of labour relations.

The following section covers the objectives of the study.

1.5 Research Objective

The main research objective addresses a specific research topic or issue (Thomas & Hodges, 2010). This study aims to determine the extent of the function of mediators in the models, such as innovation and HRM policy effectiveness. The present study also aims to test the mediation of the relationship between organisational culture and OEP at the organisational level. Furthermore, the current study seeks to analyse whether labour relations strengthen or weaken this relationship in the models, such as the relationship between organisational culture and OEP. Another research objective is determining whether extrinsic or intrinsic satisfaction factors are mediating mechanisms in the SIV model—for example, the relationship between SIV and IndEP at the individual level of analysis. Finally, the present study aims to provide managers, academics and practitioners with new approaches when addressing environmental challenges such as innovation and OEP.

This study also evaluates these associations within theoretical frameworks, including those at the organisational level (based on CDT and CVF) and individual level (based on SIV).

The objectives listed below are operationalised, providing a basis for conceptual models and identifying potential gaps. This objective is especially true in SA ISO 14001-certified organisations. The following operational objectives drove this study:

At the Organisational Level of Analysis

- To define the research problem, context, methods and related concepts to answer the research question.
- To critically assess organisational cultural concepts and analyse how they are interrelated with other factors in models derived from CDT and CVF.
- To evaluate innovation within the context of organisational culture as an enabler to improve OEP within the conceptual models.
- To explore and gain insight into the mediating role of innovation and HRM policy effectiveness on the relationship between cultural dimensions and OEP and
- To explore and gain insight into labour relations' moderating role in the relationship between cultural dimensions and OEP.

At the Individual Level of Analysis

- To examine the relationship between demographic factors and IndEP.
- To assess the mediating role of Schwartz's values and motivation in the relationship between demographic factors and IndEP.

Finally, the present study attempts to add insights into various relationships defined in the models. These relationships include organisational values, innovation, organisational culture and OEP. Additionally, this study examines the direct and indirect associations of these factors. In addition, the present study examines the various associations and interactions in the proposed models of the CDT and CVF. Thus, the knowledge gained from this study could assist organisations in understanding the predictors of OEP and innovation. In addition, the present study also examines relationships at the individual level—for example, the direct relationships

between demographic variables and IndEP, the model also includes motivational factors and SIV as mediating factors. The proposed theoretical models and hypotheses relating to innovation will provide valuable knowledge. Additionally, the study findings will provide a basis for future research.

Therefore, the primary objective of this study is to develop appropriate models to answer the research question and associated hypotheses. These proposed models will use practical terminology to identify and explain the innovation subprocesses and components. Thus, the models will reflect organisational culture's internal and external influences. Further, these models provide future contributions to knowledge expansion in innovation, environmental management and OEP improvement. The objective of empirical research is to provide a variety of evidence demonstrating the importance of culture in improving OEP (Datuon, 2015).

The following section presents the research questions.

1.6 Research Questions

The first phase of any study is to develop the research question/s and its aims and objectives (Doody & Bailey, 2016). The proposed theoretical models serve as analytical tools for assessing the relationships of variables. Therefore, these models analyse the relationships of the variables to answer the research question by testing the hypotheses. Thus, the models contain hypotheses for the research question derived from several theories. The conceptual frameworks define various relationships—for example, the relationship between the independent and dependent variables (Mubarak et al., 2017). The present study aims to answer the following research question and test the associated hypotheses: To what extent are the cultural dimensions or values of the organisation related to OEP and innovation in South Africa ISO 14001-certified organisations?

The sub-questions below clarify the main research question leading to the derivation of hypotheses. These sub-questions translate the research question into the hypotheses in the proposed models discussed in the section titled Hypotheses below.

The extant literature shows concerns about environmental degradation and pollution due to rapid industrialisation. The existing literature also needs to exhibit more relevant information.

For example, an appropriate cultural dimension that promotes innovation and OEP. The present study sought to understand the relationship between organisational culture and OEP in this context. Therefore, understanding whether innovation is a mediating factor is necessary. Mediating factors are also known as transmission channels or paths that connect the dependent and independent variables in the relationship.

The following sub-questions arise from the primary research question delineated above:

- To what extent are cultural dimensions related to OEP?
- To what extent is innovation related to OEP?
- To what extent does innovation function as a transmission channel for OEP?
- To what extent do labour relations strengthen or weaken the relationship between OEP and innovation?

The current study develops a theoretical framework to answer this research question. This study also defines various relationships between the constructs and OEP, especially in South African ISO 14001-certified organisations. Additionally, certain constructs in the models function as mediating variables. For example, innovation and HRM policy effectiveness, while other constructs function as moderating variables in the models, such as labour relations. The present study uses partial least squares (PLS) models to analyse the theoretical CDT and CVF models and also includes the SIV model at the individual level. Consequently, hypothesis testing allows this study to determine these associations. These analyses also determine the true nature of the associations between the various proposed constructs.

SA is a pluralistic democracy with economic and environmental processes. Therefore, knowledge is not neutral but exists in the values of a society in time and space. SA also includes various religious and cultural groups (Coertzen, 2012). Furthermore, these social groups are dynamic. Therefore, cultural change also affects social outcomes and determines values (Soontiens & De Jager, 2008). Hence, no single model can cover all aspects of a culture (Mubarak et al., 2017). The extant literature shows the emergence of various national cultural models due to cultural differences in work environments. The existing literature also highlights various aspects of social beliefs, norms and values (Mubarak et al., 2017). The present study, therefore, analyses the relationship between organisational culture and OEP, including the

indirect or direct effects of innovation. Furthermore, the current study uses diverse levels of aggregated and individual analyses to gain better insight into OEP.

An organisation requires a positive organisational culture to improve its OEP. In addition, organisations should have a well-defined mission and vision with a strong leadership style (Mohamed, 2016a). Organisations, thus, should have an appropriate salary scale, equity, and personal autonomy and maintain a democratic political system. Horbach (2008) argues that it is essential to learn more about the drivers of innovation to improve OEP because innovation relating to OEP could differ from traditional innovation measures. González-Benito et al. (2005) failed to discover a relationship between environmental activities and firm performance. However, they did establish that relationships within the organisation rely on the current procedures. Such procedures encourage initiatives and focus on performance development.

Consequently, the study hypothesises that practices and OEP enhancements influence organisational relationships. Furthermore, an atmosphere of collaboration offers organisations superior OEP and competitive advantage. Therefore, organisational values should include cooperation, plurality, transparency and trustworthiness (Kucharska & Bedford, 2019).

Organisations should diagnose their current culture and leadership skills. In addition, organisations should examine their current performance levels, meet their current standards and adapt to future needs and priorities. Scholars and professionals are curious about the connections between competitive advantages, opportunities and innovation (Gonzalez-Benito & Gonzalez-Benito, 2005). The following section discusses the hypotheses arising from the research question.

1.7 Hypotheses

The present study addresses the research problem by deriving appropriate theoretical frameworks. Therefore, these frameworks assist the present study in understanding the relationship between cultural values and OEP. This research problem is from the main research question. Primarily, the current study attempts to understand the role of organisational cultural values and also seeks to determine the relationship between OEP and innovation. Secondly, it attempts to understand the mediating role of innovation and HRM policies' effectiveness in the

relationship between Organisational culture and OEP. Finally, it determines the relationship between an organisation's cultural values and OEP the moderating function of labour relations.

The present study creates a new context for OEP research because environmental challenges are critical issues organisations face when seeking OEP. In addition, the current study examines various mechanisms within the theoretical frameworks. The present study determines the association between organisational culture and OEP, especially among South African ISO 14001-certified organisations. This study also seeks to clarify how the different causal and interaction mechanisms, such as innovation channels and HRM policies, contribute to OEP.

Furthermore, this study seeks to fill the knowledge gaps regarding various associations. The current study also examines the interaction mechanisms between organisational culture and OEP. For example, the present study evaluates the relationship of HR policy effectiveness with OEP and innovation. This study derives hypotheses based on the research questions and literature review, together with specific hypotheses relating to the expected direction of this relationship. The reviewed literature assists this study in deriving these hypotheses..

1.7.1 Phase 1: Quantitative Research at Aggregate Level and Hypotheses (CDT and CVF)

The current study uses a quantitative approach to answer the research questions and hypotheses (see Figures 1 and 2 below). The CDT model in Figure 1 uses Hofstede's cultural dimension, and the CVF model in Figure 2 uses competing values as the cultural variables. The remaining constructs or variables are the same for both models.

The present study tests the various value orientations of CDT and CVF. However, the CDT and CVF hypotheses, theoretical models and measurement variables are similar. Thus, the models have the same constructs except for cultural values or dimensions. Therefore, this study proposes two alternative theoretical approaches to examine how the configuration of cultural values influences OEP, both based on CDT and CVF.

The following hypotheses are explored in detail below in Chapter Two – Literature Review.

H_1; H_2; H_3 & H_4: Organisational culture (Power Distance, Masculinity, Uncertainty Avoidance and Collectivism) positively and significantly associates with OEP.

H_5, H_6; H_7 & H_8: Innovation positively and significantly mediates the relationship between the organisational cultural dimension (Power Distance, Masculinity, Uncertainty Avoidance and Collectivism) and OEP.

H_9; H_{10}; H_{11}; H_{12}: HRM policy effectiveness positively and significantly mediates the relationship between the organisational cultural dimension (Power Distance, Masculinity, Uncertainty Avoidance and Collectivism) and OEP.

H_{13}: HRM policy effectiveness is positively and significantly associated with innovation.

H_{14}: HRM policy effectiveness positively and significantly associated with OEP.

H_{15}: Innovation positively and significantly associated with OEP.

H_{16}: Good labour relations positively and significantly moderate the relationship between the organisational cultural dimension and OEP.

H_{17}: Good labour relations moderate the positive and significant relationship between the organisational cultural dimension and innovation.

H_{18}: Organisational cohesion positively and significantly associates with OEP.

H_{19}: Organisational morale positively and significantly associated with OEP.

The following section covers SIV, which clarifies the link between individual values and IndEP. This study integrates the causal mechanisms of the extrinsic and intrinsic satisfaction factors that affect IndEP.

1.7.2 Phase 2: Quantitative Research at the Individual Level and Hypotheses (SIV)

The challenge of cross-cultural psychology is determining the structure of psychological constructs, for example, at the individual and national levels (Fischer et al., 2010). However, culture does not always measure an individual's values. In addition, the ecological level is the association or pattern at the organisational level. However, these associations may also differ from those at the individual level (De Mooij & Hofstede, 2010). Hence, the ecological level is the relationship between the organisation's employees. Employees share common and

harmonious cultural values at the organisational level. Therefore, a common purpose of this relationship is to achieve organisational goals.

Schwartz's theory examines an individual's functional structure and value type (Fischer et al., 2010), including differences in value preferences. However, these researchers argue that the interpretation of structures differs at different levels because the characteristics of individuals and societies also differ and conflict. Therefore, this situation implies that actions that advance one problem are likely to hinder the achievement of another. However, the conflict and compatibility between values determine their structure (Arieli et al., 2019). Thus, the current study evaluated the proposed SIV model and related hypotheses (Figure 3 below) to answer the research question.

The following section presents the hypotheses of the proposed theoretical framework relating to the research question.

H_1: Self-transcendence and Openness to change values are positively and significantly associated with intrinsic satisfaction factors.

H_2: Self-enhancement and Conservation values are positively and significantly associated with extrinsic satisfaction factors.

H_3: Demographic factors significantly and positively associated with an IndEP.

H_4 & H_7: Intrinsic satisfaction factors positively and significantly mediate the relationship between demographic factors and IndEP.

H_5 & H_6: Extrinsic satisfaction factors positively and significantly mediate the relationship between demographic factors and IndEP.

H_8 & H_9: Schwartz's values positively and significantly mediate the relationship between demographic factors and IndEP.

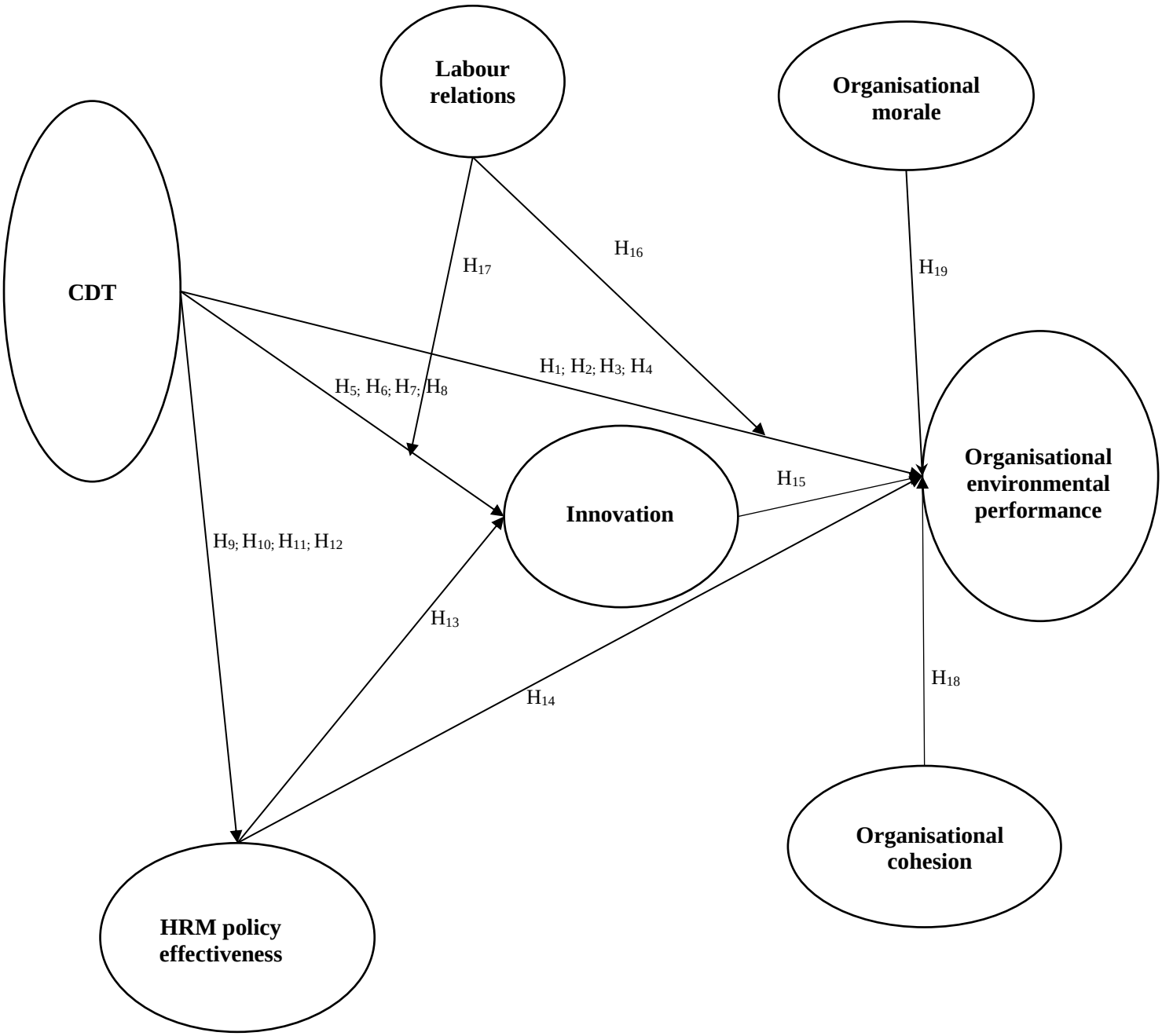


Figure 1: Model of Organisational Level of Analysis (CDT)

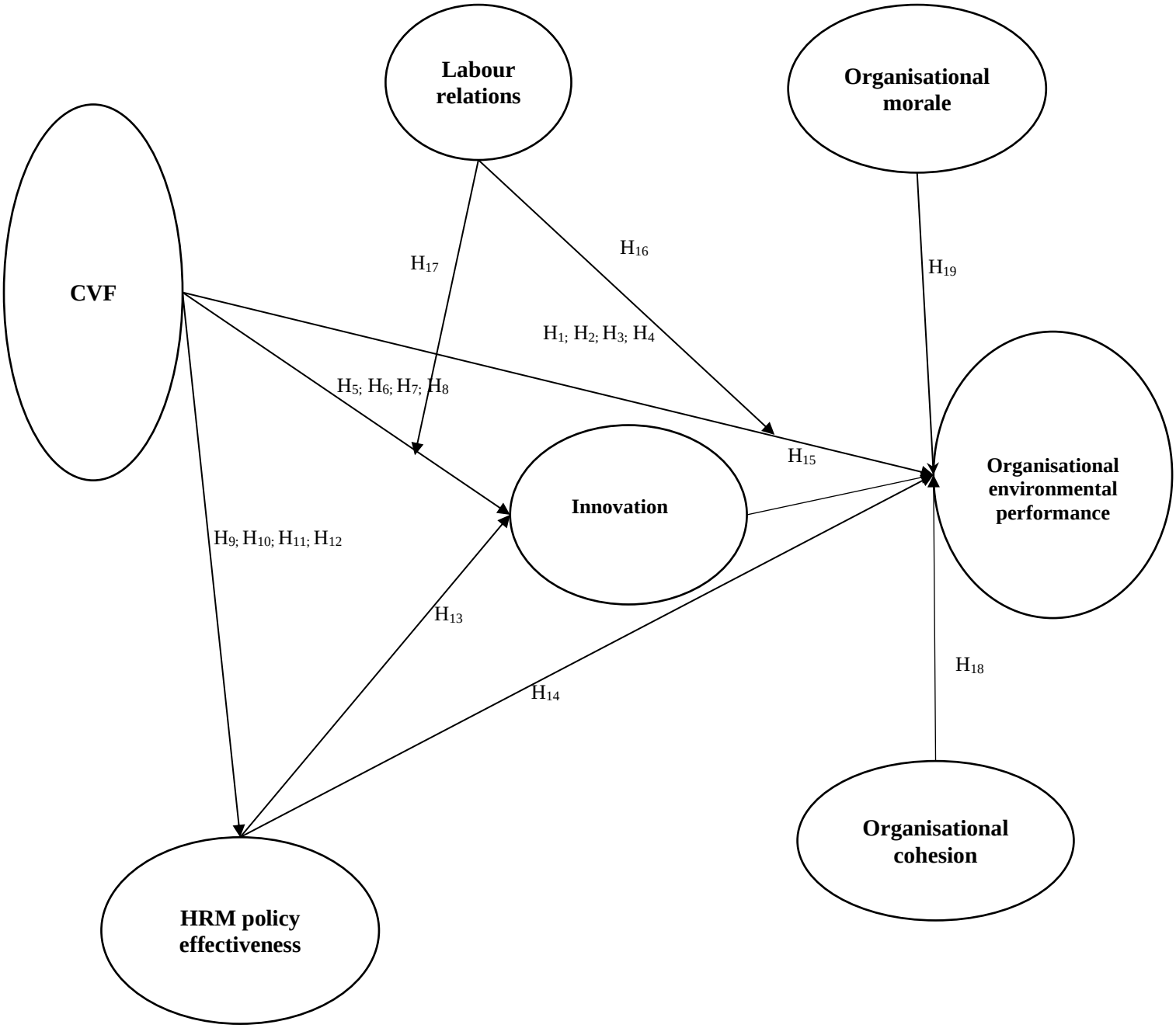


Figure 2: Model of Organisational Level of Analysis (CVF)

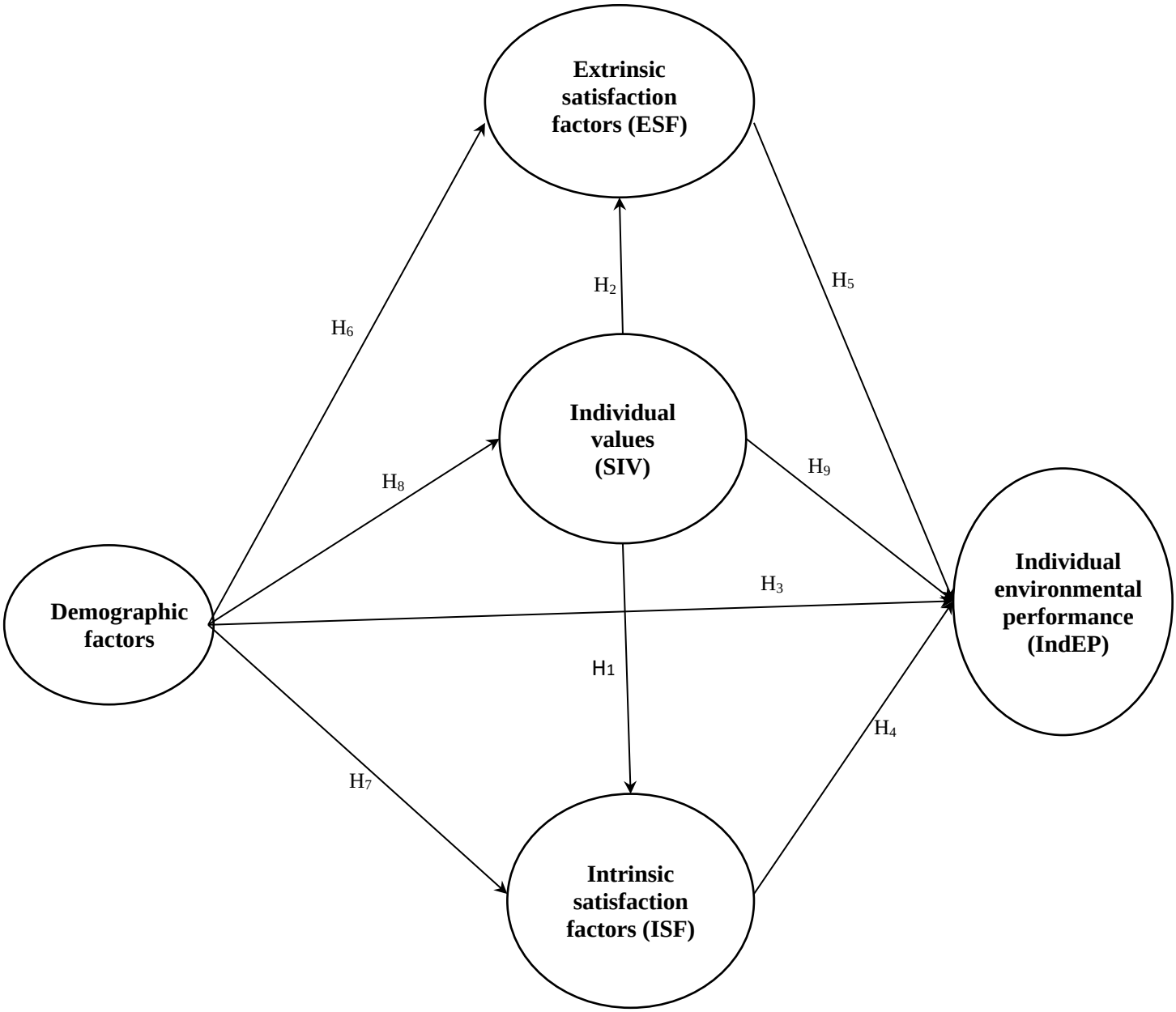


Figure 3: Model of Individual Level of Analysis (SIV)

1.8 Contributions of the Study

The contributions of this study are discussed under the sections Contribution to Theory, Methodological Approach and Practice.

1.8.1 Contributions to Theory

This study contributes to the application, validation and extension of theoretical models. These models entail innovation and OEP within ISO 14001 organisations in SA. The conclusions of this study contribute to theoretical and empirical comprehension of the relationship between organisational culture, innovation and OEP. The present study also contributes to the multilevel analysis, for example, analyses at aggregated and individual levels within an organisational culture study. The current study further determines the moderating effects of labour relations in models and innovation as a mediating factor and its effects. The present study also contributes to the current knowledge of the role and effectiveness of HR policies to the various associations.

In addition, no single theory underlies the current context of OEP research. Therefore, a theoretical justification is necessary for the underdeveloped mediators. A mediation relationship is beneficial when a significant relationship exists, e.g., between independent variables and mediators. A relationship also exists between the moderator and the dependent variables. Additionally, the study will show the associations between the independent and dependent variables (Lumbantobing, 2019).

The current study observes and discusses these relationships, as the reviewed literature reveals. Most previous cross-cultural studies assess the relationship between organisational culture and performance, but not OEP. However, in certain instances, these studies either include or omit the indirect effects, and the variables often considered were organisational morale and cohesion, innovation, industrial relations and HRM. Usually, these studies focused only on direct effects and omitted indirect impacts.

The present study proposes a research model that analyses various relationships, including the indirect effects. For example, the mediating effects on the relationship between organisational culture and performance, HRM policy effectiveness and innovation as mediators. The current

study also examines the impact of labour relations as a moderator. In addition, whether labour relations strengthen or weaken the relationship between organisational culture and OEP. Thus, including the moderating or mediating effects in the theoretical model improves the explanatory power.

Previous studies have used various theoretical frameworks, including variables supporting organisational culture and OEP. They, however, need to adequately explain the contribution of organisational culture and how organisational culture contributes to OEP. This study also contributes to research design and measurement, especially in studying the relationship between organisational culture and OEP. Additionally, future studies should consider the moderation and mediation effects in the models, particularly when determining the best impact of organisational culture on OEP.

This study extends the existing knowledge regarding the relationship between organisational culture, innovation and OEP. This study also identifies the conditions for the existence of such a relationship. An example is the role of innovation as a mediator, especially in South African ISO 14001-certified organisations. Furthermore, the results show the extent of correspondence between the study results and those in the reviewed literature. However, various reviewed studies reported contrasting findings due to methodological, models, variables and contextual differences. Additionally, the theoretical contribution of this study is to investigate the mediating influence of HRM practices' effectiveness and innovation on OEP.

Motivation plays a vital role in predicting IndEP. The study also includes Schwartz's core values at the individual analysis level and contributes to the theory by proving the boundary conditions of this theory. Furthermore, the study results either correlate or do not correlate with those theoretically predicted, as well as the findings recorded in the literature review.

1.8.2 Contributions to Methodological Approach

Culture is not static but dynamic. Therefore, culture is studied in various contexts and may affect dependent variables. Hence, these factors contribute to the various findings recorded in the reviewed literature. However, empirical studies of a longitudinal and cross-cultural nature differ because of the timing of the studies, context and geographical position. In addition, extant literature shows no previous empirical research that has a link between the variables in current theoretical models. Thus, these models do not aid the comprehension of the association between organisational culture and OEP. Some studies have involved the assessment of models entailing organisational culture and the mediating effect of innovation. As well as models analysing HRM policy effectiveness and the moderating effects of labour relations. Therefore, such knowledge might assist organisations in achieving the desired OEP. Contrastingly, this study's proposed alternative models of CDT and CVF will provide adequate comprehension of culture, predict OEP and understand the various interactions within these models. In addition, this study uses these alternative models to improve the comprehension of the phenomenon under study. In addition, there is a need to harmonise organisational cultures, innovation, HRM policy effectiveness and labour relations. Therefore, all contribute to a more comprehensive knowledge and understanding of OEP.

Additionally, the main methodological contribution of this study is its measurement, measurement scales and testing associations that include the conceptual application of organisational culture, innovation and OEP via the CDT and CVF. However, using knowledge from previous studies to achieve this study's research objectives was also important. In addition, this information assisted with evaluating variable associations, constructs and other interactions as defined in the theoretical models. Moreover, the reviewed literature contributed to the contextual approaches used in this study. The results of this study clarify that organisational culture predicts innovation and OEP.

Extant literature also contributed to this study's conceptual framework, study approach and statistical analysis. The data collection techniques contributed significantly to the results. Methodological knowledge gained from the reviewed studies contributed to formulating and testing the hypotheses at various levels of analysis. Thus, this formulation and testing of the hypotheses enable this study to offer valuable methodological insights for future research.

Finally, the study contributes to theoretical knowledge because of the relevance of applying theoretical concepts. However, the reviewed literature shows various theories developed in disparate contexts, including research models from developed countries. These theories assisted this study's exploration of the social and cultural differences within the South African context. In addition, successfully implementing these theories contributes to both theory and experience.

1.8.3 Empirical Contributions

The empirical contribution of this study provides extensive insights into various associations as defined in the models, for example, the association between organisational culture, OEP and innovation. Another empirical contribution is understanding the relationships between the above entities, including the effective and continuous implementation of OEP improvements in SA. Thus, this study could assist in analysing, initiating and developing innovation. Depending on the specific context and theoretical assumptions, this study can also be used as a practical tool to improve OEP.

This study offers profound empirical insights by providing refined theoretical frameworks to examine organisational culture and innovation and to improve the comprehension of organisational culture and innovation to enhance OEP. In addition, theories applied in studies conducted in Western and other countries have made it possible to study innovation in SA. Thus, this study used fieldwork descriptions and data techniques from these studies. Therefore, these techniques could aid researchers in conducting similar studies in other developing countries and elsewhere.

1.9 Chapter Sequence

1.

This section outlines the sequence of chapters in the study and summarises the content of each chapter.

Chapter One: Background to the Research

Chapter One presents the introduction and background of this study. This chapter also included the research problems, objectives and hypotheses. This chapter highlighted the importance of this study and described the overall research context. Therefore, the present chapter emphasised innovation and OEP associated with organisational culture. This chapter also described the core motivation of this study and highlighted the need for more knowledge regarding organisational culture. This chapter included individual values and innovations related to OEP.

Chapter One explored the theoretical context and defined the research problem. This chapter discussed numerous theories and their significance at various levels of the analyses. This chapter outlines the study's scope, aim and objectives and introduces the reader to the problem statement. It focused on previous studies related to this research problem and concluded with a description of the thesis structure.

Chapter Two: Literature Review

Chapter Two presents a review of related literature that provides a theoretical context to determine various research areas, issues and hypotheses. This chapter presents the tools utilised in this study, that is, the scale of the GLOBE study that operationalises Hofstede's CDT at the organisational level. This study also uses CVF at the organisational level of analysis. This chapter also discusses the SIV at the individual level.

Chapter Two outlines the theoretical context of the study. The studies discussed in this literature review show an association between organisational culture, individual values and innovation practices. The current study also describes the relevant contexts of other theories that affect the individual, organisational culture and organisational climate to improve environmental

initiatives. Additionally, this chapter identifies the theories and tests employed in previous research that guide the rationale of this study's research question.

Chapter Three: Research Methodology

Chapter Three outlines the research methodology to answer this study's research question. This study uses quantitative research methods that include statistical tests of hypotheses and scale tests. This chapter describes how this study tests the scales to ensure the reliability and validity of the results, as well as the relevance of statistical tests and their capacity to meet the study's objectives.

Chapter Three describes the philosophical and investigative approaches. In addition, this chapter discusses the methods and techniques used in this study. This chapter also explains the rationale for choosing these approaches and techniques. In addition, the current study uses these approaches to evaluate the proposed conceptual models. These conceptual models help to achieve the research objectives and respond to the research questions. Finally, this chapter discusses the study's sampling techniques, survey design, data collection steps, instrument scale, measurements and research ethics.

Chapter Four: Results

Chapter Four presents the statistical analyses, reports on the study outcomes and discusses the results of the model tests. This chapter also provides an in-depth analysis of the construct relationships of the proposed research models. The current study uses various data analysis techniques to evaluate the validity of the constructs and model predictive quality tests. This chapter evaluates the direct and indirect relationships between the independent and dependent variables. The present study also evaluates the effects of moderation and mediation in the models.

This chapter also determines the effects of core values at the individual level and includes the demographic characteristics to test the hypotheses. These hypotheses define the relationship between organisational cultural dimensions and various constructs. For example, CDT and CVF theories are at the organisational level of the analysis. The chapter also presents the results of the individual level of analysis (SIV).

Chapter Four describes how the three models assist in clarifying what motivates organisations to improve OEP, including individuals pursuing innovation to enhance OEP. This chapter also points out how a lack of knowledge regarding the research problem motivates this study, as well as a basis for developing the study's proposed theoretical model. These models assist in testing the hypotheses derived from various constructs to predict OEP. Finally, this chapter presents this study's findings, including the predictive quality of the models that ensure future studies can use these models.

Chapter Five: Discussion

Chapter Five outlines the main findings of this study and provides the primary outcomes and conclusions of its various tests. This chapter also presents the outcome of testing the relationship between organisational culture and OEP and mediation by innovation at the organisational level. The chapter discusses the relationship between the SIV and IndEP and the mediation results due to extrinsic and intrinsic satisfaction factors.

Chapter Five includes an extensive interpretation of the research results. In addition, this chapter clarifies the critical role of organisational culture and HRM policy effectiveness and innovation in predicting OEP. The study results also address the similarities and differences between CDT and CVF.

This chapter also elucidates organisational cultural values and the dimensions that relate to innovation and OEP. This discussion distinguishes between indirect and direct relationships of the models that enhance innovation and OEP. Furthermore, this chapter describes suitable or desired organisational cultures derived from the results of this study. Therefore, an organisational culture with suitable conditions for innovation is needed to improve OEP. This chapter focuses on the research questions, sub-questions and associated hypotheses. Finally, the chapter highlights how organisational culture and innovation practices improve OEP.

Chapter Six: Conclusions and Recommendations

Chapter Six presents the research results and offers suggestions for future research. This chapter also discusses the contributions of theory and practice and makes recommendations based on the findings. In addition, this chapter includes conclusions related to the study's scope, purpose, research question, sub-questions and hypotheses.

This chapter also explores direct and indirect interactions, for example, interactions between organisational culture and innovation to improve OEP. This chapter explains how this study employed a quantitative approach to answering the research question. In addition, this study used PLS-SEM to answer the research question and sub-questions.

Furthermore, this chapter presents the conclusions derived from the analyses of various interactions in the models. Therefore, the results support specific and significant hypotheses. This chapter also highlights significant findings that either reject or confirm original assumptions, as well as expectations or predictions derived in whole or in part from the literature review. In addition, this chapter presents the reasons for supporting these assumptions, together with the conclusions that detail the limitations of the research procedures and their implications. Finally, this chapter addresses the limitations and boundaries of the study results. In addition, this chapter outlines the applicability and interpretation of the results by providing areas for future research that can broaden and improve the current research results.

The following chapter discusses in detail the theoretical basis of the study and its related theories.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter expands on the introductory and background discussion in Chapter One. In addition, this chapter provides an overview of the relevant extant literature relating to organisational culture, individual values, innovation and OEP, especially about ISO 14001-certified organisations in SA. Therefore, this chapter builds on Chapter One by discussing the role of existing literature that defines the study's aims, objectives and measurement variables. In addition, the current study uses associated theories to answer the main research question. The present chapter begins with an introduction that outlines the importance of a literature review. This chapter also includes discussions on the various theoretical relationships of organisational culture, for example, innovation, OEP, organisational cohesion, morale and HRM policy effectiveness.

Chapter Two also discusses the role of innovation and HRM policy effectiveness as outlined in the models, labour relations and OEP, especially in South African ISO 14001-certified organisations. The current chapter reviews the CDT and CVF theories at the aggregate level. In addition, this chapter examines the CDT and CVF roles in predicting OEP and innovation and refers to related gaps in the reviewed literature. Additionally, this chapter discusses the predictions of Schwartz's values at the individual level and the conclusions drawn from the literature review.

Furthermore, this chapter describes the empirical findings of the previous studies from extant literature that guide the objectives of this study and address this study's research problem. This chapter next discusses the theoretical and conceptual frameworks of the solutions to the research problem. These conceptual frameworks help to achieve optimal organisational culture and individual values in answering the research question and include innovation for a higher OEP.

Globalisation, industrialisation, urbanisation, formal education, technological advances, democratic practices and population growth are changing organisational culture and individual values in South Africa. Furthermore, Schneider et al. (2013) argue that SA has a unique and diverse culture compared to other nations. Organisational culture varies across industries in SA because of workforce diversity's positive and negative impact on OEP and organisationally diverse workplaces. However, diversity is essential for the long-term survival of organisations

(Reddy, 2011) because each organisation has a unique culture and subculture. In addition, globalisation has spread capital and technology worldwide. Thus, globalisation relates to the distinct environmental characteristics of an organisation as well as the effects that enhance or degrade the natural environment (Panayotou, 2000).

Moreover, global environmental concerns transcend national and global boundaries (Najam et al., 2007). Therefore, globalisation must be environmentally, socially and economically sustainable and improve the well-being of all countries (Martens et al., 2010). However, globalisation also contributes to industrial development, mass consumption, increased energy demand and rapid population growth, all leading to global warming. Moreover, population growth contributes to pollution and the depletion of resources and affects many animal and plant species (Huwart & Verider, 2013).

Due to a political system, South Africa faces unique environmental challenges from its historical past (Mothee & Wright, 2014). Therefore, a political system enhanced the development of certain sections of the population due to an unequal distribution of resources amongst the different races. In addition, SA's economy is predominantly mining, manufacturing and agriculture (Mothee & Wright, 2014). The mining industry contributes to land degradation, air pollution and acid mine drainage that pollutes the surface and underground water systems (Mngomezulu, 2017). Intensive agricultural activities promote desertification because of toxic pesticides in agriculture (Francis & Webster, 2019. In addition, uncultivated land left uncovered results in wind and water erosion.

In addition, limited resources such as water and pollution due to exponential population growth, ageing infrastructure (sewage systems) and the inadequate capacity of sewage treatment plants cause water pollution (Molewa, 2013). As well as the increased energy needs, transportation, and extensive manufacturing activities all help to exacerbate SA's environmental burden. These increased challenges as a result of immigration due to poor border control (Tati, 2008). In addition, SA has poor spatial development, a lack of knowledge, clarity and appropriate policies regarding sustainable developmental goals and a lack of good leadership.

ISO-14001 is a voluntary system not regulated by legislation. Therefore, organisations usually implement it because of stakeholders' pressures and legitimacy. Accordingly, most organisations need more resources to address their environmental burdens. Thus, organisations

need help to improve their OEP. In addition, organisations need more competent personnel to address environmental challenges and improve OEP.

Furthermore, organisations must still incorporate environmental issues into their daily operational activities but seem to treat them as separate functionalities. Environmental management seems not to be part of organisational culture and management functions. Hence, such behaviour encourages employees to devalue pollution prevention, protection or conservation of natural resources, resulting in littering and the wasteful use of electricity and water. Consequently, SA seems to consume resources instead of preserving them.

A multilevel research approach is crucial for an organisational culture study and should aid in improving the OEP. Furthermore, the functions of organisational culture include internal integration and external adaptation because culture affects OEP (Zhang et al., 2011). Additionally, organisational culture assists the organisation to adapt to the external environmental conditions.

In addition, internal organisational changes lead to superior organisational performance (Rose et al., 2008). This study relies on various research theories from extant literature that assist it in answering the research question, for example, CDT, CVF, and SIV, namely: To what extent are the cultural dimensions or values of the organisation related to OEP and innovation in South Africa ISO 14001-certified organisations?

Lincoln (2010) indicated that CVF aids in analysing leadership style and organisational culture. It also provides a path for cultural change in an organisation for strategic initiatives. Therefore, it is necessary to use the CVF to assess various relationships in the conceptual model, for example, the relationship between organisational culture and OEP (Schneider et al., 2013).

CVF also focuses on the contradictions within an organisation between stability and flexibility and between internal and external environments (Yunus & Tadisina, 2010). CVF also describes the basis of thought-provoking tension, conflict and misunderstanding within the organisation. Therefore, organisational culture should be compatible with the new circumstances and challenges the organisation faces (Lindquist & Marcy, 2014). However, CDT is an alternative to CVF. Therefore, CDT describes the four fundamental problems all societies face, including challenges to the relationship between groups and individuals (Terlutter et al., 2006).

CDT also includes fundamental questions relating to social inequality and focuses on the social implications of gender (Terlutter et al., 2006) and real uncertainty-related problems. This practice is because uncertainty is inherent in social and economic processes (Terlutter et al., 2006). Hofstede's CDT is the basis for hypothetical associations within a theoretical model (Hofstede & McCrae, 2004). Furthermore, it explicitly attempts to capitalise on core employee values and organisational attitudes and behaviour, although empirical data is expected to be consistent with the theories (Hofstede & McCrae, 2004).

Notably, the GLOBE dimensions operationalised CDT at the organisational level. Accordingly, the GLOBE project focuses on research, planning, stages of action and evaluation, and plans for change. In addition, CDT focuses on empirical evidence (Evans, 2013). Hofstede's CDT was a consulting project with the International Business Machine (IBM) Corporation and focused on IBM employees' responses to surveys in various countries (Javidan et al., 2006). IBM's study dimensions are not random sets of factors but emerge from specific items in IBM's study and reflect the necessary cultural value systems in an organisation (Hofstede & McCrae, 2004). In addition, Javidan et al. (2006) indicate that CDT specifies the characteristics of constructs in the model. Therefore, measuring and writing items or developing appropriate measurement scales is necessary. In addition, Hofstede's research relies on teams of employees and managers from various countries to assess leadership issues.

GLOBE relies on middle-level managers to examine leadership styles (Evans, 2013). GLOBE selects middle managers as producers and consumers of leadership. Furthermore, CDT poses the challenge of choosing an appropriate level of analysis. However, Javidan et al. (2006) show that all GLOBE constructs converge at the aggregate level. In addition, these values are the manifest mean of the scale at the aggregate level. In addition, organisational and societal cultures support the implicit Leadership Theory. While individuals of various groups or occupations have different personalities, they have similar organisational attitudes and values (Schneider et al., 2013). Therefore, factor analysis assists in deriving CDT constructs.

This study follows a systematic and holistic research plan and arrives at a logical conclusion. Therefore, by understanding that there were information gaps in the literature regarding relationships in organisational, group and individual cultures, this study attempts to fill that knowledge gap. This study begins with a literature review of cross-cultural studies relating to

innovation and OEP. Therefore, the literature includes various relevant theories and quantitative analyses of organisations, individual cultures, innovation and OEP.

Furthermore, this literature review provided knowledge regarding innovation and its related concepts. The literature review provided conceptual and theoretical frameworks. This study used quantitative analysis to evaluate this study's intended relationships, organisational and individual culture and innovation relationships, and OEP in ISO 14001-certified organisations. This study also determines the relationships and constraints of OEP with cultural values per the CDT, CVF and SIV.

2.2 Innovation

This study examines the theoretical model of innovation programmes in ISO 14001-certified organisations in SA. Therefore, it is necessary to understand the factors driving innovation, such as comprehension, recognition, interpretation and implementation of innovation requirements in an organisation. Developing a scientific framework to describe and analyse the factors underlying innovation leading to a desirable OEP is also essential. The ideal framework explains the relationships between concepts in the model and effectively implements innovation initiatives relating to the environmental burden. Such initiatives assist organisations in achieving the desired OEP. Hence, innovation is a fundamental part of an EMS, as defined in the ISO 14001 standard.

Innovation depends on an abundance of scientific and technological knowledge. Organisations should determine the level of employees' innovation comprehension and train them with a tacit understanding of innovation, thereby influencing the success of existing EMSs in South African organisations. Measurable organisational and individual values result in effective and efficient management and innovation decisions.

Aycan and Gelfand (2012: p17) indicate the necessity of cross-cultural models for investigating the influence of societal culture on HRM practices and employment choices. This chapter discusses cross-cultural models influencing the assessment methodology and includes performance assessment and training methods for organisations and individuals. In addition, this study examines how the relationship changes between employees and organisations and between organisations. It also examines how society and organisational values, rules,

regulations and procedures impact individual thought processes, inspiration and emotions, and the constraints on society that frame an organisation's behaviour and choices (De Oliveira et al., 2012).

A person's beliefs, feelings, intentions and emotions are mediators in cross-cultural studies, and therefore, they mediate the indirect effect of society's culture on individual behaviour. (Aycan & Gelfand, 2012). Furthermore, globalisation increasingly influences organisational culture. Thus, organisational differences are unavoidable (Javidan et al., 2006). This study investigates the impact of individual attitudes on teamwork because team members' beliefs about justice are cross-culturally different, and the mediating effect of individuals' beliefs and attitudes. Such principles are determinants of organisational citizenship and product value (Aycan & Gelfand, 2012). Organisational culture can either support or obstruct organisational citizenship and product value (Khan, 2014) and consequently, it is a challenge for organisations to deploy EMS. In addition, innovation necessitates organisational and behavioural adjustments. Thus, innovation varies in its degree of success.

2.3 Organisational Culture and OEP

Numerous organisations have adopted and implemented ISO 14001 for various reasons. However, many need to gain knowledge of ISO 14001's potential business and environmental benefits, as well as its social responsibilities. There is no large-scale research on the scope of innovation programmes, especially within SA ISO14001-certified organisations. Innovation is crucial for improving organisations' environmental issues and performance. Thus, organisations need to understand the nature of desirable OEPs, especially innovation initiatives and the associated critical constraints.

Consequently, organisations should undertake measures to improve their OEP. Such as manufacturing recyclable materials, reducing solid waste and toxic substances, improving energy efficiency and minimising the release of pollutants into the environment (Weng et al., 2015). In addition, Zhu et al. (2008) posit that OEP relates to an organisation's productive capacity, including reducing air emissions, effluents and solid wastes and reducing the consumption of hazardous or toxic materials. Additionally, a reduction in environmental accidents improves OEP and conditions.

Acar and Acar (2014) report that organisations respond to internal dynamics that vary across organisational cultures and react differently to external environmental pressures. Quinn and Rohrbaugh (1981) developed a value model that analyses both the values of knowledgeable individuals and the culture of companies at various levels. However, CVF proposes that the various cultural variables are not random occurrences but relate to similar organisational variables. These cultural variables emphasise an organisation's success, e.g., employee well-being increases market share (Schneider et al., 2013).

Hofstede (1980) categorises countries' cultures according to five organisation-related cultural values: masculinity versus femininity, individualism versus collectivism, uncertainty avoidance and power distance and Confucian work dynamics (Wu, 2006). National culture influences cultural choices and organisational effectiveness (Nazarian et al., 2014). According to the CDT, three factors determine the behaviour of workers in the workplace –individual, organisational and national culture and values. Several authors support using organisational cultural practices as a cultural assessment tool (Abu-Jarad et al., 2010; Hofstede et al., 1990; Haus et al., 2004a; Pfeffer, 1997; Glunk & Wilderom, 1998). However, Hofstede's dimensions are more suitable for countries without ethnic diversity than for comparative research between countries with high cultural diversity, such as SA (Khastar et al., 2011).

Hofstede et al. (1990) also posits that values are concepts people learn early from their family, especially when their personality takes shape (Nazarian et al., 2014). Therefore, the behaviour of individuals defines an organisational culture, especially that of the founders or owners who form these values at various stages of the organisational development. Such behaviour affects employees in organisations. Thus, organisations must promote mutual respect between employers and employees (Nazarian et al., 2014).

Yu and Wu (2009) conclude that the CVF and OCAI are appropriate, valid and reliable scales to measure organisational culture that are superior to other scales used in empirical studies at the organisational level.

Cultural differences between management practices and institutions indicate the readiness of countries to meet the requirements of ISO 14001 (Boiral, 2007). An organisation has a unique configuration of practices and policies in its operations that relate to other organisational and people management characteristics (De Oliveira et al., 2012).

The existing literature indicates a need for more research on organisational engagement. This literature review reveals insufficient studies on the relationship between organisational engagement and performance and inadequate frameworks (Cui & u, 2012). One of the main concerns of organisations is to have a framework that explains how they create value. However, creating a framework to identify, measure and predict values is challenging in modern business environments because of the rapidly changing business environment that generates inherently ambiguous processes (Cameron et al., 2006).

The traditional measurements of the value added to a company's balance sheet focusing on productivity and profits must be revised in the current economy because they exclude the impact on the natural environment. Another challenge organisations face is the independent development of value-creation, measurement and prediction tools despite their interconnectedness (Cameron et al., 2006).

Generally, individuals' socialisation processes, education, and earlier experiences inform and reflect the development of their various values visible in an organisation's functional departments (Altintas, 2008). Institutionalisation makes explaining organisational ideals possible because social pressure forces organisations to comply with environmental legislation. An organisation becomes an industrial leader depending on how it responds to environmental issues (Behram, 2015). As well as how it focuses on the verification of OEP.

ISO 14001 organisations use indicators to monitor goals and improve environmental management and quality as progress measurements for sustainable development. Such organisations display superior environmental and social performance (Van den Berg et al., 2013), enabling them to create new business competition because of their superior environmental alignment capabilities (Branzei et al., 2002). Organisations with superior environmental management demonstrate that business leaders are aware of environmental sustainability issues and responsibilities that protect the natural environment and conserve natural resources (Wong et al., 2013).

Branzei et al. (2002) agree that tangible investments in EMSs improve OEP and reduce pollution levels. An effective EMS requires understanding how resources and energy flow throughout the organisation (Shin & Welch, 2012). ISO 14001-certification bodies respond to

the challenges of improving the environment through policy development, products, services and planning processes (Branzei et al., 2002) that assist them in addressing their economic, environmental and challenges. ISO 14001-certified organisations require tacit knowledge of sustainability performance levels to exchange good practices through benchmarking.

This study cites the various obstacles and motivations for innovation to improve OEP at both organisational and individual levels. In addition, the present study also defines the hypotheses as pathways of the conceptual models, statistically analyses these hypotheses, interprets the results, and compares them with literature findings. It is essential to note the organisational differences in environmental aspects and impacts and the implementation of innovative programmes. Organisations differ in their business focus and nature. As a result, the structure of the implementation programmes remains a challenge, especially regarding challenges associated with innovation. Hence, earlier theoretical formulations of organisational factors and their influence on performance are the basis for testing organisational culture hypotheses. OEP is a valuable indicator of an organisation's productivity. However, the extant literature shows inconsistency (Marcoulides et al., 1993).

2.4 Organisational Culture and Innovation

Organisational tension and cultural incompatibilities adversely affect environmental initiatives and organisational success, leading to inefficiency, stress, energy loss and poor OEP (Cameron et al., 2006). Organisations have various conflicting cultures that coexist to create a unique organisational culture (Datuon, 2015). Therefore, the primary function of the management team is to reduce possible disputes relating to cultural disparities and to ensure their organisations take swift corrective actions when deviations from agreed-upon standards arise (Dartey-Baah, 2013).

Organisational culture refers to employees' interactions in the workplace with a collective meaning and interpretation frames and modifications by the organisation (Zhu, 2015). This study highlights the relationship between the components of organisational culture and various organisational factors, for example, innovation in predicting performance management practices and associations between specific behaviours and organisational resource development outcomes. Employees must understand and validate these associations to improve their OEP (Zott & Huy, 2010).

This research study addresses specific questions about innovation in SA ISO 14001-certified organisations. Empirical evidence shows that organisational culture and individual values constrain innovation. Organisations require intercultural adaptation to innovate and improve their OEP. Therefore, organisations adopt behaviours that can achieve tasks that maximise positive impacts and minimise adverse effects.

Bansal (2002) provides two conflicting explanations regarding organisations that rapidly certify ISO 14001. Firstly, those who certify ISO 14001 differentiate themselves from their peers because it creates a competitive advantage. Secondly, ISO 14001 certification helps organisations to correct their tarnished image, especially that of significant polluters, because of pressure from external stakeholders, regulatory compliance and environmental concerns of communities. Therefore, organisations face challenges that encourage them to adapt their culture, goals and objectives to achieve a successful EMS (Cagnin & De Abreu, 2000).

Traditional cultures resist cultural changes because organisations hesitate to accept a new culture (Treven et al., 2008). Those with a collective culture exert unconscious but overwhelming pressure on employees' conformity and consistency by offering fewer opportunities to deviate from established standards, thereby hampering innovation (Dartey-Baah, 2013). Organisational culture also affects multicultural organisations by amplifying the gains and difficulties of their employees' cultural diversity. This study needs clarification of whether organisational culture indirectly impacts the OEP and if learning and competitive advantage in multicultural organisations are more significant than in monocultural ones (Trefry, 2006).

Individuals prioritise values, and the differences in these values affect human behaviour (Callaghan, 2014). These individual characteristics influence the speed of innovation adoption within organisations (Stanley et al., 2006). In addition, the culture of a country or region affects organisational culture and employees' motivation (Treven et al., 2008).

Appropriately aligning organisational management operations with the national culture, external environment, strategy systems, and the company's structure leads to a significant competitive advantage (Nieves & Mujtaba, 2006b). In addition, culture and values relate to organisational effectiveness and leadership. However, management varies from organisation to

organisation (Lindquist & Marcy, 2014). Thus, achieving organisational goals depends upon individual leaders' influence on subordinates (Siddique, 2015).

The lack of team cohesion leads to uninspired and disinterested group behaviour. Such distrust, disapproval, and apathy undermine the group's functioning ability (Salas et al., 2014). Conversely, collaborative opportunities enhance the cognitive capacity of a team to acquire and evaluate information. Thus, collaboration enables the team to comprehend more complex innovation processes and adjust to external opportunities and risks (Liu & Tao, 2015).

Organisational culture influences human capital formation systems, leading to competitive organisational performance (Ordevic, 2016 & Wong et al., 2013). HRM practices influence innovation and OEP and indirectly promote resource and skills development within the organisation (Nieves & Quintana, 2018). A lack of such practices diminishes employees' well-being and development, resulting in employees' unwillingness to undertake innovation-related tasks, thus delaying OEP improvement initiatives (Nazariana et al., 2017).

Job satisfaction among highly skilled workers mediates masculinity (Kucharska & Bedford, 2019) with long-term orientation, collectivism, and knowledge-sharing. However, other CDT dimensions also influence job satisfaction, except power distance. Power distance does not produce job satisfaction when other cultural dimensions affect it but mediates socioeconomic variables such as income and education. Previous studies have revealed various discrepancies regarding the effects of CDT on dependent variables. Although their results aid in determining the impact of the CDT on OEP and interaction mechanisms. Such as innovation and HRM policy effectiveness. Additionally, previous studies guide the impact of labour relations as an empowering or debilitating variable.

2.4.1 CDT

Organisational culture defines employees' identities and growth paths (Dartey-Baah, 2013; O'Riordan, 2015). Employees have various values and motivations for reaching their goals (Yahyagil & Otken, 2011). Hofstede's (1980) cultural dimensions include a long-term orientation, masculinity and individualism, uncertainty avoidance and power distance (DeLorenzo et al., 2015).

Hofstede's cultural dimensions (1980) describe a person's identity within a national setting (DeLorenzo et al., 2015). Therefore, individual culture is the underlying priorities of an individual that include the interests of individuals and their families (Vitell et al., 1993). The most profitable organisations are in countries with lower uncertainty avoidance and organisations with a lower power distance, high indulgence, and long-term orientation cultures (Martins & Lopes, 2016).

Furthermore, marketing innovations influence the association between organisational culture and bank performance (Aboramadan et al., 2020). Khana et al. (2020) demonstrate that organisational innovation mediates culture, the relationship between organisational performance and culture and the entrepreneurial approach and performance.

A solid organisational culture promotes performance (Nwibere, 2013; Sharma & Good (2013) and is crucial for profitability and corporate success. However, each organisation has a distinct set of cultural characteristics that relate to the organisation's unique difficulties and opportunities (Nadeem & Sully de Luque, 2017). Comprehension of the aspects of culture, thus, can assist organisations to locate, measure and manage organisational culture effectively (Pallavi et al., 2018).

- **Power Distance Culture**

The evaluator-respondent interaction in high-power distance cultures has risks of unreasonable and unfair performance criteria and ratings (Fening & Beyer, 2014). Such organisations evaluate society and employees' interpersonal factors more than the work results (Aycan & Gelfand, 2012). These features include human nature, harmonious interpersonal relationships, loyalty, trustworthiness, respect for superiors, willingness to work, awareness of obligations and duties, organisational citizenship and compliance, and contributions to team support. As a result, low- or high-power distance cultures affect rank.

Additionally, individuals in high-power distance cultures seek status symbols, for example, a large workplace, company car or position suitable to their efforts, devoted services and contributions. Contrastingly, low-power distance culture organisations prioritise equity and fairness (Aycan & Gelfand, 2012). Therefore, the power imbalance between organisational design and management becomes apparent (Fening & Beyer, 2014) because, in a high-power distance culture, decision-making is the managerial prerogative, and equitable involvement is an indication of a breach of managerial entitlements (Aycan & Gelfand (2012).

The most prominent cultural factor identified in Hofstede's research (1990) is power distance, which comprises the extent of acceptance and encouragement of unequal power distribution in an organisation (Ghemawat & Reiche, 2011). Power distance includes authority, social connection and charismatic perception of others while encouraging openness to organisational diversity and change. Therefore, this culture increases the willingness of employees to act under various conditions and directives. In contrast, self-management is a value that shapes leadership (such as freedom, creativity and independence).

In high-power distance cultures, beliefs in 'inequality' drive subordinates to rely on their superiors, leading employees to dread punishment if they query or dispute managerial decisions (Aycan & Gelfand, 2012). Therefore, the leadership values in a power culture impact organisational performance (Aktaş et al., 2011) because, while some employees will respect senior management, it can result in the disconnection and disloyalty of other employees. However, organisational cultures with considerable power expect and regard these traits as usual (Dartey-Baah, 2013).

In power-distance cultures, employees are not equatable to top management or their high status and certain perks (Aycan & Gelfand, 2012). However, idealised leaders are bold and persuasive and exhibit high moral behaviour using behavioural performance appraisal rather than task performance criteria (Siddique, 2015). However, power distance is a militaristic connection between managers and subordinates through a hierarchical structure emphasising task-based outcomes and a limited spectrum of employee responsibilities (Aycan & Gelfand, 2012; Fening & Beyer, 2014).

Information-sharing, training and teamwork are all practices directly related to employee performance. However, Celma et al. (2018) argue that teamwork and internal information are more important than training. Power distance is the extent to which employees agree with management's judgments. Thus, it defines employees' involvement in decision-making and influences organisational decisions (Mohammed et al., 2013). Consequently, power distance organisations optimise output and efficiency by not overworking employees, which is critical to employee well-being (Showkat et al., 2019).

When an organisation allows employees to explore and voice their viewpoints, it increases the possibility of generating innovative ideas (Nadeem & Sully de Luque, 2017). Businesses can increase their innovation and OEP by managing a power distance culture. However, organisations have varied preferences and power distance values influencing creativity and OEP.

In addition, low power distance organisations encourage flexibility and foster creative ideas and innovation, resulting in an improved OEP without employees abusing these liberties.

- **Collectivist versus Individualistic Culture**

Employees in an individualistic culture have high autonomy (Dartey-Baah, 2013). However, companies have diverse workforces with varying aims and ambitions. Therefore, managers must support organisations' collective expectations. This practice includes goals through cooperation, neutrality and non-hostility (Jariya, 2012). However, in an individualistic culture, employees' motivation is stimulated through recognition and rewards that fulfil and enrich their lives. Therefore, the organisation evaluates the achievement of the performance targets by

deciding to invest in employees by considering whether individual efforts contribute to a high-performance standard of the organisation.

Individualistic management favours self-determination by encouraging employees to command their destiny by promoting their freedom of thought and expression and right to independence and excellence (Aycan & Gelfand (2012). Hence, these organisations recognise and respect the individual variations of the employees by addressing the emerging inefficient organisational structures and systems (Van Ness et al., 2005).

In a collectivist society, employees identify with a collective or team and accept team decisions for loyalty and security (Mohamed et al., 2013). In addition, collectivists perform significantly better in group settings (Aycan & Gelfand, 2012). Consequently, collectivists prioritise high collaboration and have low power–distance values (Mustafa et al., 2017). These employees focus on personal learning when there is cooperation (Kucharska & Bedford, 2019) and readily exchange information when they experience job satisfaction. Thus, a collectivist orientation is congruent with employees' desire to work together instead of autonomously (Mustafa et al., 2017). In contrast, individuals who favour individuality perform well in individualistic cultures.

Therefore, collectivist cultures consider individuals as belonging to a group rather than oneself (Vitell et al., 1993). Collectivist management philosophies value national and family loyalty, wisdom, age, tradition and common properties (Aycan & Gelfand, 2012). Therefore, this culture requires collaboration, participation and effort when promoting innovation values. Cooperative behaviour and joint decisions positively correlate with innovation and OEP, especially when collective efficiency is high and increases the benefits of information-sharing on team creativity (Liu & Tao, 2015).

The dominant collectivist cultural norms and values are humility and group primacy, which contribute to collective harmony. However, individual self-esteem challenges the group's tendencies and harmony (Kastanakis & Voyer, 2014). According to Waldman et al. (2006), companies prioritise institutional collectivist ideals. However, they hurt stakeholder relationships and community welfare. Individualistic employees are more susceptible to rewards because of their solo performance rather than as a collective (Fening & Beyer, 2014).

Seelos and Mair (2012) recognise intrinsic and extrinsic motivation as the underlying factors for creative processes. These motivations include autonomy, mood, reward systems, task intensity, resource availability, safety cues and contextual features. They rely on stimuli within and outside the organisation and motivational processes. For example, those that compare problematic thinking with intuitive and unconscious processing (Van Ness et al., 2005).

According to Tetteh et al. (2021), employees in collectivist cultures prefer to work and identify in a group environment that develops positive interactions among group members. In contrast, individualistic cultures value freedom and flexible social interactions centred on self-interests rather than conforming to the demands of others or groups. (Tetteh et al., 2021).

In addition, collectivist organisations rely on teamwork and cohesion. However, some employees will keep the company's objectives and regulations intact. Thus, such employees will not innovate and improve their performance due to group and organisational loyalty. However, individuality values encourage creativity because of the recognition and rewards relating to innovation. Thus, such compensation should match employees' expectations. In addition, the misalignment of creativity and innovation with recognition and rewards adversely impacts innovation and OEP.

Furthermore, some organisations favour connecting high-power distance, rules and laws. Thus, such policies and procedures are at the heart of EMS processes, as mandated by ISO14001. However, this culture must be more conducive to innovation and requires initiative and creativity.

- **Masculine versus Feminine Culture**

Another aspect of Hofstede's work (1980) is the contrast between masculinity and femininity. The traits of a solid masculine culture include gender diversity, assertiveness, competitiveness, and a desire for material success and economic growth. By contrast, the characteristics of a feminine culture include tender masculinity, personal relationships, nurturing others and prioritising employees' well-being and quality of life. Therefore, feminine culture does not focus on the net results of the organisation (Andrijauskien & Dumiuvien, 2017; Andrijauskien & Reiche, 2011).

The degree of masculinity in society affects managerial attitudes and leadership styles (Fening & Beyer, 2014), dispute resolution and motivators. Managers have various masculine and feminine traits. Thus, organisations with a predominantly masculine culture reveal less social and environmental information because of lower social and environmental demands (Adnan, 2009). However, building rigorous work-oriented environments in feminine organisations is difficult because of lower employee enthusiasm and conflict (Fening & Beyer, 2014).

Historical and social processes influence organisations to align HRM strategies with local cultures whilst respecting individual values. Masculinity predicts environmental commitment in the organisation (Petruzzella et al., 2017); thus, societies with low masculinity prefer cautious behaviour, modesty and tolerance, solidarity, and quality of life (Dangelico et al., 2020). According to Petruzzella et al. (2017), masculine organisations are less likely to actively care for their environmental setting, although they are receptive to public opinion and social issues. Ugoani (2016) also discovered that organisational culture influences employee relationships.

In a globalised economy, competition constantly increases between companies. Green or eco-innovation contributes to companies' competitiveness and sustainability. Corporate sustainability reporting uses environmental protection schemes because consumer pressure leads to innovation (Van den Berg et al., 2013). Therefore, organisations need an additional source of valuable skills that enable them to adapt to the rapid pace of innovation and competition (Yassien, 2015), resulting in a sustainable competitive advantage that enhances an organisation's resources and capabilities. Organisations make their resources and capabilities opaque to prevent their imitation by competitors and disguise their value-added attributes (Lado et al., 2006).

Innovation is an organised way to discover and apply new methods to improve work processes and includes sequential innovation that brings about new ideas (Khan et al., 2018). Rehman et al. (2021) indicate the existence of the relationship between intellectual capital, human resource management and innovation. However, intellectual capital and HRM relate to OEP, a complex concept.

Knowledge underpins the importance of an organisation's strategic relevance to its competitive environment because it assists them in achieving a competitive advantage (Oliver, 2015). Ullah

et al. (2022) maintain that companies engage more in innovation when society demands CSR, which also requires the inclusion of a partnership with environmental non-governmental organisations (NGOs).

Managers in masculine cultures focus on organisational outcomes (Mohamed et al., 2013). Hofstede's (1990) depiction of masculine societies emphasises competitiveness, success and performance (Grenness, 2015), with accomplishment being the main factor in masculine culture (Radziszewska, 2014). Employees strive to enhance their performance in a masculine culture through boldness and confrontation (Mohamed et al., 2013). Thus, a successful strategy in masculine culture is to encourage individuals to adopt a self-centred approach that encourages efforts that aim at personal achievements rather than common goals (Mustafa et al., 2017). However, Miska et al. (2018) found that gender equality (feminism) positively influences corporate sustainability practices. Money and material belongings are essential for a masculine society instead of quality of life and relationships (Grenness, 2015). In contrast, individuals with high feminine values perceive themselves as more integrated with others or groups. However, social circumstances vary according to a group's perspective (Mustafa et al., 2017).

In addition, employees in organisations with a high masculinity culture are motivated, assertive, competitive, and ambitious and value their achievements and performances. Additionally, inventiveness is a sense of accomplishment because they are more responsible for their destiny (Tetteh et al., 2021). Consequently, such organisations quickly initiate innovation and OEP because their employees undertake challenging tasks without undue restraints or external controls.

Values influence individual and collective behaviours at various levels of social organisation (Van Riper et al., 2018). An organisation's culture determines how well its employees perform. It can improve OEP by fostering innovation (Odour, 2018) or undermining innovation and OEP, depending on the values it promotes (Naranjo-Valencia et al., 2016).

Organisations require human centricity and a supportive climate, including information sharing, to foster collaboration and warmth (Nadeem & de Luque, 2017). Employees prefer comfortable workplaces and a conflict-free climate characterising feminine societies,

especially when activities match employees' caring, nurturing and collaboration values. Thus, these feminine organisations are more likely to innovate and improve their OEP.

- **Uncertainty Avoidance Culture**

At the macro level, accepting uncertainty requires tolerance for change, while risk is also essential for innovation. In contrast to organisations with low uncertainty avoidance, those with high uncertainty avoidance have multiple formal internal regulations governing organisational behaviour. Such as employees' work processes encourage managers to exercise freedom and discretion in decision-making processes (Dartey-Baah, 2013). Therefore, uncertainty avoidance also affects management, planning patterns and job motivation (Fening & Beyer, 2014).

According to Van Ness et al. (2005), corporations minimise uncertainty by reducing ambiguity and seniority-based incentive systems. Furthermore, uncertainty avoidance promotes risk-taking and provides organisational change opportunities. Organisations with less power distance have fewer hierarchical structures suitable for avoiding uncertainties, decreasing job ambiguity, and developing thorough policies and processes to manage employee activities. A country and organisation that attempts to minimise uncertainty does so to keep its levels of insecurity as low as possible (Kolesnik, 2013).

Societies that avoid uncertainty are insecure, emotional, aggressive and intolerant. However, organisational cultures with low uncertainty avoidance are contemplative, less emotional and aggressive, and accept more personal risks. In addition, such organisations are reasonably tolerant (Vitell et al., 1993) and prefer unstructured and ambiguous conditions. Therefore, such organisations favour risk-taking, innovation and acceptance of multiple opinions and options (Ghemawat & Reiche, 2010).

Organisations also have unconscious distinctions between cultural values, attitudes, beliefs and conventions. These factors implicitly indicate a person's psychological culture (Aycan & Gelfand, 2012). A strong organisational culture emerges when employees' values fit with the new organisational values (Nieves & Mutjaba, 2006b).

Culture influences the formation of individuals' attitudes and values. For example, leaders' behaviour, especially when faced with complicated and essential decisions that extend beyond those of the organisation, forces them to reflect on their cultures' values before making such decisions (Altintas, 2008). According to O'Riordan (2015), culture provides implicit operating norms that give personnel a sense of identity and stabilise social systems.

Furthermore, organisations within the national population can quickly assimilate the national culture. This practice is affected by the organisation's size and complexities, the nature, activities, stakeholders' expectations, requirements and employees' personalities (Waisfisz, 2012).

Finally, the CDT influenced GLOBE's Cultural Theory and implemented Hofstede's ideas. Therefore, this study develops comprehensive intercultural theoretical models from these theories and empirically uses the GLOBE model to confirm its constructs and scales (Javidan et al., 2006).

The following section examines GLOBE's Cultural Theory and its effects.

2.4.2 GLOBE Theory

Globalisation increases intercultural management and interconnectedness. Thus, globalisation necessitates a more profound understanding of the cultural effects and intercultural management (Shi & Wang, 2011). Culture can either aid or impede international trade and foreign direct investment (MacDermott & Mornah, 2015). This study uses the GLOBE concept of culture in CDT; this model includes human resources, innovation and productivity (House et al., 2004a). Nevertheless, cultural identities differ across countries and affect leadership, attitudes, people management, strategy formulation, and behaviour that determine work performance (Nieves & Mujtaba, 2006b). Cultural complexities and ubiquity improve human behavioural knowledge and culture. At the same time, national cultural indices measure cultural identity and characteristics (DeLorenzo et al., 2015).

GLOBE's theoretical structure of GLOBE originates from Hofstede's (1980) and McClelland's (1987) motivational theories that include nine theoretical cultural value dimensions (House et al., 2002). In addition, GLOBE measures culture as behaviours and values, such as culture in

various institutions, organisations and communities (Shi & Wang, 2011). Furthermore, Hofstede's (1980) work inspired GLOBE researchers and includes the selection of criteria for analysis and maintains specific factor labels (Shi & Wang, 2011). Therefore, this study uses the GLOBE measurement scale because it is adequate for analysing an organisation due to its simplicity and widespread use. However, this study uses Hofstede's (1980) original cultural labels. The cultural components of GLOBE are as follows (House et al., 2004a).

Assertiveness refers to individuals' levels of conflict, hostility and correctness within communities.

Uncertainty Avoidance refers to the degree to which employees desire order, consistency and structure. Organisations use protocols and formalised laws to avoid unpredictability (House et al., 2004a). Moreover, uncertainty avoidance is consistent with established rules and an aversion to conflicting ideas. Behaviours and conviction relate to the ultimate truth and the accomplishment of expertise to eliminate uncertainty by promoting creativity and innovation (Hofstede, 1980; House et al., 2004a). Managers' values affect managerial decisions (Altintas, 2008), especially regarding innovation and innovative solutions to various environmental challenges and improving the status quo.

Institutions create rules because of intolerance to ambiguity through implementing a planning process to manage unpredictability (Budner, 1962). This practice also includes a positive association between planning and investment returns (House et al., 2004a). Organisations have planning or project management strategies that can prevent significant uncertainties (Nakata & Sivakumar, 1996). However, these can be inappropriate for product design or commencement.

Uncertainty avoidance coincides with future orientation because it relates to planning and preparing for the future. It also uses regulations, technology, rules and policies to cope with ambiguity (House et al., 2004a). Moreover, in the GLOBE study, higher uncertainty avoidance values relate to teams, and leaders have a self-protective rather than charismatic leadership style. However, HRM practices in SA are rigid and regulated and include the guidelines associated with the execution of affirmative action to address inequalities caused by past discrimination (Bendix, 2001).

A high uncertainty avoidance culture involves structured activities and task-oriented management, such as intellectual activities relating to fundamental certainty and truth. However, low uncertainty-avoidance culture leads to intellectual activity generating usable knowledge (Hofstede, 1980). Therefore, GLOBE research projects have examined individualism and collectivism at the organisational and social levels (Gelfand et al., 2004).

Individualistic cultures favour individuals over groups, while collective cultures value common goods and group loyalty (Ghemawat & Reiche, 2011). Individualistic societies use reward systems and management strategies to inspire employees (Fening & Beyer, 2014). Members of collectivist societies, however, are either internal or external to the organisation or group (Ghemawat & Reiche, 2011). Thus, employees submit their interests to their internal groupings (for example, the family) because of their commitment to the group. Consequently, individuals from various cultures have different perspectives that could affect group cohesion.

According to Hofstede's (1980) studies, individualistic societies favour lower power distances (Ghemawat & Reiche, 2011). In addition, GLOBE demonstrates that direct leadership behaviour has low involvement and high close supervision, especially in collectivist societies and in power distance societies (Aycan & Gelfand, 2012). GLOBE observes substantial relationships between social and organisational values (Ghemawat & Reiche, 2011). Therefore, individualistic culture can positively or negatively influence innovation depending on the association between social and organisational values.

Power distance – this is another cultural dimension of the GLOBE. Power distance results in an unequal allocation of power in societies or organisations. Thus, the individual accepts and supports authority, power differences and status privileges (Bankston, 2004; Ghemawat & Reiche, 2011). The power distance of CDT comes from Mulder's (1971) concept of power (House et al., 2004b). In high-power distance organisations, managers provide staff with clear instructions and offer limited space for different interpretations (Dartey-Baah, 2013).

The first six GLOBE dimensions are from Hofstede's (1980) study. These dimensions are assertiveness, uncertainty avoidance and collectivism. The power distance and individualism dimensions arise from Hofstede (2001) (Terlutter et al., 2006). Furthermore, GLOBE's factor analyses split collectivism into institutional and group collectivism (Terlutter et al. 2006, p432).

According to GLOBE, 'Collectivism I' (institutional collectivism I) is an institutional and social practice supporting and rewarding collective resource allocations. Such collective activity is deemed to be above individual allocation and action (House et al., 2004a). Institutional collectivism defines the degree of division, pride and unity within groups and includes honour and devotion within families and organisations. The cohesiveness of individuals toward groups is termed 'Collectivism II'. This concept is also known as group collectivism (House et al., 2004a). However, individuality relates to innovation due to independent thinking and creativity (Nakata & Sivakumar, 1996), while in collectivism, a regulated and resource-oriented approach promotes OEP (Nakata & Sivakumar, 1996).

Gender egalitarianism describes the degree of gender role variation (House et al., 2004a). This study acknowledges the existence of specific dimensions but omits them. Thus, the dimensions of the GLOBE model inspired the theoretical model used in this study. One of the dimensions omitted from this study is 'future orientation', which refers to the degree of engagement in forward-thinking behaviour and includes planning, investing and deferred gratification (House et al., 2004a).

Performance orientation refers to the degree and effort of performance development and excellence, including encouragement and rewards (House et al., 2004a). This study omits this dimension in the model.

Human orientation – this practice involves treating and supporting people and includes reward equity, generosity, conviviality, caring and kindness (Kabaskal & Bodur, 2004; Terlutter et al., 2006). This study also omits this dimension in the model.

Ambitions, challenging goals and performance outcomes measure performance (Javidan et al., 2006). Consequently, countries with performance-based cultures expect higher performance levels, resulting in successful innovation (Diehl et al., 2008; Javidan et al., 2006).

The GLOBE Theory suggests that certain cultural practices contribute to economic competitiveness while cultural frameworks enable cultural comparisons. In addition, such practices are a nation's primary tendency, and unique group members perform them. Fundamental values and behaviours are relevant (Ghemawat & Reiche, 2011), e.g., innovation

necessitates collaboration while individual ambitions compete. This study examines these tensions.

The GLOBE Theory is a structural contingency theory which states that organisations should satisfy the current requirements for survival. The GLOBE Theory also includes the effectiveness of tolerating cultural diversity that allows the organisation to function beyond its borders to maximise the economic benefits (House et al., 2002).

As a result, comprehending the relationship between an organisation's culture and individual behaviour and values is critical. Organisational culture is a set of beliefs that govern behaviour that includes employee performance expectations (Putriana et al., 2015). Therefore, comprehending how individual values and behaviours influence organisational culture and innovation is essential for success. The following section discusses the CDT and OEP.

2.5 CDT and OEP.

Various organisational cultures lead to different performance outcomes (Acar & Achar, 2014). Therefore, organisational culture significantly affects performance (Ahmed & Shafiq, 2014). Cultural constraints create barriers to the effective implementation of performance management (Reddy, 2011). Foreigners perceive that a country's citizens share a visible national character (Hofstede, 1980), whereas, in SA, the circumstances differ due to cultural diversity.

The relationships between business culture, resources and knowledge differ in competing countries due to the underlying cultural norms. Institutions and resource-based theories show that organisations dissimilarly apply ISO 14001 standards because of their various internal resources, guidelines and needs. This diverse implementation may lead to differences in OEP responses to ISO 14001 standard requirements. Socialisation processes, education and earlier experiences affect the development of individuals' values, which applies to the members of an organisation's functional departments (Altintas, 2008).

Implementing an EMS involves policy and operational factors that affect environmental, economic and social benefits (Cagnin & de Abreu, 2000). The reviewed literature provides inadequate empirical research on organisational culture, especially concerning OEP and

organisational culture delineation when addressing environmental challenges. In addition, organisational culture should associated with OEP outcomes in South African ISO 14001-certified organisations. Therefore, the impact of culture on OEP needs to be clarified (Carson et al., 2016).

Organisational culture has a direct positive impact on OEP and an indirect and favourable impact on employee engagement (Nikpour, 2017). Individualism and uncertainty avoidance affect organisational performance (Wahjudi et al., 2018). According to Jie et al. (2020), uncertainty avoidance and power distance benefit employees' performance because avoiding uncertainty can improve job performance (Hasan et al., 2020). Therefore, individualism and uncertainty avoidance have a significant influence on OEP.

2.5.1 Collectivism and OEP.

Collectivism enhances engagement by fostering new ideas, teamwork and performance improvement (Afaneh et al., 2014). Collectivist businesses focus on fostering and rewarding communal activities (Van Ness et al., 2005). For example, an individual compares and observes other team members' behaviours and seeks to replicate them, even if they are not performing satisfactorily. The culture of cohesion affects both teams and employee performance (Mohamed et al., 2013). However, whether employee imitation promotes positive or negative organisational innovation is unclear—consequently, the following hypothesis.

H_1: Collectivism is positively and significantly associated with OEP.

The following section discusses masculinity and OEP.

2.5.2 Masculinity and OEP.

A review of the extant literature reveals the various effects of masculine culture, such as how it affects OEP. Dan (2019) states that masculinity insignificantly relates to OEP. However, Dangelico et al. (2020) report that masculinity affects OEP directly. Kim et al. (2022) show that a masculine culture influences performance-based pay effectiveness.

Miska et al. (2018) show that gender egalitarianism negatively predicts corporate sustainability practices. At the same time, Ogundajo et al. (2022) report that masculinity insignificantly relates to corporate social performance. The relationship between masculinity and corporate sustainability is insignificant (Halkos & Skouloudis, 2017). While masculinity negatively influences CSR performance (Koprowski et al. (2021).

In addition, an appropriate culture enhances OEP and innovation. However, whether culture affects OEP directly or through innovation (Naranjo-Valencia et al., 2016), it also needs to be clarified whether an inappropriate culture may conflict with organisational goals. Organisations must understand employees' attitudes and practices to improve their OEP and management effectiveness (Nieves & Mujtaba, 2006a). However, in this study, it is unclear whether masculinity predicts OEP; thus, the proposed hypothesis is as follows:

H_2: Masculinity is positively and significantly associated with OEP.

The following section discusses power distance and OEP.

2.5.3 Power Distance and OEP.

Grenness (2015) demonstrates that power distance is inversely related to economic performance. The extant literature also contends that a high power distance impacts performance management (Al Jerjawi, 2016). Employees improve their performance by following supervisors' directives in high-power distance organisations (Mohamed et al., 2013) because they perceive supervisors as knowledgeable regarding organisational goals. This study, thus, proposes the following hypothesis:

H_3: Power distance is positively and significantly associated with OEP.

The following section discusses uncertainty avoidance and OEP.

2.5.4 Uncertainty Avoidance and OEP.

An uncertainty avoidance culture adheres to established policies and procedures to avoid unpredictability (Mika et al., 2018) because environmental degradation and pollution result in practices that promote an unsustainable economic, social and environmental future. According to Dangelico et al. (2020), uncertainty-avoidance societies avoid destroying environmental conditions that could endanger their lives. Ogundajo et al. (2022) indicate that uncertainty avoidance is positively associated with corporate social performance. Arshed et al. (2022) argue that uncertainty-avoidance societies are more conscious of energy consumption and avoid harming the environment. Furthermore, Petruzzella et al. (2017) argue that uncertainty avoidance organisations have a higher environmental commitment due to the rigid laws and regulations in these organisations. Miska et al. (2018) found that uncertainty avoidance predicts sustainability practices. Koprowski et al. (2021) reported a significant relationship between low uncertainty avoidance and performance. According to Halkos and Skouloudis (2016). uncertainty avoidance negatively and significantly relates to CSR, and there is a negative association between uncertainty avoidance and corporate sustainability reports. Based on the discussion above, this study needs clarification on whether uncertainty avoidance positively or negatively predicts OEP. Thus, this study proposes the following hypothesis:

H_4: Uncertainty avoidance is positively and significantly associated with OEP.

The following section discusses CDT and innovation.

2.6 CDT and Innovation.

Organisational culture, knowledge management and innovation relate to OEP (Al-Bahussin & Elgaraihy, 2013). An organisation's culture influences marketing and technology. Power distance improves strategic innovation, commodities (El Badawy et al., 2019), and research and development. However, uncertainty avoidance discourages and limits these associations. Therefore, organisational culture is the impetus for an organisation's innovation.

In addition, imaginative and creative employees allow organisations to compete in the business environment (Shayah & Zehou, 2019). Additionally, an organisation's culture is related to management processes and can either boost or hinder innovation (Shayah & Zehou, 2019). Thus, organisations should foster and strengthen the organisational atmosphere to innovate (Ongori & Bosire, 2019).

Organisational culture affects employees' creativity and innovative abilities (Odetunde & Ufodiama, 2017). However, individualistic cultures are more inventive than collectivistic ones (Khan & Cox, 2017). Excessive power distance negatively impacts learning orientation, leading to a negative improvement in product innovation performance. However, existing national culture hurts learning and organisations' innovation activities (Beyene et al., 2016).

The following section discusses collectivism and innovation.

2.6.1 Collectivism and Innovation.

A collectivist culture improves innovation performance through learning orientation (Beyene et al., 2016). According to Hong et al. (2018), employee creativity is strongly and positively associated with innovation discovery and use. On the other hand, collectivism reduces the impact of innovation on employee creativity.

Individualism has a minimal but favourable impact on creativity (Andrijauskien & Dumiuvien, 2017), while high individualism does not foster creativity or innovation (Khan & Cox, 2017). However, countries with high individualism have a higher innovation adoption rate than those with low individualism (Zbilen, 2017). Additionally, Hofstede (1980) contended that norms

restrain innovators and that conservatism drives the rejection of innovation (Grenness, 2015). Therefore, the proposition of the following hypothesis:

H_5: Collectivism is positively and significantly associated with innovation.

The following section discusses masculinity and innovation.

2.6.2 Masculinity and Innovation.

In masculine companies, remuneration (monetary awards and promotions) relies on employee performance. Social integration and group rewards for performance are predominant in feminine organisations—for example, free time and flexible working hours (Fening & Beyer, 2014). Masculine cultures favour directive leaders with dominance and power (Den Hartog et al., 1999). At the same time, feminine cultures prefer thoughtful and collaborative leaders. Therefore, it is uncertain whether masculinity or femininity is appropriate for innovation.

Previous studies have investigated the roles of innovation and organisational culture and have provided empirical evidence to predict OEP (Garca-Machado & Martínez-Ávila, 2019). Therefore, previous studies demonstrate that green innovation mediates the relationship between green culture and OEP. Halkos and Skouloudis (2016) found that masculinity has an insignificant effect on corporate sustainability reports. Furthermore, Ullah et al. (2022) found that masculinity enhances innovation. Zeb et al. (2021) also examined the relationship between organisational culture and performance. The mediating effect of innovation is due to morals that promote or weaken innovation processes. The current literature offers several outcomes about the effect of organisational culture. However, the influence of masculinity on innovation is unclear. Therefore, predicting this study's findings is difficult, specifically regarding the relationship between masculinity and innovation. Therefore, the resulting hypothesis is as follows:

H_6: Masculinity is positively and significantly associated with innovation.

The following section discusses power distance and innovation.

2.6.3 Power Distance and Innovation.

Countries with lower power distance and uncertainty avoidance accept modern technology because they have a higher adoption rate than organisations with higher power distance and uncertainty avoidance (Zbilen, 2017). Organisations should create an environment suitable for information exchange, friendliness, teamwork support and non-confrontational attitudes, and a suitable environment for emotional and social support because it could assist employees in managing the ambiguity of their current ideas (Khan & Cox, 2017). Organisations should also develop a culture of experimentation and risk-taking because such an environment underlies all aspects of the innovation process (Tekin & Tekdogan, 2015).

In addition, organisations should engage in social, economic and environmental sustainability activities with low power distance culture because these activities enable organisations to preserve and ensure stable power relations (Miska et al., 2018). According to Andrijauskien and Dumiuvien (2017), organisations that promote uneven power distribution by justifying inequities to enhance innovation inspire employees to innovate through recognition and awards to achieve organisational goals. Therefore, such organisations incorporate environmental issues into organisational culture (Almaiman & McLaughlin, 2018). Thus, the proposition of the following hypothesis:

H_7: Power distance is positively and significantly associated with innovation.

The following section discusses uncertainty avoidance and innovation.

2.6.4 Uncertainty Avoidance and Innovation.

Organisations engage in environmental sustainability practices when there are measures to minimise uncertainty and adhere to established regulations and procedures. Therefore, regulations and procedures assist organisation to avoid unanticipated consequences (Miska et al., 2018). However, individuals in a low uncertainty avoidance culture tend to be more innovative because the organisation has less bureaucracy (Radziszewska, 2014). Most researchers conclude that uncertainty reduces innovation performance (Andrijauskien & Dumiuvien, 2017).

Tetteh et al. (2021) suggest that individuals view unknown conditions as dangerous, especially in an uncertainty avoidance environment, because they are intolerant of ambiguity and demand predictability. These employees' values and behaviours encourage conformity and promote certainty. Thus, their organisations will unlikely to engage in innovation and OEP improvement efforts. Uncertainty avoidance organisations are averse to innovation (Nadeem & Sully de Luque, 2017). However, this cultural dimension also engages in incremental innovation, a fact that is especially true for predictable effects with a certain level of assurance.

Cultures with low uncertainty avoidance welcome uncertain situations, and employees in these cultures are willing to take risks, have a calm attitude and enjoy challenges (Tetteh et al., 2021). Consequently, a low uncertainty avoidance culture values a flexible work environment and encourages employees to innovate by taking risks, enhancing OEP. Businesses try to consistently enhance their OEP by becoming leaders in a highly competitive market. However, organisations fail to achieve innovation and OEP improvement initiatives because creativity and innovation projects do not relate to rewards or recognition. Thus, this study proposes the following hypothesis:

H_8: Uncertainty avoidance is positively and significantly associated with innovation.

The following section discusses CDT and HRM policy effectiveness.

2.7 CDT and HRM Policy Effectiveness.

2.7.1 Collectivism and HRM Policy Effectiveness.

In collectivist cultures, applicants should be suitable for the organisation's social and cultural setting as a measure for job appraisals (Aycan & Gelfand, 2012). This cultural factor is significantly associated with low power distance and individualistic cultures (Ghemawat & Reiche, 2011). However, collectivism positively correlates with power distance. Organisations with a collectivist culture focus on age, personality and gender during recruitment because applicants' competencies should "fit" into the organisation's culture and social context. However, it needs to be clarified from the reviewed literature whether the applicant's culture is suited to the organisational culture, whether a social orientation relates to a collectivist culture, or whether it relates to HRM policy effectiveness. Thus, the formulation of the following hypothesis:

H_9: Collectivism is positively and significantly associated with HRM policy effectiveness.

The following section discusses masculinity and HRM policy effectiveness.

2.7.2 Masculinity and HRM Policy Effectiveness.

Koenck (2018) advises that masculine organisations rely on HR to be competitive because they focus on human capital development resulting from training and other personal development tactics. Fietz et al. (2021) state that assertiveness and competition characterise masculine organisational cultures that include performance, which has advantages in organisational resilience during a crisis. Moreover, Kim et al. (2022) indicate that masculine cultures have HRM policies for career progress. Thus, masculine culture accepts performance assessments positively. However, Fietz et al. (2021) found no significant link between resilience and masculinity. At the same time, Koenck (2018) found an insignificant effect of masculinity on HR formalisation. Therefore, the literature must clarify whether masculinity culture impacts HRM policy effectiveness, especially in South Africa ISO 14001-certified organisations.

Furthermore, organisational culture affects organisations' HRM systems (Đordevic, 2016). Effective organisational culture management involves diagnosing and measuring the implementation of specific activities that help to develop appropriate formal and informal behaviours (Šahić & Stupar, 2014). However, values operate at multiple levels of social organisation, impacting individual and group behaviour (Bissessar, 2018). Thus, organisations that lack a suitable culture may be unable to innovate or achieve the desired OEP. Organisations with unaligned organisational culture and HRM practices can prevent achieving the innovation and OEP goals. Hence, the proposition of the following hypothesis:

H_{10}: Masculinity is positively and significantly associated with HRM policy effectiveness.

The following section discusses power distance and HRM policy effectiveness.

2.7.3 Power Distance and HRM Policy Effectiveness.

Employees in a power-distance culture trust management decisions because they value power, status and authority within the organisation (Tetteh et al., 2021). Employees have various preferences for this dimension and respond differently to the supervisor's behaviour. Although, they typically strive to complete tasks and meet deadlines to improve OEP. However, employees in low-power distance cultures favour participative management decisions that emphasise junior employees' autonomy in decision-making. In addition, a low-power distance culture fosters innovation, invention and entrepreneurship, leading to improved OEP (Nadeem & Sully de Luque, 2017). This study assumes that power distance will have an effect in both directions.

High-power distance cultures place a premium on rules and regulations that stifle creativity, innovation and OEP. Therefore, this situation exacerbated their employees' expectations of recognition and compensation for their novel and valuable ideas (Nadeem & Sully de Luque, 2017). However, organisations with a power distance culture may develop laws and regulations that foster creativity by implementing innovation management. Thus, the proposition of the following hypothesis:

H_{11}: Power distance is positively and significantly associated with HRM policy effectiveness.

The following section discusses uncertainty avoidance and HRM policy effectiveness.

2.7.4 Uncertainty Avoidance and HRM Policy Effectiveness.

Managers should avoid creating cultural silos within their organisations by establishing similar operating standards, languages and purposes for all operations (O'Riordan, 2015). The uncertainty avoidance culture may affect communication and the sharing of performance information within the organisation (Ihssan & Bititci, 2014). Employees act independently within organisations and instead organise and manage their reliance on others (Aycan &Gelfand, 2012). Therefore, an initiative organisational culture encourages risk-taking and fault-tolerant activities (Naranjo-Valencia et al., 2016), thereby improving organisational performance (O'Riordan, 2015).

Cultural paradigms refer to various beliefs, values, rituals and symbols that define an organisation's style (Putriana et al., 2015). However, organisational culture is not the sum of individual cultures (Waisfisz. 2012). O'Riordan (2015) suggests that a strong culture comprises a consistent set of employees' views and values, assumptions and behaviours shared by most members of an organisation. However, everyone is committed to their perceptions in an organisation (Zain & Kassim, 2012), and these attitudes, feelings and behaviours shape their lives. Thus, the proposition of the following hypothesis:

H_{12}: Uncertainty avoidance is positively and significantly associated with HRM policy effectiveness.

The following section discusses HRM policy effectiveness, innovation and OEP.

2.8 HRM Policy Effectiveness, Innovation and OEP.

HRM duties enable productivity and performance (Nyameh & Mathur, 2013)—for example, planning, recruitment, selection, mentorship, training, incentives, assessments and remuneration. Adopting HRM practices depends on organisational needs (Zhang et al., 2020). HRM practices influence organisational culture and knowledge management (Al-Bahussin & Elgaraihy, 2013), and organisational innovation is positively associated with organisational performance. Nyameh and Mathur (2013) assert that discontented, unpleasant and disengaged workers affect the organisation's results when the organisation has unaligned organisational objectives and employees or there is an incompatibility between HRM practices and company values. In summary, organisations should consider employees as resources instead of liabilities. Therefore, organisations should develop and implement efficient and effective HRM policies and procedures focusing on individual improvement, development and sustainability (Zhang et al., 2020).

Nyameh and Mathur (2013) argue that organisational culture influences HRM policies and the employees. However, the degree to which cultural values influence HRM policy effectiveness remains to be determined, especially in SA ISO 14001-certified organisations. However, HRM policy effectiveness mediates organisational culture and OEP and can motivate employees to be more productive. However, the literature needs to determine the extent of the relationship between HRM policy effectiveness and innovation. Hence, variations in an organisation's cultural context exist because of the relative order of employees' beliefs and values. This study assumes that HRM policy effectiveness could predict various outcomes, such as innovation and OEP.

HR practices and organisational culture account for 65% of management effectiveness (Singh, 2010) but contribute negligibly to long-term orientation, uncertainty avoidance and power distance. HRM practices are significantly and positively associated with organisational culture (Al-Bahussin & Elgaraihy, 2013), knowledge management and innovation. Rhee et al. (2014) found a positive association between nonfinancial performance and hiring, training, participation and remuneration. At the same time, Alsafadi and Altahat (2021) show that HRM policies positively impact employee performance, job satisfaction, stability and enrichment.

Obeidat et al. (2016) indicate a significant association between national culture and employee relationships. Thus, the derivation of the following hypotheses:

H_{13}: HRM policy effectiveness is positively and significantly associated with innovation.
H_{14}: HRM policy effectiveness is positively and significantly associated with OEP.

Therefore, the following section discusses innovation and OEP.

2.8.1 Innovation & OEP

The effect of culture depends on the processes, systems and products of innovation. At the same time, innovation relies on the organisation's climate, mission, vision and goals. An organisation's innovation success depends on its resource utilisation and management style. Organisations differ according to variations in these parameters. Thus, the literature needs to clarify whether innovation positively or negatively affects OEP, especially when organisations attempt to improve their OEP across cultures. Thus, the formulation of the following hypothesis.

H_{15}: Innovation is positively and significantly associated with OEP.

According to Hofstede's approach (1980), culture influences new employees' learning, while benchmarking is a forerunner to innovation. In addition, harmonious labour relations through labour unions are vital. The CDT and CVF theoretical models propose that labour relations regulate the relationship between cultural values/dimensions, innovation and OEP. Thus, as organisational stakeholders, unions will affect organisational culture, innovation and OEP. The Stakeholder Theory help to explain and forecast the role of labour relations in the models employed in this study, as well as the moderating influence of labour issues within ISO 14001-certified organisations. The following section discusses the relationship between labour relations, innovation and OEP.

2.9 Labour Relations, Innovation and OEP.

This section examines the impact of labour relations on OEP and innovation. As organisational stakeholders, labour unions considerably influence management, organisational structure and operation. Thus, labour relations may moderate (control or regulate) the relationship between organisational culture, OEP and innovation. According to the Social Exchange Relations Theory, organisations experience continuous improvement because of employees' motivation and involvement. Thus, personnel should focus on achieving quality and OEP to satisfy customer needs, including innovation and Total Quality Management (TQM) (Joiner, 2007). Although culture promotes team motivation, individuals and groups appear inspired differently (Aycan & Gelfand, 2012).

Employees' abilities, knowledge and skills are critical organisational resources (Samuel, 2018). Positive employee relationships result in highly engaged, motivated and loyal employees. Industrial relations focus on improving the rights of workers (Duah & Danso (2017) rather than power sharing to increase organisational efficiency, performance and other benefits.

Arimie and Oronsaye (2020) state that labour relations encourage a positive workplace atmosphere because of the organisational culture's value systems, including trust, respect and communication. Organisations should improve dialogue and a complaint-resolution mechanism to create a harmonious workplace that satisfies the requirements of both employers and employees. A concordant workplace with a knowledgeable, qualified and passionate workforce enhances performance (Samwel, 2018), motivation, superior employment relationships (Ngari, 2013), quality performance, commitment, an error-free rate and higher innovation. A harmonious work environment promotes collaboration, reduces absenteeism, and improves work retention, occupation and organisational tenure. However, organisations must cope with mistreatment and demotivation because of the psychological demands of appreciation, respect and recognition of the employees' desires (Arimie & Oronsaye, 2020).

Management decisions are practical in ethical management (Harrison et al., 2015). Popoff and Buzzelli (1993) emphasise the impact of industrial products and services on resource depletion and environmental deterioration. Sustainable supply chain management should consider

various players, as well as the expansion of the organisational scope and institutionalisation when organisations seek legitimacy for their policies and operations (Labegalini et al., 2010).

Organisational climate refers to behaviours, attitudes, beliefs and theories influencing an organisation's focus and effort (Hartnell et al., 2011). Employees' attitudes and well-being impact OEP and influence their achievements (Vashdi et al., 2013). Ethical ecological or environmental practices and innovation propel the sector toward efficiency and effectiveness (Conding et al., 2013). Although extant literature reveals studies without the empirical validity of the impact of labour relations on the environment, they suggest the inclusion of employees in decision-making if labour relations are favourable. The directionality of the influence of labour relations on certain organisational relationships is unclear, especially about labour relations according to the Stakeholder Theory—for example, the moderating (controlling) effects on the relationships between organisational culture, innovation and OEP.

According to Onyebuchi and Uchechi (2019), effective grievance management maintains harmonious relationships in the workplace by enhancing loyalty, engagement and satisfaction, employee productivity, organisational performance and innovation. However, poor complaint management (low productivity, absenteeism and disobedience) has adverse organisational effects, such as a lack of discipline and poor job quality. The existing literature needs to clarify whether good labour relations strengthen or weaken associations in the chosen models or if they moderate the connections between organisational culture and innovation and OEP. Thus, the proposition of the following hypothesis:

H_{16}: Good labour relations positively and significantly moderate the relationship between cultural dimensions and OEP.

Samwel's (2018) findings suggest a positive and significant association between organisational success and labour relations and that a relationship exists between employee performance and labour relations. Labour contracts and dispute resolution also affect worker performance (Liu & Wan, 2020).

Stakeholder Theory encourages equitable, truthful or even compassionate treatment of all stakeholders. Therefore, this theory shows that culture influences CSR relationships by producing and disseminating information to address organisational difficulties (Ambec et al.,

2013; Harrison et al., 2015). In addition, CSR uses environmental protection to influence innovation to satisfy customers (Van den Berg et al., 2013). Harrison and Wicks (2013) propose that stakeholders evaluate organisational performance due to challenges, while managers evaluate corporate values. Organisations seek legitimacy and responsibility (Branzei et al., 2002), and measures taken due to market and institutional pressure can improve OEP.

A positive and significant connection exists between employee recognition and productivity (Adaeze, 2019), employee feedback methods, productivity and labour relations, employee engagement and working conditions – all of which affect OEP (Ngari, 2013). However, it is not apparent whether labour relations moderate these relationships, strengthen or weaken them, or moderate (regulate) the relationships between organisational culture, innovation, and OEP. Thus, the proposition of the following hypotheses.

H_{17}: Good labour relations positively and significantly moderate the relationship between cultural dimensions and innovation.

In an environment with satisfactory working relationships, management is interested in employees' happiness and well-being, and employees reciprocate with appropriate behaviour and improved OEP (Dupe, 2015). However, how industrial relationships affect OEP is unclear, especially about South African ISO 14001-certified organisations. It is also unclear whether labour relations strengthen or weaken the relationship between organisational cultural values and innovation. Hence, Pallavi et al. (2018) have shown that organisations have disparate organisational cultures that affect the functioning of organisations differently. The following section examines organisations' cohesion and morale, HRM policy effectiveness and innovation.

2.10 Organisations' Cohesion and Morale, HRM Policy Effectiveness and Innovation

This section addresses the relationship between HRM policy effectiveness, organisational cohesion and morale, innovation and OEP. Organisational culture influences various circumstances for innovation and tradition (Kaasa & Vadi, 2008), and national culture is the primary determinant of multinational companies' corporate culture (Dartey-Baah, 2013). In experimental research, statistical researchers follow the 'causal effects' approach (Mahoney & Goertz, 2006).

Several authors from the reviewed literature argue that national culture influences organisational culture, environmental protection effectiveness and innovation achievement (Heras-Saizarbitoria et al., 2010; Terlutter et al., 2006). International organisations should adapt to national culture to achieve superior performance (Nieves & Mujtaba, 2006b). Comparative studies of management and organisational practices show that national culture also affects employees and determines their value systems (Altintas, 2008). FDI organisations have a high level of ISO 14001 acceptance in the host nations, provided their countries of origin have the same high level of ISO 14001 adoption (Prakash, 2007). Organisational competitiveness significantly impacts OEP by striving for innovation (Zain & Kassim, 2012). The following section discusses HRM policy effectiveness, innovation and OEP.

2.10.1 HRM Policy Effectiveness, Innovation and OEP

The OEP of an organisation requires the effective control of processes, products, activities and management practices (Mandaraka et al., 2004). Managers do not use emotional structures in their work environments by prioritising task decisions over personal relationships. Thus, their decisions rely on competencies and rules governing the work environment (Altintas, 2008). Moreover, corporate culture is crucial for a competitive advantage (Yildiz, 2013). HR practices positively impact employee values and OEP (Dartey-Baah, 2013). Consequently, cultural characteristics are a source of organisational sustainability. However, it is a challenge to replicate this process (Uddin et al., 2012).

Human resources are critical for achieving sustained OEP because they influence innovation in an organisation's ever-changing environment. HRM practices affect organisational performance by enhancing employee behaviour, competencies and organisational capabilities (Nieves & Quintana, 2018). Organisational commitment refers to an individual's loyalty to the organisation (Gangai et al., 2015). Managers should provide employees the freedom to develop new ideas for improving products, services and processes by creating an environment of trust and openness that benefits employees (Zain & Kassim, 2012). Trust encourages individuals to commit to the organisation and their fellow employees, thus promoting a harmonious work environment (Kinghorn et al., 2011).

Rhee et al. (2014) show that HRM activities directly affect the organisation by improving employee skills and work quality. These HRM activities also indirectly increase employee motivation through an incentive system. Culture strongly determines perceptions of an organisation's HRM performance, including creating, implementing and evaluating employee development activities (Tetteh et al., 2020). Moreover, HRM policies significantly predict organisational performance and promote innovation (Alsafadi & Altahat, 2021). However, organisational cultural design varies and affects the implementation of HRM policies, practices, planning and job analyses.

Organisational culture positively and significantly impacts HRM and determines HRM practices (Nyameh, 2013). Obeidat et al. (2016) found that four cultural dimensions significantly impact HR strategies. For example, masculinity, uncertainty avoidance, long-term orientation and individualism while management practices have a negligible effect on the power distance. Masculinity predicts performance management, while individualism is significantly and negatively associated with performance management (Obeidat et al., 2016).

The following section discusses the relationship between organisational cohesion and OEP.

2.10.2 Organisational Cohesion and OEP

This section also addresses the relationship between organisational cohesion and OEP. Harun and Mahmood (2012) describe cohesion as a dynamic process that reflects a group's preference for bonding. Thus, the group stays united in its search for goals and purposes. In contrast, cohesion results in adverse consequences such as a lack of participation and information sharing, increased costs, disorientation, tight control, manipulation, criticism, power imbalances and poor results. A lack of cohesion occurs because of an ineffective power structure and long working hours, resulting in team demoralisation (Harun & Mahmood, 2012). A lack of cohesion can also fail to achieve organisational goals because employees are uncommitted, disengaged or disloyal. This discrepancy between organisational and individual values manifests in professional practices, for example, personal behaviour, organisational processes and structures (Harun & Mahmood, 2012). The performance of group members differs depending on their level of cohesion and the fact that organisations have various networks in group circumstances. Employees' roles with the group positively or negatively affect their participation, especially their level of cohesion (Banwo et al., 2015).

The literature review shows that cohesiveness is intrinsically temporal. However, researchers have yet to assess this concept at various points in a team's life. This practice is critical for large and dynamic groups (Salas et al., 2014) because collective efficiency encourages production and the successful implementation of creative ideas. In addition, collective efficiency moderates the association between each component of behavioural integration and team innovation performance (Liu & Tao, 2015). An innovative atmosphere enhances invention efficiency and allows individuals to think about themselves. In addition, an innovative atmosphere modifies their mental abilities, resulting in a new work vocabulary and enhanced emotional, inspirational and cognitive resources (Waheed et al., 2019).

Group cohesion significantly affects organisational performance (Harun & Mahmood, 2012). However, Banwo et al.'s (2015) results are inconclusive because group cohesion was strong in both high and weak teams. In addition, teams with high cohesiveness and greater organisational consistency outperformed those with lower organisational consistency. Group cohesion is significantly associated with organisational effectiveness (Nwizia & Okachi-Okereke, 2020). Student attendance positively relates to cohesion but not students' success in any of the

semesters (Thornton et al., 2020). Groups often cannot reach a consensus because of a lack of unified teamwork and social cohesion, contributing to low organisational performance (Nwizia & Okachi-Okereke, 2020).

More importantly, a lack of cohesion weakens organisations, so they cannot achieve their innovation goals and improve their OEP due to demoralised and unproductive employees. However, cohesion encourages employees to work together to achieve organisational goals and improve innovation and OEP. However, the literature must clarify whether cohesion in ISO 14001-certified organisations is solid or weak and whether organisational cohesion is predictive of inferior OEP. It also needs to be clarified whether cohesion contributes positively or negatively to OEP. Thus, the derivation of the following hypothesis.

H_{18}: Organisational cohesion is positively and significantly associated with OEP.

The following section discusses organisational morale and OEP.

2.10.3 Organisational Morale and OEP

Employee morale relates to job satisfaction, prospects and well-being and reflects employees' attitudes towards and satisfaction with the organisation (Muallik et al., 2019). Organisational culture determines employee morale (Arnchand & Hareesh, 2013); morale-boosting factors include the employer's respect, commitment, appreciation, fair compensation and promotion of employees. As well as enable a pleasant work environment as an integral part of a positive organisational culture (Panthi, 2019). Morale is a psychological factor leading to positive employee behaviour (Mallik et al., 2019) that enhances performance. However, the causal association between job satisfaction and organisational performance is unclear (Bakotić, 2016).

Organisations should provide pleasant working conditions for employees and communicate information to them through appropriate internal channels. Such measures will significantly improve employees' well-being and knowledge sharing (Celma et al., 2018). In addition, these measures facilitate an effective relationship between job satisfaction and organisational performance (Kucharska & Bedford, 2019). Workers are demoralised and underperform when working under inadequate and unpleasant conditions. Thus, organisations should create

appropriate working conditions that produce positive physical and psychological responses (Sekhar et al., 2013).

Job security and pleasant working conditions affect employees' well-being (Celma et al., 2018). By contrast, a high level of collective efficiency leads to overconfidence, resulting in a lack of vigilance and competitive pressure (Liu & Tao, 2015). Empirical evidence from a study of an organisation with a masculine culture demonstrates material accomplishments, self-actualisation and higher wages resulting in job fulfilment (Kucharska & Bedford, 2019).

Managers should ensure conducive internal work environments by creating a conducive setting for employees to comprehend the organisation's vision and mission. Such a setting includes organisational structure, effective communication and inclusive decision-making processes, merit-based promotions, and a diversified workforce (Zain & Kassim, 2012) that comprises employees' favourable internal organisational climate. This organisational structure should be flexible, with minimal formal procedures to encourage employees to express their opinions (Van Ness et al., 2005). Furthermore, Panthi (2019) argues that high morale contributes to high productivity levels, good stakeholder return and employee loyalty. Conversely, low morale leads to high absenteeism and turnover rates, reducing productivity and competitiveness (Shaban et al., 2017).

Evidence compiled by Bakotić (2016) suggests a complex relationship between organisational performance and job satisfaction. However, extant literature shows insufficient studies relating to this relationship. Employees' satisfaction with their working conditions raises their morale and improves customer satisfaction and the OEP (Panthi, 2019). However, low morale demoralises and discourages employees, adversely affecting their well-being and leading to lower performance, reducing the organisation's productivity and OEP goals.

In addition, low morale in an organisation results in conflicts and disharmony among employees (Panthi, 2019). In addition, this results in a lack of effectiveness, efficiency and productivity that impairs the OEP. However, while the factors that characterise organisational morale ensure employees' job satisfaction and productivity, it is impossible to gauge the extent to which organisational morale positively influences OEP. Thus, this study derives the following hypothesis:

H_{19}: Organisational morale is positively and significantly associated with OEP.

Furthermore, culturally acceptable attitudes boost employee satisfaction and morale. In addition, they help to improve performance and productivity (Osibanjo & Adeniji, 2013). Power distance cultures, for example, the public sector's bureaucratic culture, motivate employees to obey their superiors (Tetteh et al., 2021). Therefore, this sector has low employee morale, resulting in hopelessness and reduced production. Employees with low individualistic cultural values seek positive relationships. At the same time, individuals in high-risk societies prefer readiness for all eventualities. Laws, rigorous regulations, security, safety and other formalities prepare organisations for such challenges (Tetteh et al., 2021).

This study determines a favourable internal environment or organisational climate that includes the organisation's vision and mission and promotes organisational morale, a stable structure, effective communication, inclusive decision-making processes, and performance-based advocacy; such a collective workforce can lead to innovation and improved OEP. The following section discusses CVF and innovation.

2.11 CVF and Innovation

Organisations can successfully meet customer expectations by comprehending their expectations. Nevertheless, no single organisational culture has all the values or techniques necessary for adapting to its dynamic environment for optimal OEP. Therefore, diverse, unexpected needs affect the form and practice of OEP (House et al., 1999), forcing organisations to search for efficient working techniques to improve their OEP (Lapia, 2015).

The CVF encourages holistic management methods, alternative model views and an internal approach (Kula-Semos, 2014) that includes partnership, integration and unity, and an external approach that exhibits differentiation and competitiveness (Cameron et al., 2009). Kunert (2018) explains that the CVF proposes unifying internal functions, processes and structures to achieve sustainability, viability and practicability. However, such organisation retain their external capabilities to interact with and regulate the external environment.

This study compares the two dimensions of CVF and, in so doing, creates four types of organisational culture, namely, clan (group), adhocracy (development), market (rational) and

hierarchical cultures (Yunus & Tadisina, 2010). These dimensions produced equally conflicting diagonal quadrants, e.g., flexibility and control characterised the clan and adhocracy cultures (Šahić & Stupar, 2014). In addition, the flexibility-control axis displays the competitive need for change and stability (Yunus & Tadisina, 2010). It shows the predictability of an organisation—for example, job descriptions, work procedures and internal structures (Kunert, 2018). Furthermore, Helfrich et al. (2007) support that this axis describes the level of organisational centralisation and controls organisational processes by focusing on the well-being and growth of individuals and organisations.

The internal-external axis represents the organisation's internal and exterior business environment focus (Yunus & Tadisina, 2010). Helfrich et al. (2007) emphasise the importance of competitive values in an organisation as a link between the internal processes and the external environment, for example, regulators, suppliers, competitors, business partners and customers. As a result, the CVF urges leaders to balance value with innovation. However, managers and employees define success and effectiveness differently (Lindquist & Marcy, 2014). Thus, these four essential values are incompatible.

The upper-left quadrant shows values with an internal organic focus. The lower right quadrant displays the values that focus on external control. The upper-right quadrant represents the external organic value, and the lower-left quadrant emphasises internal control values (Cameron, 2009).

The following section discusses the four dimensions of culture and value formation:

- **Clan Culture**

The traits of clan culture are satisfactory working conditions in which leaders function as 'paternal figures'. Managers depend on allegiance, tradition and commitment to motivate employees. Therefore, these factors enable the fulfilment of the organisational objectives and OEP (Šahić & Stupar, 2014). Consequently, a clan culture promotes flexibility, internal maintenance and employee care. Therefore, this results in a supportive work environment that boosts teamwork and inspires employees to engage with management (Alharbi & Abedelrahim, 2018).

Managers in a clan culture environment are coaches who supervise social relationships to encourage collaboration, involvement and consensus within the organisation (Datuon, 2015). Clan culture managers appear to foster innovation through collaboration and employee participation (Naranjo-Valencia et al., 2016). In addition, these managers value adhocracy and employee engagement, dedication, cooperation, originality and ingenuity (Rukh & Qadeer, 2018). However, other managers prefer hierarchical and rational cultures (Rukh & Qadeer, 2018).

- **Developmental Culture**

The adaptive development culture fosters flexibility and an external focus through creativity and risk-taking. Thus, managers in this culture have a mindset that encourages new products. Therefore, such innovative leaders positively impact performance (Naranjo-Valencia et al., 2016). An organisational development culture enables organisations to innovate and adapt to changing business environments. This agility fulfils the productivity principles and objectives through a flexible structure. Therefore, such a structure helps open communication channels, encouraging employee participation (Felipe et al., 2017).

- **Hierarchical Culture**

A hierarchical culture limits innovation because of its internal emphasis that resists change and flexibility in the changing business environment. This process hinders superior performance because its manipulation and stability values limit innovation (Naranjo-Valencia et al., 2016). However, the hierarchical culture emphasises excessive standardisation, leading to increased efficiency because individuals comply with agile policies and processes that encourage innovation and invention (Felipe et al., 2017). By contrast, a hierarchical culture prioritises rules and process compliance that adversely impact organisational performance. Therefore, this is due to a lack of creativity, autonomy and excessive control, resulting in a lack of innovation (Naranjo-Valenciano et al., 2016). The significant traits of hierarchical culture organisations are tradition, dedication to organisational cohesiveness and commitment to morale as a long-term advantage for HR growth (Datuon, 2015). Mohamed et al. (2013) conclude that employees' participation in the workplace, whether direct or indirect, benefits both employees and employers.

- **Market Culture**

Market orientation and harmony as a strategic design of the organisation provide a rapid response to existing environmental conditions. When organisations implement these measures successfully, they increase OEP. Consequently, Jabeen et al. (2016) propose synchronised strategies with external conditions, such as outwards-facing strategies and engaging with the market culture. The market culture anticipates, comprehends, and responds to market trends, requirements, and competitive changes to increase OEP. Therefore, an organisation requires an external strategy to adapt to the business environment through transparent communication with adequate feedback from the essential stakeholders. Organisations analyse, forecast and respond to external environmental demands and feedback, gaining access to extensive and valuable external knowledge (Felipe et al., 2017).

Positive upstream environmental impacts on a company's product quality, design and competitiveness lead to innovation. Examples of supply value chains include suppliers, materials and components (Weng et al., 2015). Organisations should assess external and internal factors. For example, outputs, inputs, activities and approaches could promote innovation (Mazzanti & Zoboli, 2006). Organisations should also consider the effect of external environmental factors, for example, economic, political, social and technological factors. Organisations must identify opportunities, threats and constraints that influence OEP and immediate competition.

An organisation's response in developmental culture to external environmental factors unfavourably influences innovation (Zeb et al., 2021). Therefore, organisational intervention and responses to market and competitive needs depend on the link between the development culture and innovation. Market conditions and rivalry control are innovative powers that determine the intensity of competition, the depth of innovation and the response to market demand. Managers also foster innovative cultures to assist organisations in responding to external environmental changes (Abdullah et al., 2013).

Currently, businesses face the challenges of globalisation that require organisations to concentrate on competitive advantages (Govender & Parumasur, 2010). Naranjo-Valencia et al. (2016) discovered an ambiguous relationship between innovation and clan or market

culture. Organisations require a balanced organisational culture to respond sensitively to market changes, enabling them to innovate. However, market culture limits innovation through control and stability. Market culture supports challenging and competitive goals because of its purpose, thriving market penetration, and participation (Naranjo-Valencia et al., 2016). Therefore, market culture facilitates strategic planning, management, flexibility, and standard operating procedures that reduce uncertainty (Felipe et al., 2017). Adaptation to the external environment is also a facet of an open system because leaders in a market culture promote flexibility, growth, innovation and creativity (Botti & Vesci, 2018).

The developmental culture emphasises development through organisational flexibility and adaptability. According to Fietz and Günther (2021), an organisation has a distinct culture that manages and controls its explicit and implicit or ineffective values, including a hybrid organisational culture. Therefore, it is unclear whether an organisation that emphasises a specific cultural type can be both influential and ineffective within the organisational context. It is impossible to state whether one culture is superior to another because of their conflicting values. Zeb et al. (2021) raise several considerations about whether organisational culture directly and indirectly relates to OEP through innovation. In addition, managers require a vision of the future to focus on high OEP in order to increase their market share (Govender & Parumasur, 2010). Thus, higher OEP is associated only with culture to adjust to the changing environmental conditions (Hamzaali et al., 2017).

Additionally, the traits of clan management approaches include facilitators and mentors. Thus, managers introduce teams, build interpersonal interactions and develop employees. However, in a hierarchical culture, management is a coordinator and supervisor and requires acculturation to managerial abilities, control mechanisms and coordination. Furthermore, in a market culture, management approaches emphasise customer service and competitiveness, providing vitality to employees.

According to Zeb et al. (2021), flexible organisations have market cultures offering higher economic advantages than stable ones. For example, clan culture organisations prioritise employee welfare, and hierarchical culture organisations focus on authority and control. At the same time, managers in development culture organisations are mediators and mediate (bridge) the gap between the stakeholders and innovators. These managers also have appropriate innovation management talent that drives continuous growth (Datuon, 2015). Organisations

with adhocratic cultures are product leaders because they favourably affect employees' attitudes and risk-taking behaviours (Zeb et al., 2021).

According to Olynick and Li (2020), clan cultures have highly productive and satisfied employees, followed by those in hierarchical, adhocratic and market cultures. According to Zeb et al. (2021), an adhocracy culture accurately predicts performance, enabling organisations to increase innovation with innovativeness that connects organisational cultures and performance types. Edafetano (2020) identifies certain factors of multinational corporations that significantly benefit OEP, for example, market (competition), clan (advocacy), hierarchical culture and adhocratic culture (entrepreneurial culture).

Organisational performance depends on organisational culture. Predicting the impact of HRM policy effectiveness on innovation and OEP improvements is difficult because scholars challenge universalist theories that use contingent methods to clarify the relationship between HRM practices and organisational performance (Ramadista et al., 2020). The extant literature indicates a continuation of contestation regarding the relationship between innovation and HRM policy performance. Thus, the proposition of the following hypotheses:

H_1: Clan culture is positively and significantly associated with OEP.
H_2: Developmental culture is positively and significantly associated with OEP.
H_3: Hierarchical culture is positively and significantly associated with OEP.
H_4: Market culture is positively and significantly associated with OEP.

According to Singh et al. (2020), innovation has a favourable and considerable impact on OEP. Ritala et al. (2020) assert that employee incentives and motivation influence the spirit of innovation. Ashraf et al. (2013) report a significant positive association between organisational culture and innovativeness and the market, clan and adhocracy cultures. They also found an insignificant connection between hierarchical culture and organisational innovativeness. Their findings, however, show that adhocracy culture has the most significant influence on forecasting organisational innovativeness. At the same time, clan and market culture have little effect on innovation. Kokt and Makumbe (2020) state that culture and innovation have a favourable relationship.

Furthermore, several studies show that employees drive adhocratic cultures and are highly willing to work. For example, employees create and conduct experiments. Adhocratic cultures have a flexible organisational HRM policy to control employees (Edafetano, 2020; Fietz & Günther, 2021; Ramadista et al., 2020; Zeb et al., 2021). Employees in hierarchical organisations respect power and status because of the HRM policy traits. Thus, they comply with rules, processes and policies (Edafetano, 2020; Fietz & Günther, 2021; Ramadista et al., 2020; Zeb et al., 2021). A hierarchical culture emphasises regulations and instructions. Thus, existing business scenarios remain unchanged because these organisations fail to adjust to changing business conditions (Quang, 2020). HRM policies in a market culture are externally focused because they rely on an agreed-upon level of performance. Thus, market culture prefers appropriate control to promote employee participation, such as teamwork and self-management (Edafetano, 2020; Fietz & Günther, 2021; Ramadista et al., 2020; Zeb et al., 2021).

Clan culture is adaptive and self-regulating, emphasising teamwork and encouraging employees' participation and self-management. Therefore, HRM policies in clan cultures promote long-term commitments, loyalty, connections and employee engagement (Edafetano, 2020; Fietz & Günther, 2021; Ramadista et al., 2020; Zeb et al., 2021).

Therefore, various organisations operate in diverse environments and use different cultural values. Management, leadership and organisational policies to promote their objectives. These values are both familiar and disparate among ISO 14001-certified organisations. Thus, the literature must clarify which cultural values predict innovation or OEP. Therefore, the proposition of the following hypotheses.

H_5: Clan culture is positively and significantly associated with innovation.
H_6: Developmental culture is positively and significantly associated with innovation.
H_7: Hierarchical culture is positively and significantly associated with innovation.
H_8: Market culture is positively and significantly associated with innovation.

Individuals are the only natural source of continuous competitive advantage (Gopinath, 2014). According to Singh et al. (2020), green HRM indirectly affects OEP through innovation. Quang (2020) also finds that HRM practices partially mediate the impact of the clan, market, and hierarchical culture on OEP and the relationship between adhocracy culture and OEP. Singh et al. (2020) observe that green HR management practices, such as ecological skills, employee

motivation and opportunities, positively and significantly predict innovation. Quang (2020) defines clan culture as pursuing HRM benefits because strong cohesion drives OEP.

Furthermore, Ramadista et al. (2020) demonstrate a match between the HRM practice variable and organisational culture types. The organisation requires this fit to maximise its expected OEP. However, the extent of the disparity between these variables leads to lower OEP. As a result, a misalignment between HRM methods and organisational culture affects the organisation, which has a considerable and unfavourable impact on OEP. However, information on organisational contexts and conditions is equivocal. Thus, the proposition of the following hypotheses:

H_9: Clan culture is positively and significantly associated with HRM policy effectiveness.

H_{10}: Developmental culture is positively and significantly associated with HRM policy effectiveness.

H_{11}: Hierarchical culture is positively and significantly associated with HRM policy effectiveness.

H_{12}: Market culture is positively and significantly associated with HRM policy effectiveness.

According to the CVF Theory, the association of culture types with several indices of organisational performance depends on their connection with values and structure (Hartnell et al., 2011). Jetmarova (2011) maintain that a corporation should explore, adapt frequently or use various creative management philosophies, approaches, tools and processes. Innovation tools include environmental life cycle assessment (LCA), green supply chain management (GSCM), eco-design, green marketing, environmental accounting and environmental reporting.

This literature review focuses on innovation theories at the organisational level. The following section, thus, delves into Schwartz's Values Theory to understand IndEP based on individual values.

2.12 SIV and Innovation

Precedent studies commonly use Schwartz's core values (1992) to study employee behaviour that can lead, frame and impact employees' innovation and IndEP. As a result, the present study employs Schwartz's Value Theory (1992) to identify acceptable values that reduce barriers to innovation and align with existing organisational cultures. Consequently, this practice could decrease the potential for conflict in the quest for improvements in the OEP. In addition, this study applies Schwartz's theory (1992) to find values that can foster ecologically friendly attitudes and behaviours.

According to Schwartz, cultural values (1992) constitute three societal challenges. For example, relationships between individuals and groups, the association between the social and natural world and maintaining moral attitudes (Ghemawat & Reiche, 2011). These conflicts also include authority over equal treatment, inclusion versus independence and mastery versus peace. Therefore, choices and patterns fluctuate between groups and individuals (Schwartz, 2006). Thus, the character and framework of values define Schwartz's (2006) Values Theory (Yahyagil & Otken, 2011), in which these characteristics are common among individuals. However, a significant variation exists in the characteristics of the values and configurations between people and organisations. Thus, this theory offers three alternative aspects of bipolar culture (Ghemawat & Reiche, 2011).

In addition, these values develop into internal signs of individuals who are collective and continuous social monitors that alleviate problems (Schwartz, 2006). According to Dartey-Baah (2013), culture influences and governs all aspects of society, including individuals' values, attitudes and behaviours. Thus, cultural characteristics develop from the shared and distinct values of the various groups. Furthermore, Schwartz (2006) proposes ten motivational value categories at the individual level that vary amongst individuals compared to social culture (De Mooij, 2013).

Schwartz's (2006) fundamental individual values have an integrative structure with conflicting values on the opposite side. Thus, under similar circumstances, cultures with underlying value systems behave differently. As a result, values influence how society understands what is good or evil (Jariya, 2012). Hence, organisations need effective leadership and management to

manage and sustain appropriate values (Ahi & Stupar, 2014). Employees often contradict organisational needs that disagree with their entrenched values and cultures (Lindquist & Marcy, 2014). The following section discusses Schwartz's (006) Values Theory.

- **Embeddedness versus Autonomy**

According to Sagiv and Schwartz (2007), individuals are autonomous but have distinctive constraints. Thus, they articulate their preferences, sentiments, reasons and traits. Several authors from extant literature differentiate between two types of cultural autonomy values – intellectual and individual autonomy (Gouveia & Ros, 2000; Sagiv & Schwartz, 2007). Intellectual autonomy refers to a search for independent ideas, fundamental values, open-mindedness and knowledge. Individual autonomy refers to the desire for experience, i.e., enjoyment, excitement and variety.

Sagiv and Schwartz (2007) opine that entities in traditional cultures operate as extended families who care and provide for their members and work diligently towards shared goals. In contrast, organisations in highly autonomous societies respect their workers' independence and recognise their interests, desires, capacities and affiliations.

- **Hierarchy versus Egalitarianism**

Egalitarian organisations act morally by preserving society's norms. Thus, they sustain the nation through gainful activities without destruction. At the same time, they are promoting and allocating responsible behaviour and productivity. Alternatively, hierarchical role structures prefer central decision-making processes that reduce job satisfaction by increasing organisational tensions (Fening & Beyer, 2014; Sagiv & Schwartz, 2007). The fundamental value system justifies the inequitable distribution of resources and promotes unequal power and responsibilities. For example, social power, authority, humility and prosperity (Sagiv & Schwartz, 2007). Cultural egalitarianism encourages people to respect one another as morally equal human beings with mutual interests.

Egalitarian commitment relates to individualism and collectivism in the CDT (Evans, 2013). An egalitarian cultural environment promotes innovation and enhances OEP using established

OEP indicators. Leaders should motivate employees by focusing on shared objectives and their well-being (Sagiv & Schwartz, 2007).

Organisations with a hierarchical structure prefer power and specific duties. Thus, focus on the organisation's well-being (Sagiv & Schwartz, 2007), teamwork, participation and employee engagement (Hartnell et al., 2011). These organisations also value fairness and collaboration between employees and management (Sagiv & Schwartz, 2007).

Mastery versus Harmony

The third social dilemma, according to SIV, concerns mastery values that foster self-assertion or self-confidence. Therefore, individuals with these values prefer to manage, direct and alter the natural environment and social environment to attain collective or personal goals. Authority, accomplishment and pleasure are the characteristics of self-enhancement (Schwartz et al., 2012). At the same time, the values include ambition, success, boldness and competence (Sagiv & Schwartz, 2007).

Furthermore, managers should know that values have a dynamic structure that allows them to respond to changing circumstances. The sociocultural context of this study affords the evaluation of the external factors. This context signals the cause and processes influencing motivation (Parks & Guay, 2009). As well as individual participation in innovative activities that are attractive to the employee offer fulfilment and achievement. Such activities give employees the authority and skills to conduct innovative activities (Schwartz et al., 2012). However, self-enhancement value may negatively affect innovation when aspirations are unsatisfactory.

According to Sagiv and Schwartz (2007), self-improvement values foster awareness by managing individuals, resources and power values. Consequently, management techniques for self-improvement values either encourage or threaten employees' self-esteem and well-being (Jariya, 2012). However, individuals exceed social standards by achieving their self-interests through aspiration and proficiency (Sagiv & Schwartz, 2007).

Agras and Ates (2015) state that task and IndEP relate to achievement and self-direction. Thus, an autonomous organisational culture encourages individuals to operate independently to attain

objectives and develop new ideas and inventions. (Sagiv & Schwartz, 2007). Overall, an organisational culture that promotes autonomy is ideal for innovation.

Furthermore, the alignment of individuals' values and organisational strategy values is crucial because it also connects to overall organisational performance (Ogbonna & Harris, 2000). Additionally, individuals who value self-transcendence engage in environmental improvement projects because they need to protect the environment by preserving natural resources and reducing their pollution activities (Schwartz et al., 2012). Furthermore, innovation projects rely on collaborative efforts to improve the OEP of the organisations. Thus, the organisation embraces, comprehends and enjoys the world without plundering, altering or controlling the natural resources. Individuals also harmoniously integrate with the world through unification and peaceful incorporation that protects the natural environment (Sagiv & Schwartz, 2007).

Organisations improve the overall OEP by obtaining higher economic performance using innovative methods and processes—for example, lean strategies and waste reduction (Wong et al., 2013). Organisations also use innovation to enhance their OEP through dedication to internal integration systems. For example, they minimised wastewater and enhanced energy efficiency (Shin & Welch, 2012).

Adaptive Theory states that an adaptive cognitive-type individual (adaptor) performs within expected limits. Thus, they do not question the validity of organisational expectations. In contrast, innovators take risks and violate acceptable procedures and guidelines to resolve environmental challenges (Baer et al., 2003). In addition, SIV shows that conservation values oppose openness to change. Thus, individuals who prefer conservation values adhere to laws, regulations, safety and stability (Schwartz et al., 2012). Extant literature shows an inverse connection between conservation values and risk-taking. However, employees who prefer openness to change values strive to gain the most recent knowledge as a prerequisite for innovation.

This study aims to determine whether conservation values relate to IndEP. The characteristics of openness to change are creativity and originality. Hence, openness to change values effectively resolves environmental problems and preserves natural resources. Thus, organisations must improve their OEP (Schwartz et al., 2012). The reviewed literature indicates

the apparent link between adaptability and innovation that could enhance OEP when adaptability aligns with innovation.

Consequently, such an alignment affects employee satisfaction and responsibilities (Putriana et al., 2015). Organisations use employees' job circumstances and work environments to improve employee satisfaction and responsibilities. Hence, this study assesses and evaluates IndEP as an indicator of employee satisfaction (Gangai et al., 2015). Values represent socially accepted behaviour and justification of demands and define the desirable and achievable behaviours by the organisation (Schwartz, 2006).

Organisations should have internal environmental governance, structure and culture, plus the managerial capacity necessary for competitiveness (Van den Berg et al., 2013). HRM strategies should aim for environment-friendly human capital resources by hiring environmentally conscious and compassionate individuals who will provide the required technological and innovation skills. Organisations should reward these employees according to their competencies and incentivise success in environmental management and performance (Wong et al., 2013).

Managers should emphasise respect, trustworthiness, delegation and empowerment and include mentorship and consistency as components of a healthy organisation (Kane-Urrabazo, 2006). Empowered employees feel valued by the organisation, especially when culture connects with individuals' values (individualism, uncertainty avoidance, masculinity and power distance). Therefore, it is a motivational technique (Aycan & Gelfand, 2012). These actions facilitate workplace performance and outcome management. For example, an achievement-reward contingency that improves the logical decisions of performance goals. Therefore, this study examines these objectives, such as employees' involvement in decision-making and self-regulation strategies (Aycan & Gelfand, 2012, p60). In addition, trustworthiness is trusting and believing in an individual. Thus, the outcome of competency, character and self-belief (Kane-Urrabazo, 2006).

Callaghan (2017) states that security and stimulation values relate to research productivity. Callaghan found that hedonism and compassion are inversely associated with research output. Singaravelloo & Kamiab 2016 found that conservation, self-improvement and openness to change are essential values in the banking sector, although not significantly related to banking

service quality (Singaravelloo & Kamiab, 2016). Universalist values are inversely associated with an entrepreneurial work environment (Knafo &Sagiv, 2004).

Knafo and Sagiv's (2004, p256) results show a positive association between social environments, universalism, and benevolence but a negative association with power and achievement values. Artistic working environments are negatively associated with conformity. At the same, openness to change is associated positively with time and investigative environments (Knafo & Sagiv, 2004).

The SIV reveals that adjacent or near values are compatible and have similar motivational effects. However, those on the opposite sides of the circle oppose each other for various reasons. Therefore, these tensions imply that individuals have diverse motivations and behave differently under similar circumstances. Therefore, how motivation drives employees' participation in environmental improvement activities must be clarified. Alternatively, how do they contribute to innovation in this context because individuals favour different values? Hence, they may disagree when making decisions such as directing life choices and circumstances, especially when these are socially important (Parks & Guay, 2009; Zekera et al., 2019).

According to Schwartz et al. (2012), the SIV values are bipolar. Thus, openness to change is theoretically opposed to conservation. For example, conversation values include conformity, security and tradition. Self-transcendence (benevolence and universalism) theoretically opposes self-enhancement (power, achievement). Therefore, the values of openness to change are stimulation and self-directionality. This study predicts the presence of extrinsic and intrinsic satisfaction factors because of these paradoxes, including whether the relationship between values and IndEP is indirect or direct. Thus, the proposition of the following hypothesis:

H_1: Self-transcendence and openness to change values are positively and significantly associated with intrinsic satisfaction.

H_2: Self-enhancement and Conservation values are positively and significantly associated with extrinsic satisfaction factors.

Values influence people's attitudes, decision-making processes, human behavioural systems and motivational desires (Singaravelloo & Kamiab, 2016). Thus, a value is the chosen action

(excitement and orientation) and the manner of execution (intensity and perseverance) (Parks & Guay, 2009). An organisation must identify suitable motivational factors that reflect employees' behaviour in achieving organisational goals (Dunggio, 2021). Bashir et al. (2020) assert a link between motivation and work recognition that could assist employers in valuing their employees and enhancing their overall performance. These linkages occur through an understanding of the inherent motivational mechanisms. Thus, values assist in managing employees' diverse perceptions and encouraging them to behave as required by the organisation (Singaravelloo & Kamiab, 2016).

In addition, Çalışkan et al. (2015, p3) describe the intrinsic life goals, i.e., physical health, personal development and emotional intimacy. For example, self-acceptance and commitment to others are beneficial in helping individuals serve society. Extrinsic satisfaction factors lead individuals to pursue purposeful actions such as rewards and recognition.

Intrinsic motivation refers to the undertaking of pleasure-seeking activities because they are engaging, enjoyable and internally satisfying. In contrast, applying an external stimulus results in extrinsic motivation that satisfies indirect needs or recognises exceptional work. For example, praise, increased earnings or promotion (Adeoye & Elegunde, 2014), special allowances, and fringe benefits. Factors such as respect, trust, encouragement, appreciation, joint decision-making, good quality supervision, working relationships, and growth opportunities motivate employees. Employer loyalty also is essential to employees' well-being (Manzoor, 2012).

Organisations should align employees' competencies with organisational capacity and desired outcomes to incrementally create employee value (Cameron et al., 2006). Organisations should consider society's historical, social and economic aspects in its mission and vision. The political environment influences motivational goals (Yahyagil & Otken, 2011). Thus, internal capacities, systems and culture are also crucial to the organisational success. Human development creates value at a particular point, especially when aligned with employees' motivation (Cameron et al., 2006). Organisations should consider cost reduction and continual quality improvement to achieve their goals. In addition, organisations should take cognisance of both external factors, such as society and individual factors, because they affect the creation of values within the organisation (Morris et al., 2012). Such factors also enable innovators to undertake challenging and complex jobs readily. However, contingent and extrinsic rewards have negligible effects

on employee creativity because they deal with innovative styles and complicated employment conditions (Baer et al., 2003).

Lack of alignment between organisational cultural values and employees' values results in an inferior OEP because of low levels of employee engagement. It also produces inferior product quality and services (Barrett, 2010). The alignment of employee goals and organisational vision creates a working environment that promotes commitment and enthusiasm at all organisational levels.

Demographic factors, motivation, and intrinsic and extrinsic satisfaction relate to personal values, especially in the SIV investigation. Furthermore, Altintas (2008) notes that age, education level, social class and organisational size influence personal values. At the same time, management experience relates to managing value systems.

Ćalışkan et al. (2015) conclude that intrinsic goals relate to security, compliance, benevolence, traditionalism and universality. Extrinsic life goals, however, relate to value preferences for hedonism, power and self-management, success and stimulation. Singaravelloo and Kamiab (2016) found that motivation has an insignificant mediating effect on human values, e.g., conservation and openness to change that influences service quality. Hence, these values impact the association between self-improvement and service quality and mediate the relationship between self-enhancement and service quality. At the same time, self-enhancement and self-transcendence show an insignificant relationship. Additionally, Bashir et al. (2020) reveal the insignificant moderating effect of motivation on job satisfaction and performance.

Therefore, the above discussion shows that the predictive value of motivational factors still needs to be clarified. The author observed that studies highlighted in the extant literature have different conclusions, especially regarding the intermediary role of values when predicting motivation. Furthermore, it is unclear which values predict the extrinsic or intrinsic satisfaction factors because individuals subscribe to different values.

Dunggio (2021) conducted a study within an educational institution that indicated that motivation does not significantly or positively influence job satisfaction. However, it does influence the lecturer's success. Wahyu et al. (2016) found a positive correlation between academic motivation positively and significantly related to self-regulation and academic

performance. Additionally, Saeed and Nasir (2016) report that motivation positively affects job satisfaction. Seyto et al. (2021) show that employee engagement does not directly affect employee performance. In addition, the mediation role of motivation on job satisfaction significantly affects employee performance. Therefore, motivation is a mediating (transmission) variable that mediates between fundamental values and IndEP (Seyto et al., 2021).

Consequently, this study examines whether specific values predict IndEP. Furthermore, the literature must clarify whether various relationships predict the IndEP. For example, whether a relationship exists between specific values and extrinsic satisfaction factors includes a relationship with intrinsic satisfaction factors. Therefore, the proposition of the following hypotheses:

H_4 & H_7: Intrinsic satisfaction factors positively and significantly mediate the relationship between demographic factors and an individual's OEP.

However, various studies from the extant literature report conflicting results regarding the relationship between monetary motivation, age, gender, education, tenure, employment level and job satisfaction (Met & Ali, 2014). However, employee motivation is a fascinating, complex phenomenon that affects individuals differently and depends on intrinsic or extrinsic motivation. Individuals, thus, differ significantly in their evaluations of motivating factors and preferences for monetary rewards or recognition from leaders (Met & Ali, 2014).

Szekeres et al. (2019) found that cognitive abilities and stimulation are less significant in older people, with security being vital to them because of their decreased physical strength, significantly when risks and threats increase. In addition, the fact that older people's senses are less acute increases the importance of conformity and traditional values. However, hedonism and power values decrease with age.

The literature review results show a significant inverse correlation between age and job performance (Miralam & Ali, 2020). Findings indicate a significant positive correlation between experience and job performance. Sorvali et al. (2022) reveal a moderately significant hedonism with differences between various age groups, with the younger group rating their

self-enhancement values highly. For example, achievements, power dominance and power resources simultaneously, older employees respect traditional values and are universalistic.

Individuals within the same age group, cultural, environmental or organisational settings have the same exposure to circumstances, events and learning experiences. However, they prefer dissimilar values according to their age group (Sorvali et al., 2022). The reviewed literature shows that the age gap and differences between cohorts have various preferences for individual values. Thus, they prioritise environmental protection and conservation differently (Sorvali et al., 2022).

According to Tabatabaei et al. (2012), job satisfaction improves if employees work under contract rather than formal employment. Szekeres et al. (2019) show that universalist values negatively relate to entrepreneurship. Social settings link with universalism and generosity principles but not with power and achievement values. These researchers found that artistic workplaces negatively relate to conformity. In contrast, investigative employment positively relates to openness to change values (Szekeres et al., 2019), suggesting substantial differences between the various groups and predicting various outcomes.

Hassan and Ogunkoya (2014) state that service duration improves job performance. At the same time, Feldman (2010) shows a decrease in the strength of the association between job performance and organisational significantly when organisational tenure increases. Work experience due to tenure defines an employee's contribution to the organisation. Employees acquire skills and competencies suitable for a particular due to their exposure to and experience with policies, procedures and values. They are also familiar with organisational culture, unlike short-tenured employees who are still learning (Ng & Feldman, 2010).

Males prefer self-improvement and openness to changing values than females (Szekeres et al., 2019). However, cultural and age factors account for less variation in values. Furthermore, Hassan and Ogunkoya (2014) find that men are action or action-oriented, person or person-oriented, et al. (2021) show that women highly rate universalism and self-transcendence. While men highly rate self-enhancement values and rate hedonism and openness to change low. In contrast, women rate their self-direction values higher. Interestingly, their findings show no gender differences relating to conservation values. Tabatabay et al. (2012) found significant differences in job satisfaction between males and females.

Education is an essential societal tool for communicating social values (Mundhe, 2018). Hence, school performance indicates the learner's level of motivation, which is a function of interactions with various individuals in their early life. However, parental education level indicates socioeconomic status. Thus, the status of children's education includes behavioural outcomes (Dubow et al., 2009). Galliano et al. (2020) argue that lower parental education levels reduce the educational value within families. Mundhe et al. (2018) report a significant association between parental income and academic performance, corroborating the earlier findings of Dubow et al. (2009). These findings show a high association of parents' academic performance between achievement and occupation. Thus, the greater the parents' educational level, the better the occupation of their children.

Hassan and Ogunkoya (2014) argue that education influences positive or negative attitudes towards work and commitment. Szekeres et al. (2019) opine that education requires intellectual openness and flexibility. Thus, education relates to the individual's self-direction and conservation values. Education promotes conformity and tradition while increasing educational attainment correlates with achievement values to satisfy the individual performance according to external standards.

However, Koivra (2008) found that when educational achievements evolve, conservation values decrease but include an increase in autonomy by improving self-enhancement values—for example, authority and achievements. Solvari et al. (2021) indicate that academics prioritise openness to change and self-improvement more than other individuals with a similar level of education. While university graduates, in comparison, have lower compliance values than vocationally trained workers. However, the values of conservation and self-transcendence are unrelated to educational level.

Educational attainment positively correlates with citizen behaviour and creativity (Hassan & Ogunkoya, 2014). However, it is also negatively associated with absenteeism and drug use. However, the limitation of Ng and Feldman's (2010) study is that it cannot compare college and vocationally trained graduates because of the differences in institutional requirements rather than educational attainment.

Nurcahyono and Mardiati (2019) show that education influences performance, a finding that supports the theory of workplace performance and suggests that competent employees can work effectively and efficiently. These employees' education level gives various skills, abilities and capabilities that promote their confidence to achieve their goals by acquiring further knowledge and skills. These factors influence their value systems in fulfilling duties and responsibilities.

Organisations have hierarchical and functional structures that require certain knowledge, skills and competencies specific to a particular occupation. Therefore, factors that guide the recruitment and placement of employees. Thus, this study includes educational level to determine the relationships between education, individual values and OEP. However, the predictions regarding the various levels of employees' education could be more precise. Thus, education could predict similar or various values. Furthermore, this study questions whether education is related to IndEP.

Gashi et al. (2017) suggest that individual values are diverse and complex to prioritise, especially when considering their contributions to groups and organisations. Senior management should uphold stimulation and traditional values. In contrast, middle management should uphold benevolence but not define lower management values. However, owners convey values that translate into common beliefs that serve as the basis of the organisational culture, goals, objectives, practices and norms that are also affected by employees' values. Thus, employees share views and interpretations of organisational conduct while the structure strengthens actions favouring these values and practices (Sagiv & Schwartz, 2007).

The organisational structures facilitate a physical environment, e.g., open and closed office spaces. Such spaces vary across industries relative to organisational size (Sagiv & Schwartz, 2007). Chatman and Jehn's (1994) findings link culture and industry characteristics, technology and growth rates. Thus, their findings provide empirical support for cultural similarities between organisations in the same industry. Business workplaces frame an organisation's cultural values (Sagiv & Schwartz, 2007). At the same time, regulations and procedures affect the subsidiaries' organisational culture. However, culture contributes to disparate internal factors within industrial sectors. Extant literature needs to offer more knowledge regarding the specific sector factors that influence IndEP. Thus, it is difficult to determine the impact of the

culture on IndEP. Alternatively, whether culture is defensive or constructive within the organisation (Chaudhry et al., 2016)., the proposition of the following hypotheses:

H_3: Demographic factors are positively and significantly associated with an IndEP.

H_5 & H_6: Extrinsic satisfaction factors positively and significantly mediate the relationship between demographic factors and IndEP.

H_8 & H_9: Schwartz's values positively and significantly mediate the relationship between demographic factors and IndEP.

This section discusses Schwartz's theory (1992) as the basis of individual values that motivate individuals to innovate and encourage them to engage in innovation initiatives. Therefore, this section addresses various interactions relating to IndEP, for example, extrinsic and intrinsic satisfaction factors. This study also examines whether SIV, extrinsic and intrinsic satisfaction factors act as mediators and determine the relationship between the demographic factors and IndEP. This study also focuses on CDT (translated into practice by GLOBE Theory), CVF and SIV. CVF includes specific values at an aggregated level. In addition, CVF outlines the longstanding values and diverse analytical traditions—for example—form measures to elucidate personal leadership styles. CVF also evaluates organisational groups and values (Lindquist & Marcy, 2014) and posits that certain cultures have strong associations, such as a particular set of efficacy criteria (Hartnell et al., 2011).

The following section discusses the Convergence Theory that assists the understanding of innovation.

2.13 Convergence Theory and Innovation

Culture establishes parameters for common, convergent, acceptable and desirable behaviours. Culture influences employees' beliefs and expectations, leading to consistent choices and actions that achieve long-term organisational performance (Peprah & Ganu, 2018). Thus, dedicated and loyal employees act in the organisation's best interests. Consequently, improvement improves.

Cultural differences contribute to variations in production and the adoption of modern technology. These differences can result in disparities in long-term organisational growth rates

due to diverse laws, endowments, technological prospects, legislation, market-based instruments and attitudes towards environmental concerns. Therefore, countries' green sector development and innovation levels vary (Karman et al., 2020).

Ulucak and Apergis (2017) define convergence as equalising the ecological footprint per capita values due to environmental degradation resulting from organisational activities that deteriorate the environment. However, these organisations increase performance on an equal footing. Regardless, they are industry leaders or laggards. The pace of convergence varies because of the abatement costs until it reaches equilibrium. According to De la Fuente (2000), international inequality eventually stabilises, resulting in income distribution equilibrium because this equilibrium depends on various investment locations and efforts. However, convergence in reporting standards can considerably impact organisational operations, earnings, policy, and political power (Matisoff et al., 2013).

Convergence in global OEP entails sharing responsibility to reduce carbon emissions. Convergence also transfers technology to promote and accomplish global commitment to environmental improvement through a fair negotiation for global environmental improvement agreements (Branlund & Karimu1, 2018). De la Fuente (2000) states that convergence arises from technological advancements and emulation. However, Agion et al. (2004) contend that some countries trail technologically by mimicking and using new technologies discovered elsewhere.

Organisations that adopt and implement ISO 14001 may have similar or converged cultural traits that result in similar innovation initiatives with comparable OEP improvements. This study also argues for adopting and implementing ISO 14001 standards that promote equal standards of OEP. Similar resources within organisations also have the same organisational OEP. However, the literature needs to determine whether these propositions hold.

Based on previous sections and the discussions, this study incorporates various levels of analysis and incorporates all the theoretical viewpoints into the context of this study. These levels generate value for achieving innovation. This study also considers inventive activities at aggregate analysis or the organisational level and includes individual analyses. The following section discusses the individual levels of analysis and innovation.

2.14 Individual Level of Analysis and Innovation

This study selects applicable theories based on the research topic and chooses an appropriate level of analysis to avoid applying incorrect theories, inappropriate data collection methods (Khastar et al., 2011) or inadequate determination of the level of analysis. All theories may impact the chosen research methodologies and prevent the study participants from responding to the study questions and confirming or rejecting the hypotheses. This study employs various theories: CDT and CVF at the aggregate or organisational level of analysis and SIV at the individual level. Using appropriate analysis can overcome the problem of obtaining incorrect data results, resulting in errors, fallacies, and incorrect conclusions. The individual-level analysis describes' behaviour and attitudes related to personality or actions due to their values and belief system. At the aggregate level, at the same time, analysis is the evaluation of organisational traits, for example, group behavioural attitudes and beliefs resulting from the employees' commonly shared values or culture. This study discusses individual-level analysis using the SIV. The aggregate-level analysis follows this discussion in the subsequent section.

An organisation's cultural values alignment affords employee empowerment and engagement to ensure the effective management of culture. Management comprises a sense of empowerment, self-efficacy, meaning, personal consistency and trust that enables self-determination (Cameron et al., 2006). Kane-Urrabazo (2006) suggests that such alignment is achievable when an organisation respects the principles of trust that facilitate consistent and reliable empowerment. Thus, management actions show no contradiction between its words and deeds. In addition, such actions encourage employees to contribute to decision-making processes.

Additionally, the correct culture encourages and motivates employees' trust, loyalty and growth, such as enjoyment, comfort and excellence in their work (Hamzaali et al., 2017). Undoubtedly, a self-determined organisation implies collective action for the common good of employees, including paying explicit attention to articulating and promoting core values because these foster a sense of purpose among employees (Lunenburg, 2011).

Furthermore, organisational culture influences employee behaviour, motivation and values (Ehtesham et al., 2011), empowering the workforce by engaging and motivating them to be effective without rigidity or dysfunctionality, especially during difficult times (Cameron et al.,

2006). Such empowerment includes shared decision-making and encouraging new ideas to deal with challenges. Therefore, empowerment is an institution's commitment to its employees. Such practices result in complex employee motivation as individuals and groups differ in beliefs. Such action can result in either the support or inhibition of success in the organisation (Clark, 2003).

In addition, DeLorenzo et al. (2015) indicate that individuals' cultural perspective is relative to their individual or national levels because of their unique characteristics. Additionally, the self-determined organisation involves working together towards the common benefit of employees. It will devote particular attention to communicating and implementing core values because they promote a sense of commitment among workers (Lunenburg, 2011). In addition, organisational culture influences employee behaviour, values and motivation (Ehtesham et al., 2011). Therefore, employees create value through superior achievement through collaboration, cooperation and control skills. In addition, employees also independently understand standardisation's internal processes and procedures (Cameron et al., 2006).

SIV is an appropriate theory for describing individuals' behaviour, attitudes and belief systems, distinguishing and characterising individuals as unique beings (DeLorenzo et al., 2015; Fening & Beyer, 2014) and determining their actions, responsibilities and rights. Personal values determine individual behaviour in an individualistic culture and are appropriate at the individual level of analysis. The openness to change values includes action independence, originality and passion (Sagiv & Schwartz, 2007). Conservation values include previous customs, convictions and commitments—for example, social—forms, compliance standards, safety and stability.

Furthermore, employees have a purpose, passion, energy and enthusiasm, especially when they achieve their perceived value and the organisation's purpose, goals, and vision reflect their perception of value or when trust empowers them (Cameron et al., 2006). Therefore, individuals support fairness, equality and friendliness prevailing in decision-making and believe that appropriate manners and treatment motivate employees. Hence, an organisation with an unfair and inconsistent compensation system results in a lack of trust in the management and, thus, unmotivated employees (Kane-Urrabazo, 2006).

In addition, other contributing factor to the lack of motivation is employees' and managers' persistent questionable ethical behaviour. Organisations need to understand the root causes of misconduct, such as a lack of proactivity, social responsibility and misalignments with the mission statement, structure, management philosophies, shared values and other aspects of the organisation (Hurst et al., 2004).

A discussion on the aggregate level of analysis follows.

2.15 Aggregate Level of Analysis and Innovation

Sedgwick (2014) defines the statistical unit of analysis as a unit that leads to the study's conclusions that comprises the "who" or "what" information. Understanding and defining the unit analysis, thus, aids in adequately planning the study. This study also uses this unit to guide the research design to minimise logical errors and incorrect conclusions. At the individual level, SIV Theory determines the units of measurement. This study uses CVF and CDT as units of measurement measuring at the organisational or aggregate level. According to Kumar (2018), an aggregate is a group, e.g., independent individuals sharing the exact location and time.

Aggregation produces group or ecological constructs from common and shared individual-level data, resulting in a minimum agreement. In addition, this unit represents the average of individual replies. Therefore, these responses have satisfactory reliability and validity (van Mierlo et al., 2008). Researchers and organisations determine the validity of the outcomes through the ecological factor analysis (Hofstede, 2011) and aggregate the individual scores rather than the number of cases.

Hofstede's (1980) universally acceptable cultural dimensions are cross-cultural indices because they distinguish between cultural groups. Consequently, the assessments of personal values and cultural orientations differ from the assessment of culture because such a process could result in ecological errors, especially when interpreted as an individual culture or value (Rinuastuti et al., 2014).

Peterson and Castro (2006) caution about errors due to the utilisation of a poor scale and analysis because culture differs at individual, organisational and societal levels. This poor scale and analysis implies the creation of an illogical error. This problem is especially true when

individual-level effects relate incorrectly to group-level effects or vice versa (Dansereau et al., 2006). Consequently, this study could lead to bias in drawing inaccurate conclusions from the data by following an incorrect analysis level.

In addition, these logical mistakes stem from the misconception of the total individual values, i.e., that the total equals the national cultural values, even when there are no shared values or identities (Beugelsdijk et al., 2017). Hofstede's cultural dimensions (1980) are helpful in analysis at the national level, while the development of the GLOBE scale is suitable for organisational purposes, including societal analysis (Peterson & Castro, 2006). In addition, the CVF is also applicable to studying organisational culture, leadership and strategies.

Hofstede examines the differences and similarities between the GLOBE and Hofstede models (Diehl et al., 2008). Thus, these studies employ a variety of study designs, occupancy rates and datasets. The GLOBE study relies on theoretical data, uses data from collaborators worldwide, and builds on Hofstede's findings. However, Hofstede's research (1980) relies on empirical data from decentralised IBM organisations.

In addition, GLOBE researchers group the data into four categories: the concepts of intercultural and social culture define the boundary between social and organisational cultures and categorise and describe cultural values and dimensions. Furthermore, GLOBE studies compare data on personal accomplishments at societal and cultural levels and compare societal data with that at the individual level, h. However, they do not necessarily exhibit identical behaviours (Dorfman et al., 2012).

In addition, collectivist cultures promote working together as more vital than individual working effort, thus including opinions and ideas for attaining goals (Fening & Beyer, 2014). Dartey-Baah (2013) found that collectivist societies usually lack the freedom and independence necessary for creativity and innovation. Thus, this culture breeds competitiveness rather than cooperative behaviour among employees. Employees in individualistic societies may fail to follow these ISO standards, resulting in irresponsible actions as perceived by management that lead to uncooperative behaviour (Aycan & Gelfand, 2012).

Organisational and cultural changes adapt organisations to the dynamic business environment. Hence, the leadership faces challenges related to cultural expectations. Organisations also expect to confront cultural imperatives (Javidan et al., 2006).

Furthermore, Side et al. (2006) assert that organisations should have "opaque" organisational capabilities and resources, meaning that the value traits, talents and resources of organisations are uncertain. In addition, these capabilities and resources might improve the sustainability of competitive advantage (including managers and employees), resulting in an imitation or innovation dilemma for competitors. This situation implies that a company attempts to avoid imitation by creating barriers. Thus, competitors may drive innovation by replacing the original invention. Such actions may cause a company to develop and regain competitiveness (Lado et al., 2006). Consequently, it executes novel ideas (Zhu, 2008).

Some organisations have a stronger focus on the performance effects because of the perceived OEP that surpasses those organisations that place less emphasis on OEP (Diehl, 2008). Organisations also promote collaboration, cooperation and interpersonal contact to improve learning opportunities (Shore et al., 2009).

The following section discusses environmental benchmarking and innovation.

2.16 Environmental Benchmarking and Innovation

This section clarifies the concept of benchmarking and discusses the theoretical foundations of benchmarking that is a precursor of innovation. Benchmarking allows SA ISO 14001-certified organisations to adopt environmentally innovative ideas and investigate their potential benefits and constraints. Furthermore, Heras-Saizarbitoria et al. (2010) argue that organisations differ in their ability to innovate and how they absorb new information. This absorption of information depends on adequately trained management and their subordinates. The employees involved in implementing EMS are ideally suitable for adopting environmental self-regulation solutions such as the ISO 14001 standards.

Pudelko (2005) also proposes that organisations require integrated models for cross-national management studies that explain the convergence patterns produced by the learning pressure from best practices and the continuing effects of institutional and cultural contexts of

management practices. Rothenberg et al. (2005) indicate a need to adequately understand benchmarking factors that affect the choice of the organisational benchmark matrix and the relationship between OEP, benchmarking and management actions. This practice results in a model of continuity, pluralism and diversifying management practices standards in assessing benchmarking collaborators. It also includes the inspiration of organisational involvement as a survival incentive. In addition, there is a need for additional resources for benchmarking and the organisational desire to eliminate uncertainty. This model leads to a search for partners with whom to exchange information (Dörfel & Ruben, 2002).

Corporate benchmarks also vary among tiers, e.g., performance improvement processes. Systematic changes in operations could improve productivity. Thus, productivity is necessary to achieve superior performance. However, Ghere and Gogozan (2010) argue that environmental benchmarking must overcome ideological methods by discovering realistic solutions, such as embracing global best practices (GBP). Hence, organisations must be able to adapt dynamically to ever-changing economic environments.

In addition, benchmarking philosophies use organisational theories, for example, Institutionalisation and Resource Dependency Theories. Therefore, it is necessary to understand an organisation's existing problems when benchmarking, such as forming new partnerships with prior opponents (Doerfel & Ruben, 2002). Institutional Theory contends that an organisation desires to conform to traditional organisational and social norms because this practice results in structural and behavioural homogeneity (Grecco et al., 2013). It also leads to cooperation, understanding and maintaining the common truth (Evans, 2013). Prakash (2007) states that competition for foreign direct investment generates opportunities for multinationals. It includes trade practices, norms and business skills that organisations transfer from their home countries of origin to other host countries.

The Institutional Theory provides a conceptual framework for environmental benchmarking. Organisations implement the best practices, such as eco-friendly environmental management and performance measures, to achieve efficiency. Callaghan (2014) posits that values create privileged standards that guide organisational and individual behaviour and practice selections that either improve or constrain individual and OEP.

Benchmarking is a review of best practices, and the reviewed literature indicates a significant contrast between competitive cooperation and benchmarking. This latter practice results in a superior OEP (Ghere & Gogozan, 2010). De Vlieger (2002) also acknowledges that managing an alliance is problematic, especially when the organisation needs more performance indicators or measurements. Organisations must gather comparable statistics, including complete data on their equipment, for benchmarking and the population, efficiency and operational measures. However, benchmarking remains controversial in comparative studies (O'Rourke et al., 2012).

Benchmarking employs rigorous methods to perform significant performance measurements to gather data and identify innovative approaches that improve performance through a well-planned approach. Additionally, benchmarking is a systematic process with well-defined objectives and mechanisms to measure, compare and reveal innovative approaches (Roche, 1997).

Organisations should acknowledge the existing environmental situations and establish the desired environmental result with measurable objectives. Organisations must also define their targets over time (Delmas & Toffel, 2003) to enable them to discover discrepancies between existing and desired cultures. In addition, it is necessary to diagnose the current condition and create an ideally friendly climate to efficiently implement the desired culture (Lindquist & Marcy, 2014). Moreover, OEP is essential for organisations to succeed because of the operational costs, market needs, expectations, voluntary initiatives and regulations such as ISO requirements (ISO, 2015, 2 14001).

Sim et al. (2003) assert that benchmarking benefits include goal congruence, superior coordination, and a comprehensive examination of the results. Benchmarking should meet the development objectives and the adoption of advanced technologies. This practice necessitates in-depth environmental and competitive performance assessments as demanded by regulators, local governments, employees, non-governmental organisations and other stakeholders (Mandaraka et al., 2004).

Benchmarking is also feasible when an organisation focuses on the importance of organisational culture that requires the development of learning values and agreements with employees as a proactive intention. These intentions enable the organisation to pursue its goals and objectives (Bates & Khasawneh, 2005). However, the reviewed literature indicates few

empirical studies on the driving forces of innovation and whether innovation can improve OEP, especially when management approaches are not universally applicable (Jariya, 2012). Therefore, the OEP indicators compare conditions that supplement or integrate planned and stated goals (Horbach, 2008).

Indicators are appropriate for action, goal setting and monitoring results (DEFRA, 2006), aid in understanding the state of the environment and promote and protect the organisation's status quo. Organisations implement these practices through informed and responsible organisational decisions (Bossel, 1999). Consequently, significant environmental indicators are the expressions of the organisational values and priority goals that provide information about programmes.

The above practices clarify the relationships between impacts, outcomes, outputs and inputs in the organisations and detect challenges in achieving organisational goals (Mosse & Sontheimer, 1996). Moreover, Ghere and Gogozan (2010) suggest that benchmarking enhances environmental practices and OEP and acts as key performance indicators (KPIs) that reflect the essential capabilities of the organisations. KPIs also reveal the performance of ISO 14001-certified organisations in SA and serve as barometers for efficient and effective execution of innovation programmes. In addition, the CQI and innovation programmes advocate trust, respect, communication, collaboration, accountability and empowerment to achieve innovation (Radawski, 1999).

Furthermore, the CQI and innovation programmes raise awareness among employees and supervisors. Thus, organisations should trust their personnel to honestly manage their organisational assets (Solehah & Noor, 2015). A shared culture fosters trust, enhances communication among individuals, and alleviates anxiety in employees' relationships (Ahi & Stupar, 2014). Moreover, honest communication should incorporate an organisation's values, expectations and purposes.

Organisations also offer information on progress to allow discussions at all levels (Solehah & Noor, 2015). Thus, Radawski (1999) emphasises the essential concepts of CQI and innovation that state that organisations should not blame employees for errors, nor should they instil fear but instead foster confidence and respect.

In addition, CQI and innovation implementation assist in the long-term success of cultural change. However, this shift necessitates financial and emotional commitment from the leaders (Radawski, 1999). Management should actively engage in cultural management and convey its function to all stakeholders (Branzei et al., 2002). Hsieh (2010) also confirms that cultural values significantly impact conceptions such as organisational values, behaviour and leadership styles.

According to Social Theory, behaviour evolves with innovation to enhance the earlier possibilities (relative advantages), current values and experiences. However, companies may become less responsive to the need for change, especially when economies and markets become more volatile than in the previous period (O'Riordan, 2015).

The existence of subcultures produces paradoxes and makes it difficult for an organisation to execute and realise innovation. Organisations that constantly update information, conduct research and engage in development that includes formal and informal learning procedures can innovate. Organisations should be aware of the most recent ideas and developments. Thus, these learning methods enable integration and allow organisations to experiment with this new knowledge (Seelos & Mair, 2012). The reviewed literature offers limited reasons for implementing ISO 14001 to enhance cultural homogeneity alternatively, whether this homogeneity exists within organisations and sectors.

This study seeks a theory for this undefined theoretical explanation. It also needs to be clarified which Cultural Theory is relevant and suitable for this study's purpose and whether the association constructs or values predominate in the benchmarking projects. Likewise, the literature must clarify which dimensions are sufficiently dominant to advocate for innovation and OEP when adopting ISO 14001.

The following section concludes this chapter.

2.17 Conclusion

This chapter has discussed the role of existing literature and includes defining the study's aims, objectives and measurement variables. It also identified related theories addressing the research question and discussed innovation's roles and effectiveness in HRM policy. It also referred to the OEP in South African ISO 14001-certified organisations. Additionally, this chapter discussed the findings of earlier studies.

Chapter Two explained the CDT and CVF theories at the aggregate level and how they can predict OEP and innovation. Furthermore, it discussed the predictions of Schwartz's values (1992) at the individual level. Organisational and cultural theories relevant to innovation to predict and explain certain relationships within ISO 14001-certified organisations in SA. This chapter also outlined the empirical findings of the extant literature that guide the objectives of this study.

Chapter Two presented the literature review related to the research question, which indicated that organisational culture could facilitate or impede innovation and may lead to an improved or poor OEP. Further, the reviewed studies showed that employees have various values. Thus, employees exhibit behaviour that 'fits' the organisational culture, especially when they understand and internalise culture. This practice aids in attaining the organisation's objectives and could increase or decrease productivity with an enhanced or poor competitive advantage.

Significantly, this chapter has contributed to theoretical and empirical knowledge by indicating this study's purpose, the tested hypotheses, and the conceptual models that serve as new approaches to organisational culture, innovation and OEP, particularly for South African ISO 14001-certified organisations. Moreover, Chapter Two aimed to demonstrate the relationships between various factors in the conception models. For example, HRM policy effectiveness, organisational culture and innovation. The reviewed literature reported factors relating to OEP and highlighted their association with the current research question. This chapter also noted a lack of knowledge from the reviewed literature regarding various relationships—for example, the relationship between cultural values and OEP.

This chapter also considered mediating (bridging or channel) factors—for example, innovation and HRM policy effectiveness. Furthermore, the literature review showed a lack of knowledge regarding the impact of labour relations on OEP. Alternatively, whether labour relations strengthen or weaken the apparent associations between organisational culture and innovation.

In addition, this literature review highlighted how the dearth of effective labour relations, morale, enthusiasm and job satisfaction adversely affects OEP, innovation and organisational productivity. It noted that organisations should have sufficient knowledge of labour relations to cultivate good communication, minimise grievances, improve mutual respect and develop employee trust, resulting in a mutual plan with employees for achieving the organisation's goals.

Furthermore, the literature review demonstrated the importance of culture, which is an impetus for innovation and enhances organisational efficiency and performance. Furthermore, this chapter provided a new approach that integrated several factors within the conceptual models. However, this practice contradicted previous studies that used various other approaches, factors and dissimilar conceptual models within different regions and contexts.

The following chapter outlines the research methodology.

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CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

The previous chapter provided a thorough overview of previous literature, including studies on cultural theories relevant to the innovation practices of ISO 14001-certified organisations. Chapter Three briefly describes methodological approaches, the research philosophy, beliefs and values underpinning this study's design, data collection methods and the analysis process (Ryan, 2018). It explains innovation as a dependent variable and the causal relationships between the theoretical concepts (Benitez et al., 2020).

Falsification principles involve rejecting or not rejecting a null hypothesis (Popper, 1972). This study aimed to achieve this goal. This study evaluates the theoretical framework of innovation. The methodology provides the theoretical rationale for research in a specific area, including concepts and models (Hameed, 2020). This study uses quantitative techniques from the existing literature that validate this research approach. Therefore, it is an appropriate tool for studying innovation, especially in South African ISO 14001-certified organisations.

The adopted methodological approach influences the quantitative strategy and deals with research concerns (Williams, 2007). Quantitative researchers argue that it is only possible to proceed with an investigation with prior theories because of known facts (Hameed, 2020). The nature and technique of acquiring knowledge are essential for the issues under enquiry and dictate the selection and applicability of the method employed (Morgan & Smircich, 1980).

Positivistic and quantitative researchers prefer to collect data using various methods, for example, surveys, because of the objective beliefs, costs and data analytics of the research problem (Hameed, 2020; Li & Mahadevan, 2017). Positivistic researchers think that scientific research on organisational activity should use quantitative approaches because these assist in comprehending these practices (Uduma & Waribugo, 2015) and make it possible to analyse complicated research problems. This study uses PLS-SEM as an appropriate statistical technique (Benitez et al., 2020).

Organisations need long-term efficiency to sustain themselves (Elangovan & Mala, 2013). Culture has a significant impact on the organisation. However, cultural disparities exist in workplaces due to the diverse workforce. National cultural models are growing in cross-culture studies because of differences in social views and conventions that create these models

(Mubarak et al., 2017). This situation requires a systematic study of human behaviour within organisations that yield practical societal and cultural knowledge (Paolisso & Hames, 2010). Generally, the quantitative analysis focuses on hypotheses or examines cultural values. In this study, the research question and supporting sub-questions produce hypotheses.

The following section discusses the philosophical paradigm.

3.2 Philosophical Paradigm

Gemma (2018) highlights philosophical research paradigms like positivism, which drive research techniques. Positivism emphasises impartiality in study design, method, and analysis, with researchers needing to determine their philosophical paradigm and the direction, procedure, and methodologies for their study (Gemma, 2018). This approach involves hypothesis development and testing, operational definitions, mathematical equations and calculations, extrapolations, and expressions (Kivunja & Kuyini, 2017).

Objectivism asserts that valid knowledge can only be obtained by measuring the phenomenon under investigation and documenting the researcher's independent observation of events. Positivists hold that knowledge production is objective and independent of the values and effects of participants and researchers (Yoon et al., 2020).

Positivist scholars employ quantitative methods and emphasise the presentation of causal relationships (Yun et al., 2020). This strategy permits controlled experimentation, reliable results, and generalisation. The deductive methodology helps to distinguish successful organisations from unsuccessful ones (Abreu-Cruz et al., 2019).

The following section discusses the study’s design.

3.3 The Study's Design

The study follows a positivist approach. The precedents set by previous cross-cultural studies guide and enrich various aspects of this study and its outcomes (Salciuviene et al., 2005)—for example, methodological integrity, conceptualisation design and the application of research methods.

The findings of the literature review inspired the researcher to use specific theoretical frameworks, quantitative approaches, problem definitions and related hypotheses (Williams, 2007). Thus, this study designs a research flow process emanating from the research question and related hypotheses to investigate culture's influence on OEP Furthermore, the role of innovation and HRM policy effectiveness as mediating factors.

The reviewed literature guided this study to focus on the proposed theoretical models (Bertrand & Fransoo, 2002). In addition, the reviewed literature included the relevant measurements, system variables and their interactions (Williams, 2007). The literature review connected the study findings to prior knowledge. Therefore, this assisted in developing the chosen theoretical models and proposing and outlining the hypotheses. These models defined various interactions, including mediation and moderation effects.

This study was conducted independently from the researcher's perceptions and opinions and objectively measured reality. Hence, the researcher's influence is minimal. The study respected the rights and dignity of the participants and their organisations.

This study uses a scientific quantitative research design, previously evaluated measurement scales and various statistical techniques. For example, PLS-SEM will analyse the data, ensuring its credibility. It follows the protocol's stringent design and uses questionnaires. Furthermore, its statistical analysis process (SmartPls) is efficient and cost-effective. This study's analysis results are appropriate for generalisation, and the results' repeatability is possible in various contexts. The subsequent sections clarify various aspects of the study design that led to the study method.

The following section discusses the methods of this study.

3.4 Scope of the Study

The relationships between innovation and culture and individual values associated with OEP factors define this study's extent, limits and boundaries. For example, conference proceedings presentations, books and journal articles helped to identify the knowledge gap in extant literature and define the research problem and scope. Participants are from the South African Bureau of Standards (SABS) ISO 14001-certified organisations, and the boundaries of South Africa delimited the study.

3.5 Population

According to the International Organization for Standardisation's (ISO) 2019 statistics, SA has 942 ISO certificates (ISO, 2020). The South African National Accreditation Scheme (SANAS) is an ISO member. Therefore, SANAS accredits SABS. Furthermore, SABS has 70 years of certification expertise and has certified over 5,000 organisations of varying sizes that comply with various ISO standards. Understanding and assessing the significance of these relationships in the models is essential. Thus, analysis of the models requires an adequate sample size.

This study's population is 400 ISO 14001-certified organisations from diverse industries of varying sizes and functions throughout SA's nine provinces. The SABS database of ISO 14001-certified organisations comprises organisations from various sectors that include transport (12%), chemicals (11%), petroleum (3%), paints (1%), electrical and equipment (9%), banking (1%), textiles (3%), clothing (1%), footwear (1%) rubber (2%), government (3%), glass (3%), buildings (3%), food (10%), publications (3%), information technology (1%), municipalities (1%) timber (16%), entertainment (1%), research and services (6%) and mining (12%). Furthermore, the distribution of these organisations in various provinces of South Africa varies. i.e., Limpopo (6%), Gauteng (23%), Northwest (6%), Mpumalanga (7%), Northern Cape (2%), Eastern Cape (9%), Western Cape (12%), Free State (10%) and Kwazulu-Natal (26%). This database includes all the entities operating businesses in South Africa.

Employees in different organisations vary in composition and numbers because of the disparate nature of their activities. Some organisations have low-skilled employees, while others have

highly skilled and specialised employees. This study uses sampling to establish a population profile and questionnaires to obtain participants' responses.

The following section discusses a sampling of this SA ISO 14001-certified organisations.

3.6 Sample

A descriptive analysis summarises the characteristics of the respondents and their organisations. This study uses email to sample these organisations electronically. In addition, this study also uses virtual and on-site visits to make a follow-up. Consequently, the study uses questionnaires to collect primary data. However, the downside of sample research in a cross-cultural study is the need for more responses because, even if all the potential participants received the questionnaire, they still need to complete it.

The sample consists of organisations from various industrial sectors. For example, government (4), agriculture, hunting and fishing (5), mining and quarrying (10), educational institutions (2), electrical and gas (11), IT and communication (1), wholesale and retail (8), transportation and storage (10), manufacturing (39) and construction (3). This study uses these categories in its questionnaire and considers these manageable categories of industrial sectors for data analysis.

The provincial distribution of organisations in various industrial sectors is as follows: Limpopo (5%), Gauteng (22%), Northwest (11%), Mpumalanga (11%), Northern Cape (2%), Eastern Cape (8%), Western Cape (13%), Free State (6%) and Kwazulu-Natal (22%). Hence, this sample consists of 93 organisations at an aggregate level and includes 429 SIV respondents at the individual level.

Purposive convenience sampling, a non-probability technique, aids in collecting data through emailed questionnaires. This sample is from a population of SABS ISO 14001-certified organisations because the characteristics of this population allow this study to answer the research question. The study requests respondents to express their perceptions of innovation according to the measurement scale and includes the related constructs as per the theoretical frameworks on a 5-point Likert scale.

The following section discusses the aggregate and individual-level analyses.

3.7 Aggregate and Individual Level Analyses

The reviewed literature informs the use and choice of constructs in this study. These constructs are at an aggregate level analysis (CDT and CVF) and the individual level (SIV). These models define the relationships between organisational cultures, values and innovation. This study uses statistical software, such as SmartPLS, for statistical analyses. In addition, SmartPLS analyses the responses from questionnaires to answer the research questions (Bertrand & Fransoo (2002). The statistical analysis also examines the relationship between independent and dependent variables. (Williams, 2007).

This study is cautious of methodological errors. For example, an ecological fallacy is a methodological error that infers relationships between individual traits from group data. The atomic fallacy is an incorrect inference about causal relationships, assuming a relationship between outcomes and individual characteristics rather than organisational outcomes.

3.8 Data Collection

This study uses questionnaires as the primary method of data collection at both the aggregate and individual levels. In addition, this study utilises the same procedures for both levels of analysis. This study also uses the same targeted population for sampling purposes using purposive convenience sampling. It collects data at both the individual and the aggregate level.

The questionnaires comprise questions on a Likert scale and use a Likert-scale format with five choices per item, e.g., 1 = no extent, 2 = to a small extent, 3 = to some extent, 4 = to a large extent and 5 = to an extreme extent.

The author emailed the questionnaires on the aggregate level, and then the data for the individual levels of analysis followed this email. This study sent the questionnaire to 400 SABS ISO 14001 certified organisations in 10 industry sectors, e.g., government (4), agriculture, hunting and fishing (5), mining and quarrying (10), educational institutions (2), electrical and gas (11), IT and communication (1), wholesale and retail (8), transportation and storage (10),

manufacturing (39), and construction (3). The contact details of SABS ISO 14001-certified organisations are available in the SABS database.

This investigation undertakes a pilot project before the data collection process for the main study. Therefore, this pilot study assists in addressing the validity of the data collection tools. The pilot study tested the questionnaire to ensure its reliability and validity, as well as the ambiguity and complexity of the questions to ensure ease of response by participants. The study combines the CDT and CVF measurement items and also uses a single questionnaire at the aggregate level (Appendix D).

In addition, the study email questionnaires had attachments in the form of a cover letter and a consent form. This study emailed information to the responsible staff of ISO 14001 in each organisation, and they were requested to distribute the questionnaires to all staff members for completion. The researcher also requested the respondents to return the completed questionnaires either by email or to forward them by post to the address provided.

The researcher sent a second reminder two months after disseminating the first email. In addition, for these companies that did not respond to the reminder email, this study made a follow-up by sending mail by post with ten questionnaires, including a cover letter and a consent form. In addition, the author made a modest request to the respondents in the posted mail to return the completed questionnaire to the author. Therefore, the author provides a prepaid envelope to the respondents to return the completed questionnaires.

After one month, the researcher sent a postal reminder mail to companies that have yet to respond. This reminder stresses the importance of the companies' participation in this study in order to ensure its success. After a follow-up period of two months, the author made no further attempts to receive the outstanding questionnaires. This study then proceeded with data collection at the individual level.

The author used Excel and SmartPLS for coding to convert the textual data acquired via the questionnaire into numerical data and assign each item to a latent variable code. For example, PD_{11} is one of the indicators relating to latent variables such as Power Distance. This study codified the measurement items as nominal, ordinal or ratio and combined the measurement items at an aggregated level.

This study captured the coded data on a spreadsheet and recorded the observations in a row and the indicators in a column. This study occasionally spot-checks the captured data to ensure accuracy, and the data capturer made notes of respondent bias. Specific cases, such as missing values, are excluded, and the missing value 999 is labelled to allow for imputation. The author performed univariate and multivariate analyses once the data were ready.

3.9 Measurement Scales

This study designs and develops a structured questionnaire from the followings sources: for the CDT (Akoto et al., 2014; House et al., 2004b; Parrenin et al., 2015; Wu, 2006; Yoo et al., 2011); for the CVF (Melo et al., 2014; OCAI, 2010; Quinn & McGrath, 2011); for organisational morale, cohesion and HRM policy effectiveness (Furnham, 1997; OCAI; 2010; Patterson et al., 2005); for innovation (Calik & Bardudeen, 2016; Calik et al., 2017; Furnham, 1997; Gurría, 2018; Patterson et al., 2005) and for OEP (Calik & Bardudeen, 2016; Jones, 2005; SABS ISO 1403,1, 2013).

All of the above sources assist in developing conceptual models, for example, the organisational level of analysis. These models also include other variables for various interactions. For example, variables that could moderate, such as labour relations and innovation's mediating (transmission) effect. Moreover, each CDT, CVF, and SIV latent construct has six indicators.

These conceptual models define the relationships between the latent constructs and associated indicator variables. Thus, the questionnaires define these constructs using the following items: Power Distance ranges from PD_{11} to PD_{16}; Uncertainty Avoidance ranges from UN_{17} to UN_{22}; Masculinity ranges from MA_{23} to MA_{28}; Collectivism ranges from CO_{29} to CO_{34}; Clan Culture ranges from CL_{35} to CL_{40}; Hierarchical Culture ranges from HI_{41} to HI_{46}; Developmental Culture ranges from DE_{47} to DE_{52}; Rational Culture ranges from RA_{53} to RA_{58}; Organisational Cohesion ranges from OC_{59} to OC_{64}; HRM Policy Effectiveness ranges from HR_{65} to HR_{70}; Organisational Morale ranges from OM_{71} to OM_{76}; Labour Relations ranges from LR_{77} to LR_{82}; Innovation ranges from $INNOV_{89}$ to $INNOV_{94}$ and OEP ranges from OEP_{95} to OEP_{100}. The Questionnaire 2 presents these measurement items and codes (see Appendix D).

The SIV is the primary determinant of the Questionnaire at the individual level and includes demographic factors at the individual level (Ibrar & Khan, 2015). The intrinsic and extrinsic satisfaction factors originate from various sources (Cankar & Petkovšek, 2014; Lambooij et al., 2006; Seibert et al., 1999). This study also uses data from the World Values Survey that reduces the SIV to ten value variables. The motivational factors are based on the Multidimensional Work Motivation Scale and taken from various sources (Cankar & Petkovšek, 2014; Gagné et al., 2015; Lambooij et al., 2006; Roszkowski et al., 2014; Seibert et al., 1999).

Questionnaire 2 contains several measurement items: Intrinsic Satisfaction factors range from ISF_{11} to ISF_{17}; Extrinsic Satisfaction factors range from ESF_{18} to ESF_{23}; Self-transcendence ranges from SIV24 to SIV29; Conservation ranges from SIV_{30} to SIV_{33}; Self-enhancement ranges from SIV_{34} to SIV_{39}; Openness to Change ranges from SIV_{38} to SIV_{43}; Individual Environmental Performance ranges from $IndEP_{44}$ to $IndEP_{49}$. Questionnaire 2 presents these measurement items and codes (see Appendix G).

All the questionnaires use a five-point Likert scale that aids in evaluating all constructs. A value of 1 denotes 'to a small extent' and a value of 5 'to a great extent', with the midpoint of the five-point scale at 2.5.

3.10 Confidence Levels for Statistical Testing

A significance level of 5% or $\alpha = 0.05$ indicates the probability of making a Type I error. Thus, the findings reject the correct null hypothesis and are equal to the probability of making a Type II error or rejecting a false null hypothesis (Freeman, 1984). Therefore, a Type I error is a false positive and the rejection of a correct null hypothesis. In addition, a Type II error is a false negative; thus, the false null hypothesis is not rejected (Rothman, 2010). This study also assumes that the ρ-value is smaller than the significance level of 0.05 (alpha). Hence, the corresponding confidence level is 95%, and the hypothesis test results are statistically significant.

3.11 Sampling Process and Sample Size Calculation

Sample size and sampling determine statistical and analytical generalisations (Onwuegbuzie & Collins, 2007). This study calculates the intraclass correlation as a population attribute and provides an efficient sampling design that includes the sample size for hierarchical populations (Foy, 2001). The intraclass correlation coefficients (ICC) measure the reliability of the measurement scale, mainly when it measures the same latent variables. Therefore, ICC bundles the related indicator variables into a given construct.

In addition, the study calculates the sample size using a 95% confidence level. Thus, a marginal error of 0.5 and the resulting information ensure test associations at the 5% significant level. Hence, the study selects the target population from the SABS and targets 400 ISO 14001-certified organisations. It also calculates the sample size using Cochran's formula (Uakarn et al., 2021) as follows:

Sample size = $Z^2SD(1 - SD)/ME^2 = (1.96)^2 \times 0.5(1 - 0.5)/(0.05)^2$
$= 3.84(0.5)(0.5)/(0.0025) = 3.84 \times 0.25/(0.0025) = 0.960/0.0025 = 384$

Where:

Z = 1.96
ME = confidence interval = 0.05
SD = standard deviation = 0.5

In addition, this study uses the modelling of structural equations to analyse non-normal data using a nonparametric method, for example, PLS-SEM (Asyraf & Afthanorhan, 2013). Structural equations estimate the relationships between predictors and dependent variables. Organisational Culture and Individual Values are independent variables, while Innovation is the dependent variable. SEM tests the relationships between multiple constructs in the model. Therefore, this study uses PLS-SEM rather than CB-SEM to avoid incorrect solutions.

This study uses previous research measurement scales to improve the validity of the study results. The current study tests whether the data are consistent with the model and if the data

fit the hypothesised measurement model. The CB-SEM is an alternative to the Partial Least Squares SEM (PLS-SEM). However, PLS-SEM offers researchers flexibility in analysis, depending on data requirements, including model complexity and relationship specifications. This study also tests hypotheses from existing theories as in the models. It, however, is impractical to assume data are normal distribution. The models show correlations between the latent variables and the linear relationship estimation and explanation in PLS-SEM as a path model (Hair et al., 2012). Therefore, the theoretical model predicts exogenous and endogenous factors, including mediating and moderating effects on the dependent variable.

The following section describes aggregation.

3.12 Aggregation at Organisational Level

Cultural groups share cultural schemata. Thus, unique behaviour patterns exist within group boundaries (Beugelsdijk et al., 2017). Cross-cultural research approaches aggregate items at a target level. Thus, this study assesses the measurement structure of the relationships between the items at the target level (Peterson & Castro, 2006). At the same time, the within-group agreement aggregates lower-level scores (Moreno-Garcia et al., 2022).

Therefore, averaging individual responses yields a reliable and valid construct, especially at the group level with a minimum level of agreement. This study examines the cultural values of the individual aggregates at the unit level (Aycan & Gelfand, 2012). In addition, the present study considers aggregation methods such as the arithmetic mean, weighted arithmetic mean and the Ordered Weighted Average (OWA) (Moreno-Garcia et al., 2022).

Aggregates are data that indicate the average of a group of individuals. However, individual data are not aggregated and analysed at a higher level (Kumar, 2018). Hence, determining group-level constructs requires the development of a compositional model. Such models also specify how the lower-level data are combined, resulting in a higher-level construct. The average individual responses yield a reliable and valid group-level construct known as within-group agreement (van Mierlo et al., 2008).

The author considers the correctness of the aggregate at certain levels. For example, the group's mean includes the aggregates' variance and their reliability (ICC(2)). This study also calculates

the proportion of total variation between the groups (ICC(1)) that yields the correlations between these aggregations and the other group-level variables.

When assessing constructs at the individual level, equivalence frameworks evaluate the empirical structures and determine if the individual level fits all groups, as expected by the researcher (Fischer, 2019). Internal consistency reliability assesses the survey instruments and scales, while consistency reliability assesses the groups of items and assesses different elements of the same topic rather than individual items. Internal consistency is also known as Cronbach's alpha and indicates the extent to which different items quantify the same topic.

The following section discusses the response rates.

3.13 Response Rate

The present study sent 400 questionnaires by e-mail to SABS ISO 14001-certified organisations. However, only 93 of these organisations responded at the aggregate level. Approximately 429 individuals participated at the individual level of analysis. This study calculates the sample size as 384, resulting in a response rate of 24.2% (93/384 x 100%). According to Rindfuss et al. (2015), this study cannot identify and analyse the nonresponse bias of the variable(s). Thus, it did not include the characteristics of the non-responders. This practice leads to the assumption that low response rates result in poor data quality.

This study must assess the nonresponse bias or response failure when using questionnaires because it may affect the reliability and validity of the results.

The following section discusses the pilot study.

3.14 Pilot Study

This study conducted a pilot study on SA ISO 14001-certified organisations using 51 randomly distributed questionnaires. The Hofstede and Competing Value Theory inform the derivation of the questionnaire. However, the results are independently and statistically analysed. This pilot study uses SPSS 25 to analyse the data acquired for the ICC test. This study employs a two-way random-effects model, an ICC test for people with random measured effects.

The following section discusses the mediation and moderation effects.

3.15 Mediation and Moderation Effects

This study examines Organisational Culture's impact on innovation and OEP with moderator variables (labour relations), including mediator variables—for example, HRM policy effectiveness. The mediating interaction model evaluates the mediating interactions (Baron & Kenny, 1986; Kurt & Mehmet, 2015)—for example, the mediating effect of innovation. In the SIV model, the mediators are Schwartz's values and motivational factors. However, this model does not have a moderator.

The moderating effects change the relationship between predictors and outcomes (Aluko, 2003). For example, labour relations are moderators that assess the relationship between organisational culture and OEP. Only South African companies participated in this study. Thus, they share the same political, economic and technological environments.

Innovation also influences the relationship between organisational culture and OEP. The study uses PLS-SEM to test the hypotheses. In the proposed model, HRM policy effectiveness mediates these pathways—for example, the pathways defined by organisational culture and OEP. The covariates, such as organisational morale and cohesion, are independent variables that could contribute to variation. However, they are not of focus in this study. Thus, this study assesses the variance range in each primary determinant contribution.

The following section discusses data analysis.

3.16 Data Analyses

This study uses techniques relating to the study and analyses the data to answer the research question. The present study considers univariate analysis and profiles participants. In addition, this study evaluates the reliability and validity of the data. Thus, these measures ensure suitability, consistency and repeatability of the results. This study also conducts multivariate analyses to establish various relationships in the models and uses PLS to test the theoretical models and hypotheses.

The subsequent sections present these statistical techniques.

3.19.1 Univariate Analysis

The study uses descriptive statistics to describe the characteristics of the data. In addition, these measures summarise the sample and the measures of this study and describe participants' profiles. This study also calculates the statistical averages and standard deviations. Cronbach's alpha measures the reliability of internal consistency. In addition, this statistic determines whether the data are adequate for measuring the concept. In addition, this also assesses the extent to which the components measure the same idea. Thus, the process allows for the comparison of the results.

Furthermore, the bivariate analysis involves the analysis of the two variables. In addition, this analysis determines the empirical relationships and associations of variables. Intraclass correlation (ICC) measures the homogeneity between units of analysis (Foy, 2001). Furthermore, ICC provides an overview of the variance structure of data. ICC also assesses whether two or more quantitative measures vary. Thus, ICC relates to the population level (Hedges & Hedberg, 2007; Müller & Büttner, 1994). ICC also differs between research designs (e.g., with and without covariates). Thus, the ICC reports and interprets the reliability at a 95% confidence interval estimates: less than 0.5 poor, 0.5 to 0.75 moderate, 0.75 to 0.9, good, and > 0.90 excellent (Koo & Li, 2016).

3.19.2 Reliability and Validity

Correct statistical analysis of the results of this study relies on the reliability and validity of attitudes and cultures regarding innovation initiatives. The validity and reliability of the quantitative method also influence other statistical activities. Thus, the reliability of the measurement indicates the extent of unbiasedness (error-free) and ensures consistency over time. Hence, this study uses Cronbach's alpha to estimate a variable's internal consistency because it measures the scale's reliability (Kurt & Mehmet, 2015).

Construct validity measures whether a test measures the actual measurement. This measure also confirms the underlying latent structure of a variable. Hence, this study uses EFA to

determine the underlying structure of the items (Nightingale, 2018). In addition, factor analysis (FA) measures the variability between the correlating independent variables and has limited unobserved factors (Shrestha, 2021). FA condenses a large set of variables and reduces data into a manageable number of variables suitable for additional analyses, such as multiple regression (Shrestha, 2021). This study uses FA to evaluate the validity of the scale's consistency; for example, it uses Cronbach's alpha (Putriana et al., 2015). The EFA also identifies the latent factors that cause variations in observable variables. Hence, this study assesses the items of the pilot questionnaire undertaken before data collection in the main study. This pilot study provided information on the validity of the measurements and ensured the validity and suitability of this study in the variables. The pilot study also indicates the potential ambiguity and complexity of the questionnaire questions.

Furthermore, this study considers Cronbach's alpha because it measures the reliability or internal consistency of the measurement scale. In addition, this measure shows the range over which the test items or scales measure a concept (shared variance). A value of Cronbach's alpha below 0.60 is poor, and above 0.60 could be better (Onwuegbuzie & Collins, 2007). This study also uses the KMO value of 0.894, and Bartlett's test of sphericity is significant ($\rho = 0.000$). Furthermore, these measures indicate that the data are adequate. Thus, data is suitable for factor analysis (Kurt & Mehmet, 2015). Bartlett's test for sphericity also assesses if the data set is appropriate for factor analysis. This study determines if the correlation matrix is an identity matrix. Thus, the identity matrix examines if data has unrelated variables (Onwuegbuzie & Collins, 2007). Hence, the present quantitative study undertakes meaningful statistical analyses to determine the legitimacy or validation of data (Onwuegbuzie & Collins, 2007).

This study uses descriptive statistics, reliability analysis, Pearson's correlation, and hypothesis testing with PLS-SEM. The present study statistically analyses the completed questionnaires using PLS-SEM. The PLS-SEM tests the hypotheses and answers the research question. These statistical analyses provide insights into the research questions.

This study uses the Pearson' r' factor, a progression or sequence, as a standard correlation test (Williams, 2007). Pearson 'r' measures the degree of the linear relationship between the two variables. In addition, this measure ranges between -1 and 1, showing the direction of the relationship, while zero indicates no relationship (Müller & Büttner, 1994). Therefore, zero-

order correlation helps explain the significance of this association, especially before the inclusion of covariates.

Correlation analysis further shows that a definite association between organisational culture and individual values exists, for example, between culture and innovation. Therefore, the aim is to evaluate Pearson' r' relative to zero as a significant correlation.It measures how well the observation fits the rest of the data as a measure of precision (Müller & Büttner, 1994). Thus, a perfect relationship has a Pearson's correlation coefficient of 1. However, when there is no relationship, it is zero.

PLS-SEM aims to assess a suggested theory or model (Williams et al., 2012). The principal component analysis is merely a data reduction method. Thus, it does not consider the underlying structure caused by the latent variables. This study calculates the principal component by considering the total variance techniques (Costello & Osborne, 2005). In addition, the principal component assesses whether a variable's correlation is strong in both directions as the size increases from zero. Consequently, this result proves that the variables are firmly loading onto the component.

3.17 Multivariate Analysis (SEM)

3.19.1 PLS

The social and behavioural sciences use SEM as a statistical method because SEM uses empirical evidence to assess measurement errors. PLS-SEM calculates the attribute weights instead of the attribute levels, mainly when calculating respondent-specific latent variable scores (Hair et al., 2012). PLS establishes an aggregate association between the variables, for example, organisational culture, individual values and innovation. This study uses covariate analysis that examines associations by focusing on variance at the individual level. In addition, this helps to explain the variability in individuals' behaviour within (and between) groups.

This study chose between the covariance-based structural equation modelling (CB-SEM), such as SPSS-AMOS, and partial least squares structural equation modelling (PLS-SEM), for example, Smart-PLS. According to the reviewed literature, these are the most commonly used approaches for structural equation modelling. Hence, PLS is appropriate for investigations with

limited sample sizes because the data has a non-normal distribution. However, CB-SEM confirms (or rejects) theories and their underlying hypotheses. PLS emphasises construct associations to demonstrate model performance. At the same time, CB-SEM offers path modelling and model fit indices.

This study consists of several explanatory variables and potential connections. Thus, PLS-SEM is an appropriate regression for this study. However, PLS-SEM approximates complex models using many indicator variables but lacks the standard distribution assumption. Models have various constructs and structural paths (Hair et al., 2018). This study employs PLS-SEM because its population is small, resulting in an inadequate sample size. Thus, the data lacks normality (Hair et al., 2018). Hence, PLS-SEM helps predict and explain the models' links and the relationships between the model constructs (Asyraf & Afthanorhan, 2013). This study also investigates theoretical extensions of existing concepts (exploratory research).

Furthermore, the PLS-SEM model shows the structural paths between inner models (constructs), and the measurement models demonstrate various relationships between each construct and the outer model (associated indicators). In exploratory research, the minimum reliability is 0.60. However, reliability in research with established measures is = 0.70 or higher (Hair et al., 2018). The reliability of the construct in the current study falls within composite reliability, as well as Cronbach's alpha range (Hair et al., 2018).

Significantly, the model's factor loads measure values at a cut-off point above 0.4 (Kim & Jang, 2018). Acceptable item reliability has a factor loading of greater than 0.708, implying that the latent construct explains over 50% of the variance in the indicator (Hair et al., 2018). Additionally, the construct reliability and average variance extracted (AVE) assess the convergence of the variables. Thus, it confirms model validity when values exceed 0.7 and 0.5 (AVE) (Kim & Jang, 2018). This study removes indicators with outer loadings below 0.70 from the scale; hence, dropping these items increases the composite reliability (Hair et al., 2013).

The data inspection also needs to reveal values for questionnaire responses or answers. However, this study considers the missing data to ensure that the sample characteristics fulfil the statistical power requirement and eliminate the bias in parameter estimation and representativeness. The test's power is the probability of rejecting a null hypothesis when false (Thiese et al., 2015); this perception can lead to incorrect conclusions.

A normal distribution is central to parametric statistical analysis, assuming the data follows an approximately normal distribution. However, the data of this study did not comply with the standard distribution criterion and, thus, may render any other statistical parametric operations invalid and result in erroneous and misleading findings (Thiese et al., 2015).

This study uses item analysis to examine the reliability of the subscales that evaluates diverging and converging properties of the items, that is, the extent to which the items correlated with the subscales versus across subscales (Nightingale, 2018). Convergent validity evaluates whether an item construct merges into a single construct. This study also measures the variance of items using AVE (Yacim & Boshoff, 2018). Hence, convergent validity is a mean value with an acceptable AVE of 0.50 or higher than 0.50, and thus, it explains at least 50% of the construct (Hair et al., 2018).

In addition, cross-loadings assess the discriminant validity of the indicators. An associated construct's outer loading is more significant than any other construct's (Hair et al., 2013). The Fornell-Larcker criterion states that the AVE square root is larger than the highest correlation. Thus, cross-loadings indicate a lack of discriminant validity and show a perfect correlation between the two constructs (Hair et al., 2013). Cross-loading also examines the variables that load highly on a specific construct compared to those that load highly on multiple constructs. Thus, orthogonal items that load together in any meaningful way violate the discriminant validity.

The heterotrait-monotrait (HTMT) ratio is the mean value of the item correlations across constructs (Yacim & Boshoff, 2018). Thus. The HTMT measures discriminant validity to ensure one construct differs from others. The reflective constructs are vital to indicators (Hair et al., 2018). Researchers also can determine the upper bound of the HTMT – a 95% confidence interval is less than 0.90 or 0.85 (more distinct and cautious) (Yacim & Boshoff, 2018). Additionally, extreme HTMT values indicate discriminant validity (Hair et al., 2018).

The standard evaluation criteria of the structural model include "the blindfolding-based cross-validated redundancy measure (Q_2) (Hair et al., 2018; Yacim & Boshoff, 2018). The coefficient of determination (R_2) is statistically significant, as is the appropriateness of the path coefficients (Hair et al., 2018; Yacim & Boshoff, 2018). Furthermore, path coefficients in SEM investigate

the causal correlation between variables, while path coefficients close to +1 or -1 indicate a strong relationship and those close to zero a weak relationship (Hair et al., 2013). Finally, the coefficient of determination (R_2) reflects the fraction of endogenous constructs (Hair et al., 2018). The predictor constructs, thus, have values ranging from 0 to 1 and indicate the model's explanatory power when the values are high (Hair et al., 2018).

Therefore, Q^2 evaluates the prediction accuracy of the PLS path model – Q^2 values greater than zero are small, medium (0.25), or large (0.50). The PLS path model has a predictive significance, as are the outcomes of the blindfolding method (Hair et al., 2018; Yacim & Boshoff, 2018). The PLS-SEM analysis also provides more significant prediction errors, for example, the difference between the expected and original values of the variable. The root-mean-square error is the difference between the model-predicted and model-observed values (Hair et al., 2018). Therefore, the RMSE is the difference between the predictions and actual observations and is the square root of the average squared value (Hair et al., 2018; Yacim & Boshoff, 2018).

Significantly, PLS-SEM bridges the gap between explanatory and predictive modelling by providing high predictive accuracy for the models. Thus, this study proposes models with well-developed causal explanations (Benitez et al., 2020).

In addition, this study investigates the statistical link between independent and dependent variables. It uses SmartPLS to examine various connections in the models, including the moderating and mediating effects, for example, cultural determinants, individual values and innovation.

The following sections present other statistical analyses to assess the study's model and related hypotheses.

3.19.2 Factor Analysis

This study considers the requisite number of variables and analyses their link to a specific latent variable as they converge (Williams et al., 2012). Consequently, varimax rotation generates uncorrelated variables (Costello & Osborne, 2005). The rotation maximises extensive item loading while decreasing small item loading, thus resulting in a more interpretable and simplified solution (Williams et al., 2012).

Varimax rotation is a statistical technique that clarifies the relationship between variables. Consequently, these factors are orthogonal rotation factors. This study uses varimax rotation to analyse the critical components because it aids in determining the number of retainable variables. Furthermore, the Kaiser criterion identifies the retainable factors, that is, all the factors with eigenvalues greater than one. The scree plot reduces items into factors (Williams et al., 2012).

This study also evaluates the relevance of the data provided by the respondents, that is, before factor extraction (Williams et al., 2012). It derives the variance components through variance decomposition and provides insight into diverse sources of variance (Foy, 2001). This study also utilises the measurement of sampling adequacies, for example, Kaiser-Meyer-Olkin (KMO) and Bartlett's test of sphericity that are significant at $\rho > 0.05$. The Bartlett sphericity test examines the null hypothesis that the correlation matrix is an identity matrix, thus showing unrelated variables and whether these are appropriate and ready for the factorial analysis. Hence, in this study, variables with a common variance describe a single factor. As mentioned above, this study uses SmartPLS software for statistical analysis.

3.19.3 Scree Plot

The EFA and PCA use a scree plot to determine the number of the retainable factors. Thus, the scree plot examines the eigenvalues' charts (Costello & Osborne, 2005) in order to identify the natural 'elbow' or the 'breakage point' in the data, where the curve flattens out, that is, the number of data points over 'the breakpoint'. This study considers these data points because they show several factors for further analyses (Costello & Osborne (2005) but exclude the 'breaking point'.

The factor analysis reduces the variables to smaller variables and helps identify the underlying dimensions between the measured variables and latent constructs. Construct validity determines whether the scales are valid and if the self-report instruments are consistent with the theoretical constructs.

3.18 Ethical Issues Related to the Research

Ethics is a method, procedure or attitude that governs behaviour and actions for conducting a study (Chauhan, 2012). Creswell (2003) identifies the following essential ethical research principles: the author explains (i) the scope, purpose and aim of the study to respondents and the possible impact of the study; (ii) the procedure of the study that should satisfy the individuals' reasonable expectations of the study; (iii) the respondents' right to privacy, anonymity, to ask questions and to obtain a copy of the study results; iv) any benefits of the study that will accrue to the respondents. Finally, the author obtains the signatures of the participants as proof that they understand and agree to the above provisions.

This study is pragmatic and epistemological because it incorporates ethics into its investigation. It also attempts to comprehend the sources, nature and limitations of knowledge in its investigation. It connects knowledge to ethical considerations to safeguard the study's subjects from physical or emotional harm by fully informing them about the research project (Watts, 2011). The researcher initially obtained approval from the Wits University ethics committee to conduct this study. The researcher created an informed consent form that the participants signed before participating in the study. This form informs the potential responders of their right to withdraw from the study after signing the informed consent form. It also ensures the anonymity and confidentiality of participants during data collection and processing and the publication of the study results in findings by not exposing the respondents' names and identities to anyone (Chauhan, 2012).

Furthermore, other procedures during data collection entail obtaining authorisation for various organisations. Therefore, for this study, the author obtained authorisation from those in authority in the various South African SABS ISO 14001-certified organisations to access the study's participants and relevant areas. This procedure entails information such as the length of

time, potential impact and conclusions of the research, plus the fact that the researcher would respect the research sites throughout the study.

Thus, the researcher limits unnecessary intrusions on the research sites and respects respondents even when seeking positive outcomes (Baer, 2010) by following research protocols and ethical constraints. Pragmatic and practical research judgements are normative to this study (Watts, 2011). Although the study aims to generalise and benefit others, the participants' privacy rights are not compromised (Orb et al., 2001).

This study treats participants fairly and with dignity and respect by not discriminating against participants about age, sexual orientation, race, ethnicity, social class, nationality, cultural identity, relationship status, religion, disability and political beliefs, as well as other important social and political factors (Gardner, 2011). The employment of the ethical standards that apply to scientific research and other intellectual or artistic endeavours assists the research in achieving the study's objectives (Chauhan, 2012).

Finally, the researcher committed to following Wits University's ethics procedures and destroying all study-related information. Due to limited resources and time, this study provided all correspondence in English, for example, consent forms and questionnaires, outside the respondent's chosen language. Thus, it could not accommodate culturally sensitive respondents and those with low literacy levels. The researcher kept all documents relating to the study in a secure, closed room with limited access.

3.19 Conclusion

This chapter discusses the relevance of quantitative analysis to this study. Therefore, this justifies the research scope and design, especially in the current study. In addition, this chapter also discusses the population, sample and sample size.

In addition, this chapter outlines the significance of the sample size in this investigation, including a sampling process to ensure the quality of the results. Furthermore, this chapter explains the data collection process and its implications for this study.

This chapter also outlines the models' importance of mediation and mediation effects. This chapter also clarifies the significance of the reliability and validity of this study's results and statistical analyses, including the treatment of the missing values. It also discusses the applicability of the statistical techniques to address these research questions and test the hypotheses.

This chapter also considers the statistical techniques, such as univariate and multivariate analyses, to answer the research question, including a correlation analysis, factor analysis, and PLS-SEM to answer the research question. This chapter also addresses ethical issues. Therefore, it relates to the researcher's and the participant's requirements, values and expectations.

The statistical analysis gives the findings of the study. Therefore, the following chapter presents these findings and their interpretation.

CHAPTER FOUR
RESULTS

4.1 Introduction

This study specifies hypotheses in the models to determine an appropriate theoretical framework and investigates and evaluates these premises. Additionally, this theoretical framework explains innovation from the CDT and CVF viewpoints, both at the aggregate level and the SIV at the individual level.

This chapter presents the results of the quantitative analysis and reports on the empirical tests used to assess the study's several hypotheses that seek to answer the research question. This chapter also presents the results of univariate and multivariate analyses.

4.2 Central Tendency Measure of Constructs (CDT)

4.2.1 Demographic Profile

Table 5 below presents the descriptive statistical results of respondents.

Table 1: Descriptive Results of Respondents' Demographic Profiles

Gender		
	Frequency	**Valid per cent**
Male	116	46.2
Female	134	53.8
Total	**250**	**100**
Industrial sector		
Foreign governments and governments	4	4.3
Agriculture, hunting, and fishing	5	5.4
Mining and quarry	10	10.8
Education institution	2	2.2
Electricity and gas	11	11.8
IT and communication	1	1.1
Wholesale and retail	8	8.6
Transportation and storage	10	10.8
Manufacturing	39	41.9
Construction	3	3.2
Total	**93**	**100**
Occupational position		
Operator/front-line employee	38	15.1
Officer or administrator	91	36.6
Supervisor/team leader or foreman	72	29
Mid-level manager	38	15.1
Senior manager	11	4.3

Total	**250**	**100**
Company tenure		
One year	5	2.2
Two years	35	14
Three years	75	30.1
Four years	73	29
Five years	48	19.4
Six or more years	14	5.4
Total	**250**	**100**
Occupational tenure		
One year	6	2.2
Two years	46	18.3
Three years	83	33.3
Four years	62	24.7
Five years	49	19.4
Six or more years	6	2.2
Total	**250**	**100**
Respondent's education		
Matric	22	8.6
Diploma	113	45.2
Degree	89	35.5
Higher Diploma	24	9.7
Honours	3	1.1
Total	**250**	**100**
Mothers' education		

Grade 11 or below	3	1.1
Matric	81	32.3
Diploma	62	24.7
Degree	81	32.3
Higher Diploma	22	8.6
Honours	3	1.1
Total	**250**	**100**
Fathers' education		
Grade 11 or below	3	1.1
Matric	78	31.2
Diploma	70	28
Degree	73	29
Higher Diploma	22	8.6
Honours	6	2.2
Total	**250**	**100**
Home language		
Afrikaans	11	4.3
Sepedi	54	21.5
Setswana	78	31.2
Tsonga	54	21.5
Venda	35	14
Zulu	14	5.4
IsiNdebele	6	2.2
Total	**250**	**100**
Age		

25–29	35	14.0
30–34	97	38.7
35–39	100	39.8
40–44	19	7.5
Total	**250**	**100.0**

This study has members of 93 organisations as participants at the aggregate level of analysis, and the results in Table 4 above show the demographic variety of these respondents. Most of the respondents are female employees (53.8 %); the manufacturing sector has the highest number of employees (41.9%); 36.6% of the respondents work as administrators;30.1% of them have worked for three years in their respective organisation; 33.3% have employment for three years in their current positions.; 45.2% of the respondents have a degree or diploma; 32.3% of their mothers and 31% of their fathers have a matric; 31.2% speak Setswana, while 39.8 % are between 35 and 39 years old.

4.2.2 Skewness and Kurtosis

Table 43 (see Appendix H below) presents the skewness and kurtosis of the study's results. These test measures deviate from the normal distribution. However, the skewness and kurtosis tests aid in ensuring the accuracy of the statistical analyses by assessing the symmetry of the dataset or lack thereof, in the investigation. The literature review advises that the skewness and kurtosis test results should range between -2 and +2 values because when the data is within this range, it proves it has a normal univariate distribution (Field 2009). The results of this study show that all values surrounding skewness and kurtosis are within the cutoff ranges of -2 and 2 – the kurtosis readings varied from -1.017 to 0.220, and the skewness values ranged from -0.531 to 0.586 and, thus, are within the permissible range of -2 to 2 cutoff points. This range indicates the data distribution because all the indicators appear to have a normal distribution.

Furthermore, the inspection mentioned above of the results matches most of the Shapiro-Wilk and Kolmogorov-Smirnov test values. However, the study data shows a few deviations from the normal distribution from the quantile plots (Q-Q plots). The Shapiro-Wilk test is the most potent normality test (Razali & Wah, 2011) over the graphic presentations. Despite its low

strength due to this study's small population size, it indicates that data does not reflect a normal distribution.

4.2.3 Missing Values Analysis (CDT)

Sophisticated statistical techniques depend on data design (Hazzi & Maldaon, 2015) and help identify missing data. These researchers recommend the Little MCAR test to assess whether missing data displays a random distribution. In addition, the literature review advises that a study should accept 5% of the missing data in the analysis process (Lomax & Schumacker, 2004). The findings of this study show that all of the items in the collected data have at most 5% missing data and, therefore, indicate that the missing values are entirely random (Hazzi & Maldaon, 2015).

Little's MCAR test is insignificant, i.e., ($\chi 2$ (1.412, N = 51) = 25.269, ρ = 1.00), indicating that the data are MCAR. Nevertheless, this study shows that the ρ value (> 0.05) is negligible. Thus, this value suggests weak evidence against the null hypothesis and accepts it. These results also reveal no systematic reasons for the missing values, which indicates that this is the MCAR data. These results, thus, imply that the respondents did not process the data intentionally or commit biases (Hazzi & Maldaon, 2015). The little MCAR test results in Table 44 (see Appendix H below) show no missing data.

4.2.4 Test of Normality and Outliers (CDT and CVF)

The results of this study present the Kolmogorov-Smirnov and Shapiro-Wilk tests in Table 45 (see Appendix H below).

Shapiro-Wilk and Kolmogorov-Smirnov tests have the same function. However, Shapiro-Wilk has less statistical power than Kolmogorov-Smirnov. Their coefficients are sensitive to small sample sizes or large models, resulting in misleading results (Hazzi & Maldaon, 2015). The results in Table 45 (see Appendix H below) at a significance level of 0.05 reveal that the data are nonnormal distribution. Consequently, the null hypothesis is often accepted ($p > 0.05$).

The findings presented in Table 46 (see Appendix H below) also reveal that the data contradicts the hypothesis of normal distribution because of the outliers and unexpected results. These

outliers deviate from the normal data distribution (Lodhia et al., 2017). Thus, the data did not conform to the normal distribution hypothesis. This practice can impact the validity and reliability of the conclusions of this study (Tarhini, 2013). However, the residuals are close to normal. This study employs PLS because it is a robust technique for nonnormal data.

This study also uses Q-Q plots, histograms, stem-and-leaf plots and box plots to assess the normality of the data. However, these graphical methods only apply to detect and test for normal distributions (Razali & Wah, 2011). The analysis of extant literature also reveals various strategies for detecting and displaying outliers, e.g., Kolmogorov-Smirnov and Shapiro-Wilk tests are robust (Lodhia et al., 2017). Box and whiskers tests range from 0% to 100% quartile data, and if the sample contains outliers, then the graphs display them as data points outside the whiskers.

This study uses PLS-SEM because of its nonnormal distributed data that lower parameter estimates such as standard errors. Consequently, PLS-SEM is nonparametric and does not require the assumption of normal distribution.

4.3 Multicollinearity (CDT)

The correlation matrix determinant in SPSS governs the multicollinearity in this study, and its measure requires that this determinant be more significant than 0.00001. Thus, the multicollinearity of this study is within reasonable limits, which implies that the models' interpretation does not jeopardise the results of this study (Field, 2000). The correlation matrix has a determinant of 1.040 10-10 (1.040E-10) greater than 0.00001, and, as a result, the multicollinearity is within reasonable limits (see Table 47 in Appendix H below).

4.4 CDT and Common Organisational Variables – Reliability

This study uses reliability tests to assess the validity of a questionnaire because the consistency of the measurement instruments or scales is important (Zulkepli et al., 2017). Hence, this study uses a reliability analysis to evaluate the reliability of the questionnaire. The Cronbach's alpha coefficient measures the internal consistency of the items (Yusoff, 2010). Kaur et al. (2016) indicate the instrument's reliability criteria, i.e., $0.5 > \alpha$ as unacceptable; $0.5 > \alpha \geq 0.6$ as poor; $0.6 > \alpha \geq 0.7$ as questionable; $0.7 > \alpha \geq 0.8$ as acceptable; $0.8 > \alpha \geq 0.9$ as good; and $\alpha \geq 0.9$ as excellent.

Furthermore, El Hajjar (2018) defined Cronbach's alpha as a measure of internal consistency. These metrics indicate a close connection between items – a high alpha value indicates that the items represent the latent construct. Table 4 below shows that the results indicate acceptable to good reliabilities.

Table 2: CDT and Common Variables – Reliability

Reliability			
Variables	**Cronbach's alpha**	**Cronbach's alpha based on standardised items**	**N of items**
CDT			
PD	0.838	0.838	6
UN	0.703	0.701	6
CO	0.764	0.766	6
MA	0.719	0.720	5
The common organisational variable used for both CDT and CVF models			
OC	0.83	0.829	6
HRM	0.719	0.717	6
OM	0.772	0.774	6
LR	0.717	0.715	6
INNOV	0.756	0.758	6
OEP	0.743	0.75	6

Note. PD: Power distance; UN: Uncertainty avoidance; MA: Masculinity/Femininity; CO: Collectivism/Individualism; OC: Organisational cohesion; HRM: Human resource management policies; OM: Organisational morale; LR: Labour relations; INNOV: Innovation; OEP: Organisational Environmental performance.

4.5 PLS-SEM, SmartPLS

SEM is a graphical representation of the direct effects of the vectors. This study examines the effects of one independent variable (exposure) on the dependent variable (outcome). Statistical analysis defines the relationship between two variables (Roman-Urrestarazu et al., 2016). Hence, SEM evaluates the associations of both direct and indirect variables, for example, mediation and moderation effects. Therefore, these associations account for model measurement errors (Ringle et al., 2018).

The PLS-SEM is an experimental tool for examining path relationships in the models. The current study uses PLS-SEM to confirm the proposed structural model. The model's path assesses relationships between latent variables (Yazdi et al., 2017). The current study also uses PLS-SEM because of its ability to predict theoretical models, for example, using PLS-SEM when models are complex and have many constructs and indicators. The PLS-SEM can also explore extensions of existing theories because of its ability to test and deduce the hypotheses (Hair et al., 2019a).

The number of ISO 14001-certified organisations in SA is modest. Thus, this study uses a limited population size that results in the study's small sample size, which affects the hypothesis of a normal distribution of the data. By contrast to CB-SEM, PLS-SEM can handle smaller samples. Thus, this study uses PLS-SEM because it also can handle complicated models (Hair et al., 2012). PLS-SEM models can examine pathways that identify multiple relationships between the variables. As an alternative to the CB-SEM, PLS-SEM estimates the observed covariance matrix and accounts for the explained variance in endogenous variables (AVE) (Taylor & Geldenhuys, 2019).

PLS-SEM allows the estimation of complex models with several constructs and indicator variables and calculates the structural paths without assuming a normal distribution (Hair et al., 2019a). The PLS-SEM employs an iterative technique to solve the measurement model blocks individually by predicting the structural path coefficients. Consequently, this study tests the model's explanatory power using bootstrapping that uses a resampling approach to evaluate the significance of the PLS coefficients (Garson, 2016)

This study determines the measurement model's validity and consistency and assesses the outer loadings' composite reliability. It also assesses the internal consistency of the indicators and evaluates the reliability of individual indicators and the AVE for convergent validity.

This study also considers discriminant validity, for example, cross-loadings, HTMT and the Fornell-Larcker criterion. (Taylor & Geldenhuys, 2019). The standardised outer loadings in this study are more significant than the 0.70 cutoff point and, thus, are acceptable according to this criterion (Do Nascimento & Macedo, 2016; Hair et al., 2014). Subsequently, this study eliminates specific latent variables below this threshold because they do not improve the composite reliability of this investigation. Thus, constructs above the 0.7 threshold account for more than 50% of the variance and provide evidence that the variance in the indicator depicts adequate reliability (Hair et al., 2019a).

In addition, this study shows item loads of construct indicators greater than Cronbach's alpha of 0.5 and a composite reliability of 0.7. According to the reviewed literature, this level is an acceptable criterion for established measurements (Hair et al., 2019a). However, the reviewed literature also shows that values of 0.95 and higher indicate undesirable response models and result in a straight-lining of the data that indicates an inflated correlation between the error components of the indicators (Hair et al., 2019a).

Furthermore, the convergent validity evaluates the construct's AVE. The reviewed literature suggests the threshold of AVE greater than 0.50 (at the construct level) with item loadings greater than 0.70. Hence, the study results prove they are statistically significant at the item level (Peng & Lai, 2012). This study also investigates discriminant validity by comparing AVE's square root with their correlations and tests the discriminant validity of the focal construct and all other constructs (Peng & Lai, 2012). The study results further reveal that the square AVEs of all the latent constructs are more significant than their correlation coefficients, which proves that discriminant validity exists between constructs (Do Nascimento & Macedo, 2016).

Furthermore, HTMT also evaluates the discriminant validity of the PLS-SEM model. When the value is more significant than 0.90, the HTMT indicates a lack of discriminant validity (Hair et al., 2019a). Discriminant validity issues arise when HTMT values are high. Thus, the geometric mean correlation between the indicators compares to those close to it.

In the second stage, this study estimates the structural model by providing path coefficients demonstrating each construct's relationship (Taylor & Geldenhuys, 2019). It also calculates path coefficients and their significance levels. These coefficients confirm the significance levels with t-values, thus, the means of the two samples and the strength of the association (Garson, 2016).

PLS-SEM utilises a bootstrap procedure to derive statistical inferences (Streukens & Leroi-Werelds, 2016), for example, the bootstrap process and the number of bootstrap samples together with the t-statistic for the hypothetical (direct) effects. (Streukens & Leroi-Werelds, 2016). Hair et al. (2019b) suggest using the percentile or BCa method that calculates the bootstrap confidence interval for an asymmetrical bootstrap distribution. This researcher also advocates the application of the criteria listed in Table 3 below, which shows the criteria for SmartPLS-SEM analysis. Therefore, the first step in the PLS-SEM analysis is evaluating the outer model and its result. This study compares the outer models using these criteria (Hair et al., 2019b).

Table 3 below outlines the criteria for the evaluation of the measurement model.

Table 3: Evaluation Criteria for Measurement Model

Statistic test	Criteria
Reflective indicator loadings	≥ 0.700
Composite reliability	• Minimum of 0.70 (or 0.60 in exploratory research). • Maximum of 0.95 to avoid indicator redundancy, which would compromise content validity. • Recommended is 0.70–0.90.
Convergent validity	AVE ≥ 0.50
Discriminant validity criteria	
i. Fornell–Larcker criterion	The square root of the AVE of each construct should be higher than the construct's highest correlation with any other construct in the model.
2. Cross-loadings	Cross-loadings of all manifest variables had higher values on their relative latent variable than other constructs.
3. HTMT ratio of correlations	• For conceptually similar constructs: HTMT < 0.90. • For conceptually different constructs: HTMT < 0.85. • Test whether the HTMT ratio is significantly lower than the threshold value.

The following sections evaluate the SEM results:

4.6 Structural Model's Evaluation Criteria

PLS-SEM requires correct parameter selection because this practice may result in correct findings, interpretations and conclusions (Hair et al., 2012). This study reports and discusses PLS-SEM outputs, for example, determination coefficients (R^2), predictive relevance (Q^2) and path coefficient significance, as well as the effect sizes (f^2) and criteria estimations (q^2) (Hair et al., 2014).

Furthermore, this study considers the coefficient of determination (R^2) and the quantity variance. These metrics are measures of endogenous latent variables and evaluate the internal model of this study (Hair et al., 2012). Hair et al. (2012) state that f^2 and Q^2 evaluate the predictive value of each model's construct. Thus, this study eliminates certain relationships between internal models and calculates the criteria estimates (q^2).

The researcher uses a set of paths inside a structural model that correlates constructs to reflect the hypotheses (Ringle et al., 2018). The PLS-SEM utilises a composite model that includes linear combinations of the indicators (Ringle et al., 2018). Therefore, the current study uses SmartPLS 3 to test the proposed models (CDT, CVF, and SIV).

4.7 PLS-SEM Based on CDT

The literature review provides the derivation of the proposed model, which explains the role of innovation in SA ISO 14001-certified organisations. This study answers the research questions and associated hypotheses and aligns these answers to the research questions and with its objectives as defined by the CDT. Figure 4 below shows these results.

4.7.1 Hofstede's Final Model

This study redesigned the model by decreasing the number of variables in the constructs. Thus, this redesigned model shows the underlying components of OEP. This study also removed the constructs with low psychometric qualities because they require measurable attributes such as validity and reliability. Therefore, this test measures the statistical strengths or weaknesses of the connection of the attributes from the theoretical implications and content validity. This study excludes constructs with inferior psychometric properties, i.e., constructs with factor loadings less than 0.7.

Furthermore, this study evaluated the factor loading of the model. Thus, the factor loading with a value greater than 0.7 indicates that the items' composition is valid (Kim & Jang, 2018). The researcher also examined the composite reliability (values greater than 0.7) and AVE (values greater than 0.5). Consequently, the final model includes latent variables with factor loadings greater than or equal to 0.7, as shown in Figure 4 below. In addition, the model's AVE and CR values satisfy the convergent validity criteria, thus proving its convergent validity (Kim & Jang, 2018).

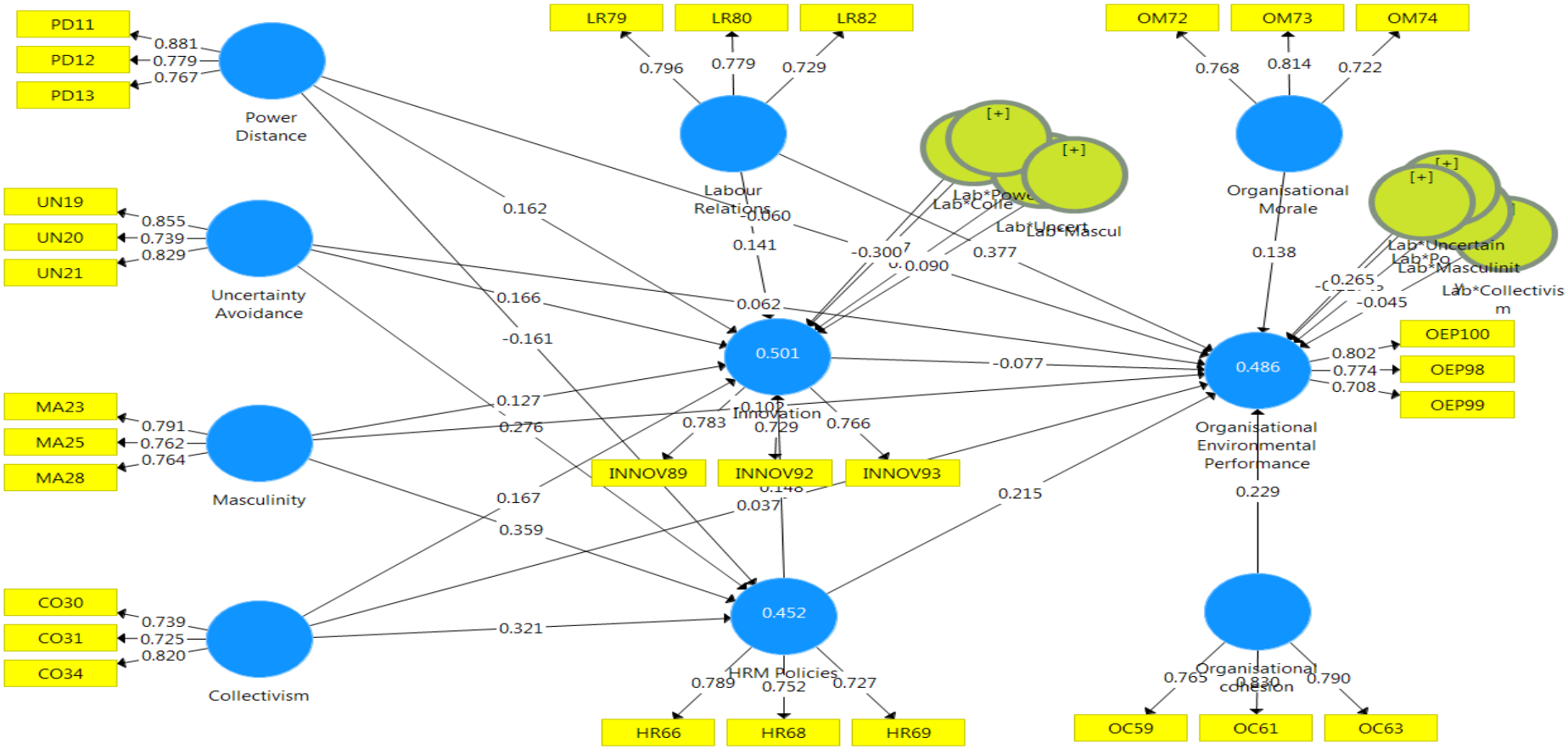


Figure 4: Final Structural Equation Model (CDT)

This study omits certain latent factors less than the acceptable cut-off point 0.7 in the final model (see Figure 4 above).

4.7.2 R Square (CDT)

The R^2 coefficient is a predictive accuracy criterion. Thus, it has values between 0 and 1, with a value close to 1 indicating good predictive accuracy (Garson, 2016). The PLS-SEM generates the bootstrap confidence of the predicted R^2 value. Thus, the assessment of an endogenous construct with a significant R^2 value is not zero (Streukens & Leroi-Werelds, 2016). Table 4 below presents the R^2 values that were close to 0.5. These results show that innovation is 47.3% and HRM policy effectiveness is 45.2%. Thus, both explain 48.6% of the variance in OEP.

Table 4: R Square (CDT)

	R Square	R Square Adjusted
Innovation	0.473	0.416
Organisational Environmental Performance	0.486	0.408
HRM Policies	0.452	0.427

4.7.3 F Square

Cohen (2010) suggests that f^2 values or criteria of 0.35 indicate a significant effect, 0.15 a medium effect and 0.02 a small effect. In addition, the path modelling estimation shows the t-statistics and predicts coefficients greater than 1.96, including a 5% significance level (Do Nascimento & Macedo, 2016). Furthermore, the PLS-SEM model predicts the specified reflected endogenous variables (Chuan & Penyelidikan, 2018). Table 5 below presents the effect of the independent variables on the outcome. Thus, labour relations (0.143) have a moderate influence. The remaining independent variables were close to 0.02. Thus, these indicators have a minor impact on OEP.

Table 5: F Square (CDT)

	Innovation	Organisational Environmental Performance	HRM Policies
Collectivism	0.032	0.001	0.109
Innovation		0.004	
HRM Policies	0.021	0.038	
Labour Relations	0.009	0.143	
Masculinity	0.014	0.011	0.188
Organisational Morale		0.019	
Organisational cohesion		0.035	
Power Distance	0.012	0.004	0.026
Uncertainty Avoidance	0.033	0.004	0.077

4.7.4 Construct Reliability and Validity

The current study uses a measurement model to evaluate convergent and discriminant validity. Therefore, AVE measures the convergent validity of the reflective measurement model and the construct variance. Thus, this study compares AVE with the measurement error variance (see Table 6 below) plus the overall mean value of the square loading of all associated construct indicators, determining whether the AVE value is within an acceptable AVE of 0.50.

Convergent validity shows that the construct manages at least 50% of the variance (Hair et al., 2019a) and that reliability values between 0.60 and 0.70 are acceptable, values between 0.70 and 0.90 range from satisfactory to good and values of 0.95 and higher are troublesome. These results show that the items are unnecessary in the model, thus indicating a reduction in construct validity (Diamantopoulos et al., 2012).

Based on the final model, all the items have loads exceeding a 0.70 cutoff point. Thus, this study set the significance level at 0.05. These results show convergent validity at the indicator level and reliability because all the AVE values are above 0.50, and the composite reliability values are more significant than 0.70.

Table 6: Reliability and Validity (CDT)

	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Collectivism	0.647	0.806	0.581
Innovation	0.634	0.804	0.577
Organisational Environmental Performance	0.648	0.806	0.581
HRM Policies	0.627	0.800	0.572
Labour Relations	0.664	0.812	0.591
Masculinity	0.665	0.816	0.597
Organisational Morale	0.669	0.812	0.591
Organisational cohesion	0.724	0.838	0.633
Power Distance	0.738	0.851	0.657
Uncertainty Avoidance	0.735	0.850	0.655

4.7.5 Discriminant Validity (CDT)

Discriminant validity shows that a construct is distinct from other constructs (Hair et al., 2019a), the extent to which a collection of constructs differs from others (Aliyu et al., 2018). As a result, this investigation uses the Fornell-Larcker criterion and cross-loading as well as a robust HTMT to establish discriminant validity.

The following sections discuss discriminant validity measures.

- **Fornell–Larcker Criterion**

Table 7 below presents the correlation matrix that displays diagonal values of the square root of AVE from the latent components. The average variance of the extracted square root values is significant and greater than that of columns and rows. Consequently, the square root of each AVE exceeded the relevant inter-construct correlations. The construct correlation matrix also shows it as diagonal and bold lines in Table 7 below. Therefore, the study findings indicate that all the reflective constructs have adequate discriminant validity.

Table 7: Hofstede's Modified Model's Fornell-Larcker Criterion

	Collectivism	Innovation	Organisational Environmental Performance	HRM Policies	Labour Relations	Masculinity	Organisational Morale	Organisational cohesion	Power Distance	Uncertainty Avoidance
Collectivism	**0.762**									
Innovation	0.560	**0.760**								
Organisational Environmental Performance	0.374	0.325	**0.762**							
HRM Policies	0.528	0.512	0.511	**0.756**						
Labour Relations	0.468	0.450	0.547	0.481	**0.769**					
Masculinity	0.407	0.455	0.290	0.543	0.415	**0.773**				
Organisational Morale	0.501	0.492	0.467	0.566	0.480	0.479	**0.769**			
Organisational cohesion	0.617	0.588	0.507	0.499	0.600	0.562	0.546	**0.795**		
Power Distance	0.570	0.490	0.205	0.305	0.368	0.323	0.456	0.390	**0.811**	
Uncertainty Avoidance	0.550	0.560	0.341	0.493	0.434	0.382	0.419	0.486	0.604	**0.809**

- **Cross Loadings**

Cross-loading is an alternative to the AVE that assesses the discriminant validity of the reflective model (Taylor & Geldenhuys, 2019). Therefore, the results show that all the outer loadings of indicators are higher in their specific constructs, and these values are more significant than the 0.70 cutoff point. In contrast, all indicator reliabilities are higher than 0.70 (Sellitto et al., 2018). Hence, the items are not cross-loaded during the factor load inspection. The loadings of all indicator variables (0.708 – 0.881) are more significant than the cutoff value

of 0.70. Thus, this study concludes that discriminant validity exists among the indicator variables (see Table 8 below).

Table 8: Modified Model Cross Loading

	Collectivism	Innovation	Organisational Environmental Performance	HRM Policy Effectiveness	Labour Relations	Masculinity	Organisational Morale	Organisational Cohesion	Power Distance	Uncertainty Avoidance
CO30	0,739									
CO31	0,725									
CO34	0,820									
INNOV89		0,783								
INNOV92		0,729								
INNOV93		0,766								
OEP100			0,802							
OEP98			0,774							
OEP99			0,708							
HR66				0,789						
HR68				0,752						
HR69				0,727						
LR79					0,796					
LR80					0,779					
LR82					0,729					
MA23						0,791				
MA25						0,762				
MA28						0,764				
OC59								0,765		
OC61								0,830		
OC63								0,790		
OM72							0,768			
OM73							0,814			
0M74							0,722			
PD11									0,881	
PD12									0,800	
PD13									0,770	
UN19										0,855
UN20										0,739
UN21										0,829

- **HTMT Ratio**

The HTMT ratio is the mean value of the cross-construct item correlations with the geometric mean and, thus, items in the same construct (Hair et al., 2019a). This situation is particularly true when the constructs are conceptually separate. A more conservative threshold value for HTMT is 0.85 (Henseler et al., 2009). Hair et al. (2019a) show that researchers can use 0.90 or 0.85, depending on the upper bound of the 95% HTMT confidence interval. The results in Table 9 below indicate that the HTMT ratios are under the rule of 0.9. Thus, discriminant validity exists when constructs are conceptually dissimilar. The HTMT ratio is more sensitive and robust than the other discriminant validity criteria. Thus, the results confirm discriminant validity.

The Fornell-Larcker criterion is the square root of the AVE and is larger than the correlation coefficients. Consequently, in the correlation matrix, the diagonal line is larger than the related rows and columns. Cross-loading indicates reflective indicator loading on a specific latent construct. Thus, the cross-loading criterion is 0.7. Hence, the Fornell–Larcker Criterion and cross-loading results reveal discriminant validity. The HTMT ratio criterion also confirms discriminant validity because the reflective indicators have a ratio of less than 0.9, which proves that their discriminant validity is more robust than the other two criteria.

This study also considered positive convergent validity results and performed further statistical analysis. Convergent and discriminant validity results indicated these instruments' suitability and suitability for further analysis, leading to significant interpretations, plus the fact that the measurement model's construct measures construct reliability and validity. The following step assesses the structural model results (Shanmugapriya & Subramanian, 2015).

Table 9: Modified Model HTMT

	Collectivism	Innovation	Organisational Environmental Performance	HRM Policies	Labour Relations	Masculinity	Organisational Morale	Organisational cohesion	Power Distance
Innovation	0.854								
Organisational Environmental Performance	0.573	0.494							
HRM Policies	0.790	0.804	0.794						
Labour Relations	0.688	0.656	0.783	0.777					
Masculinity	0.576	0.693	0.434	0.833	0.640				
Organisational Morale	0.774	0.787	0.680	0.887	0.720	0.734			
Organisational cohesion	0.889	0.874	0.663	0.713	0.832	0.824	0.800		
Power Distance	0.836	0.711	0.320	0.435	0.519	0.453	0.671	0.546	
Uncertainty Avoidance	0.779	0.811	0.469	0.730	0.595	0.535	0.607	0.669	0.806

4.7.6 Bootstrapping (CDT)

This study uses bootstrapping, resulting in the t-statistics that it then employs to analyse the importance of the inner and outer models. The bootstrapping process produces many sub-samples (for example, 5000 sub-samples) from the original sample. Therefore, this study uses bootstrapping with replacement to achieve normal bootstrap errors. It also calculates bootstrap errors for structural path significance tests by approximating t-values (Wong, 2013). Figure 5 below shows the t-statistic values of the indicators above 1.96 at 5% significance.

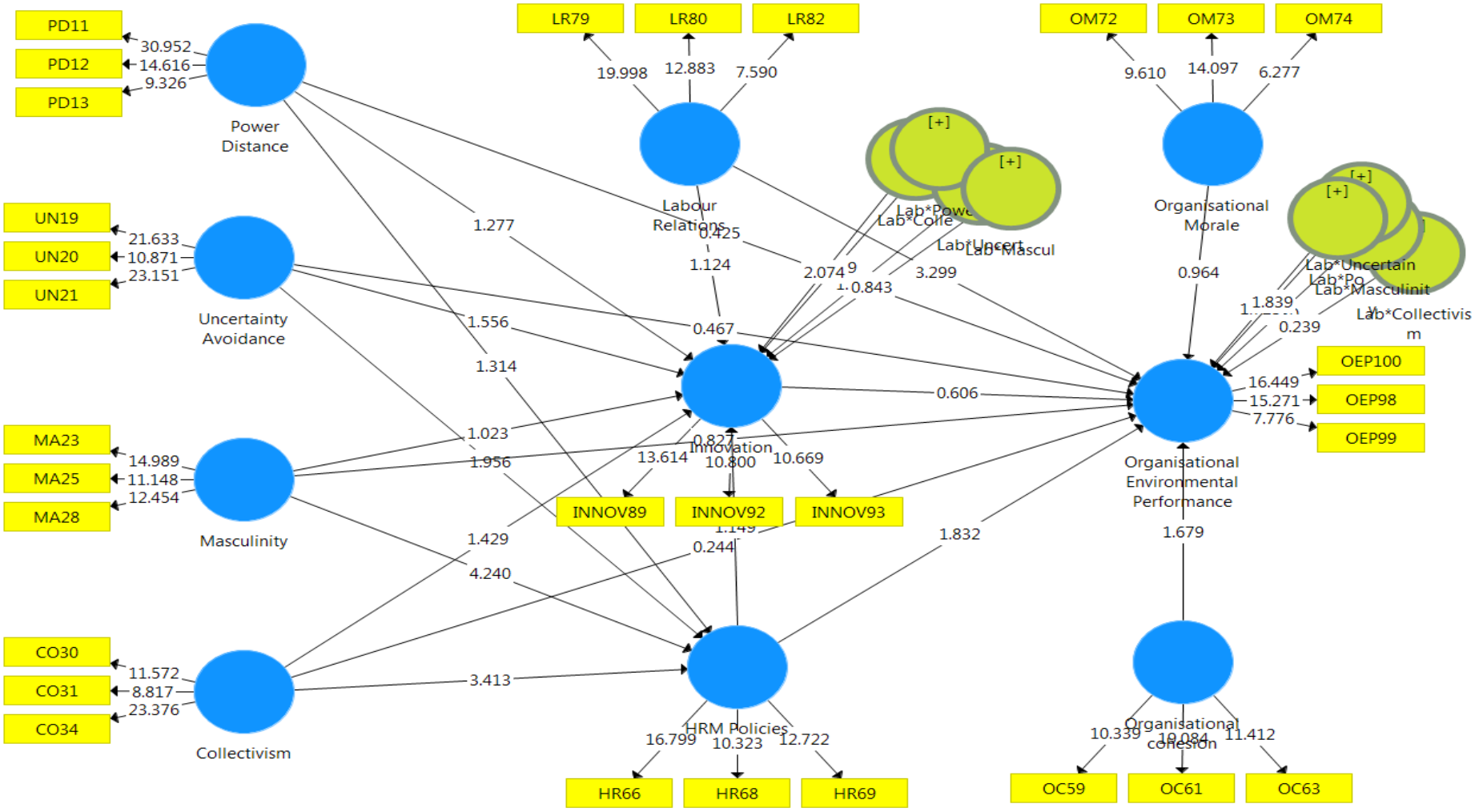


Figure 5: Hofstede's Final Model (Bootstrapping)

4.7.7 Path Coefficients (CDT)

The measurement model assesses each measurement model's construct validity and reliability. This study evaluates structural models by estimating and examining the paths between the constructs (Sevin et al., 2017). This study also examines the model's predictive capabilities, including the relationships among constructs (Shanmugapriya & Subramanian, 2015).

The objective of the structural model is to evaluate the proposed hypotheses presented in this study's introductory chapter. Furthermore, this study changes the model by removing low correlating paths to optimise the model's predictive capability and uses SmartPLS 3. The SEM analytics uses a component-based approach.

- **Direct Effects (CDT)**

- The results in Table 10 below indicate the paths reflecting the stipulated hypotheses. The following discussion focuses on significant paths but acknowledges insignificant path coefficients and presents them for future research.
- Collectivism has a significant and positive association with HRM policy effectiveness, e.g., $\beta = 0.321$ and $\rho = 0.001 < 0.05$. An increase in collectivism improves HRM policy effectiveness by 32%.
- Labour Relations have a significant and positive association with OEP, e.g., $\beta = 0.372$ and $\rho = 0.00q < 0.05$. An increase in the unit of labour relations improves OEP by 37%.
- Masculinity has a significant and positive association with HRM policy effectiveness, e.g., $\beta = 0.359$ and $\rho = 0.000 < 0.05$. An increase in the unit of masculinity improves HRM policy effectiveness by 36%.
- Uncertainty avoidance has a statistically significant and positive association with HRM policy effectiveness, e.g., $\beta = 0.276$ and $\rho = 0.045 < 0.05$. An increase per unit of uncertainty avoidance increases HRM policy effectiveness by 28%.

Table 10: Direct Effects (CDT)

	Original Sample (O)	P Values
Collectivism -> Innovation	0.187	0.113
Collectivism -> Organisational Environmental Performance	0.041	0.775
Collectivism -> HRM Policies	0.321	**0.001**
Innovation -> Organisational Environmental Performance	-0.067	0.582
HRM Policies -> Innovation	0.154	0.243
HRM Policies -> Organisational Environmental Performance	0.214	0.068
Labour Relations -> Innovation	0.089	0.479
Labour Relations -> Organisational Environmental Performance	0.372	**0.001**
Masculinity -> Innovation	0.115	0.356
Masculinity -> Organisational Environmental Performance	-0.103	0.404
Masculinity -> HRM Policies	0.359	**0.000**
Organisational Morale -> Organisational Environmental Performance	0.139	0.308
Organisational cohesion -> Organisational Environmental Performance	0.219	0.097
Power Distance -> Innovation	0.112	0.349
Power Distance -> Organisational Environmental Performance	-0.070	0.615
Power Distance -> HRM Policies	-0.161	0.147
Uncertainty Avoidance -> Innovation	0.191	0.111
Uncertainty Avoidance -> Organisational Environmental Performance	0.065	0.606
Uncertainty Avoidance -> HRM Policies	0.276	**0.045**

The following section discusses specific indirect effects. This section determines the mediating effects of HRM policy effectiveness. Additionally, innovation has no mediating effect on environmental performance. In addition, this study examines the moderation effects of labour relations on innovation and environmental performance.

4.7.8 Specific Indirect Effects

This section discusses the mediating effects of HRM policy effectiveness. It examines the mediating effects of innovation on CDT and environmental performance and the moderating effect of labour relations. The results in Table 11 below indicate insignificant mediating effects and show that the results have insignificant interaction effects, except for the following:

The results show that the moderating effect of labour relations × uncertainty avoidance has a significant and positive association with OEP. Thus, $\beta = 0.249$ and $\rho = 0.041 < 0.05$. A unit of moderation effect could increase the OEP by 25%. However, the direct association between labour relations and OEP is 37%. Therefore, the moderating effect reduces this association by 12%.

Table 11: Mediation and Moderation Effects (CDT)

MODERATION EFFECTS		
	Original Sample (O)	P Values
Lab*Mascul -> Innovation	0.064	0.553
Lab*Masculinity -> Organisational Environmental Performance	-0.198	0.098
Lab*Po -> Organisational Environmental Performance	-0.223	0.061
Lab*Power -> Innovation	0.029	0.802
Lab*Uncert -> Innovation	-0.000	0.999
Lab*Uncertain -> Organisational Environmental Performance	0.249	**0.041**
MEDIATION EFFECTS		
Uncertainty Avoidance -> HRM Policies -> Organisational Environmental Performance	0.059	0.228
Power Distance -> HRM Policies -> Organisational Environmental Performance	-0.034	0.307
Masculinity -> HRM Policies -> innovation	0.055	0.327
Collectivism -> Innovation -> Organisational Environmental Performance	-0.013	0.655
Power Distance -> Innovation -> Organisational Environmental Performance	-0.008	0.740
HRM Policies -> Innovation -> Organisational Environmental Performance	-0.010	0.708
Uncertainty Avoidance -> HRM Policies -> Innovation	0.043	0.323
Power Distance -> HRM Policies -> Innovation	-0.025	0.420
Masculinity -> HRM Policies -> Organisational Environmental Performance	0.077	0.125
Collectivism -> HRM Policies -> Innovation	0.050	0.294

Collectivism -> HRM Policies -> Organisational Environmental Performance	0.069	0.116
Masculinity -> Innovation -> Organisational Environmental Performance	-0.008	0.748

The following section discusses the proposed model's predictive relevance and quality and presents cross-validated redundancy. Thus, using the omitted data, Q^2 predicts the path from the inner and outer models. In addition, cross-validated communality (H^2) measures the predictive capacity of the model that can forecast the indicators using a measurement model.

4.7.9 Final Model Statistics (CDT)

A calculation of Q^2 statistics evaluates the quality of PLS (Shanmugapriya & Subramanian, 2015), and cross-validated commonality H^2 measures the model's capacity. Thus, the model predicts the manifest variables directly from the latent variables through cross-validation. Furthermore, f^2 measures the capacity of the path model (Bhakar et al., 2012),that is, when $Q^2 > 0$, the model has a predictive capacity, whereas when $Q^2 < 0$, the model lacks it.

Therefore, the exogenous variables have values greater than zero, indicating the relevance of the predictive model, plus the fact that the path coefficients have the predictive capacity, for example, their predictive capacity for OEP. Hence, these findings support the proposition that the model has proper predictive quality. Table 12 below presents the results of each variable's effect – these effects are significant. Table 13 below presents the cross-validated commonalities (H2).

Table 12: Construct Cross validated Redundancy.

Construct Cross validated Redundancy			
	SSO	**SSE**	**Q^2 (=1-SSE/SSO)**
Collectivism	279.000	279.000	
Innovation	279.000	217.518	0.220
Organisational Environmental Performance	279.000	216.562	0.224
HRM Policies	279.000	211.568	0.242

Table 13: Construct Cross validated Communality.

Construct Cross-validated Communality			
	SSO	**SSE**	**Q2 (1- SSE/SSO)**
Collectivism	279.000	222.201	0.204
Innovation	279.000	225.156	0.193
Organisational Environmental Performance	279.000	225.431	0.192
HRM Policy Effectiveness	279.000	228.713	0.180
Labour Relations	279.000	220.165	0.211
Masculinity	279.000	217.164	0.211
Organisational Morale	279.000	219.088	0.215
Organisational Cohesion	279.000	201.453	0.277
Power Distance	279.000	189.239	0.322
Uncertainty Avoidance	279.000	191.441	0.314

4.8 Quantitative Research at Aggregate Level (CVF)

The EFA determines the factor structure that confirms the scales of the questionnaire items in SPSS (Ansah & Louw, 2019; Samuels, 2016). This study also uses a factor analysis with varimax rotation, the primary method for determining the factor structure. This study simultaneously examines all the dependent and independent variables (Zehir et al., 2015).

The current study uses factor analysis.to analyse the interaction between variables and explore the factor structure of these measures by examining the suitability of the model using PLS-SEM (Wipulanusat et al., 2017), as well as to assess the correlations among the variables. Additionally, this study uses the PLS method to evaluate the hypotheses as paths in the model. It also uses SPSS version 25 for descriptive statistics and SmartPLS for the SEM.

4.8.1 Central Tendency Measure of Constructs (CVF)

Table 49 (see Appendix H below) lists the kurtosis values that range between –0.952 and 1.644, and skewness varies between –0.372 and 0.680. Thus, the asymmetry and kurtosis are within the limit values of –2 and 2 thresholds. Hence, the results indicate that the data are close to normality.

4.8.2 Test of Normality (CVF)

Normality tests determine whether a set of data models is a normal distribution. However, this study considers a group of observations a normal distribution (Nosakhare & Bright, 2017). In addition, non-normal data and heteroscedasticity are common problems, especially when testing location measurements because of the shape of the distributions or the presence of outliers (Yusof et al., 2009).

Normality tests are necessary before interpreting statistical results (Fitrianto & Chin, 2016). Thus, violating a normal distribution condition results in an invalid inference. This study uses graphic methods to examine the normal distribution, for example., a histogram and Q-Q plot test, to ensure that data is normal.

A graphical format is a helpful tool for testing normality. However, more is needed to prove that the normal distribution hypothesis holds. Hence, numerical methods support a visual approach to normality tests, for example, the Cramer–von Mises, Kolmogorov–Smirnov (K-S), D'Agostino skewness, Shapiro–Wilk, Anscombe-Glynn kurtosis, D'Agostino-Pearson omnibus as well as the Lilliefors, Jarque-Bera and Anderson Darling tests (Gogtay et al., 2016). Therefore, this study uses Kolmogorov–Smirnov (K-S) and Shapiro–Wilk tests for normality.

The following section discusses the results of these tests.

4.8.3 Test of Normality: Kolmogorov–Smirnov and Shapiro–Wilk (CVF)

The Shapiro–Wilk test is a more powerful normality test than the Kolmogorov–Smirnov test (Razali & Wah, 2010) because it tests the null hypothesis (H_0) for normality. Data show normal distribution at the value of $\rho > 0.05$, at which point the data match the normality parameters (Miot, 2017).

Furthermore, Table 49 (see Appendix H below) shows the results of the Shapiro–Wilk and Kolmogorov–Smirnov tests that include the values of $\rho > 0.000$, thus indicating their insignificance, implying that the study is not rejecting the null hypothesis. In addition, when using the Shapiro–Wilk test, the results show that this study obtained the data from an average population, thus proving the Shapiro–Wilk test is robust, reliable, sensitive and suitable for sample sizes exceeding 30. However, these results are limited because the data exhibits a non-normal distribution.

In addition, SEM requires certain specifications for a normality distribution, i.e., multicollinearity, sample size and measurement scales (Alias et al., 2015). Therefore, the analysis involves the evaluation of the normal distribution. This study uses histograms and Q-Q charts descriptive statistics and includes numerical testing, for example, the Shapiro–Wilk and Kolmogorov–Smirnov tests that determine whether the data are appropriate for modelling structural equations (Hazzi & Maldaon, 2015).

The skewness and kurtosis statistics verify the normal data distribution, mainly when the values are between -2 and +2 (AlAnazi et al., 2016) and when the p-value is > 0.05. Thus, this study

rejects the null hypothesis of normality and confirms the hypothesis that the data are non-normal distribution.

Furthermore, this study uses the Kolmogorov–Smirnov and Shapiro–Wilk tests (Hazzi & Maldaon, 2015) that are sensitive to small sample sizes and overly sensitive to large sample sizes that can produce misleading results (Hazzi & Maldaon, 2015, p. 57). Therefore, the results, in some instances, violate the multivariate normal distribution hypothesis. The kurtosis and skewness statistics are below the thresholds (AlAnazi et al., 2016) (see Table 49 in Appendix H below). Hence, the numerical methods show results contradictory to those of the graphic methods. The results also indicate that the p-value is> 0.05. Thus, this study rejects the null hypothesis that the data are a nonnormal distribution.

4.8.4 Test of Normality: Graphic Inspections (CVF)

Normality testing involves both graphical and analytical methods. These visual methods use charts and graphs, for example, Q-Q plots, histograms, boxplots and stem-and-leaf plots (Nosakhare & Bright, 2017). Furthermore, graphic methods are the most straightforward normality tests. For example, they identify outliers when inspecting boxplots. However, the visual assessment is subjective, especially when the pattern is unclear (Fitrianto & Chin, 2016).

Table 50 (see Appendix I) presents the outliers. Graphical methods can aid in identifying outliers and their treatments. This study replaces outliers using the average of their closest neighbours because this approach minimises their effects on further data analysis. It also ensures that the models are suitable and ready for further analysis, e.g., analysing data using Smart-PLS. This study also tests the validity of the data and evaluates homoscedasticity. Thus, the data have the same variance, owing to a common error term.

The following section presents the results of the reliability test.

4.8.5 Discriminant and Convergent Analysis (CVF)

Convergent validity is the correlation between two measures of the same variable instead of the correlation between one variable and other variables (Engellant et al., 2016). Convergent validity tests are theoretically and empirically related to the constructs, while discriminant validity tests are theoretically and empirically unrelated constructs (Yu & Wu, 2009). Therefore, a review of convergent validity is more straightforward than a review of discriminating validity.

4.8.6 Multicollinearity (CVF)

The current study evaluated the determinants of the correlation matrix using SPSS to determine multicollinearity. If the determinant is higher than 0.00001, multicollinearity does not exist (Field 2000). The correlation matrix of this study had a determinant of 1.738 10-10 (1.738E-10), which is greater than 0.00001, as shown in Table 51 (see Appendix I below). Hence, the results show no multicollinearity issues within the dataset.

4.8.7 Kaiser–Meyer–Olkin and Bartlett's Test of Sphericity (CVF)

This study assessed sampling adequacy using Bartlett's sphericity test, including the Kaiser-Meyer-Olkin (KMO) test (Wipulanusat et al., 2017). Bartlett's test of sphericity shows the significance of the correlations, especially when the correlation matrix is an identity matrix. Therefore, factorial analysis is inadequate for data processing (Cardoso et al., 2017).

This study examines the determinant of the correlation matrix and reviews the adequacy of a variable's factor analysis (Rossoni et al., 2016). The results of Bartlett's test are statistically significant ($p < 0.05$), which suggests a good correlation for further analyses (Rossoni et al., 2016). Furthermore, the value in Table 14 below of Bartlett's test of sphericity is $\chi 2$ (562) = 1794.114, with df = 562. Thus, the results show that Bartlett's test of sphericity is highly significant at $p < 0.05$, indicating that the data is suitable for the EFA because it approximates the multivariate average.

Furthermore, the study utilises the KMO measure of sampling adequacy with a cut-off above 0.50, testing whether the data suits the EFA (Yong & Pearce, 2013). In addition, it has a value between zero and one. For example, the acceptable value is 0.50 as the limit, with values below 0.05 being unacceptable. At the same time, those above 0.90 are marvellous, between 0.80–0.89 are meritorious, between 0.70–0.79 are middling, between 0.60–0.69 are mediocre, and 0.50 and 0.59 are low (Cardoso et al., 2017).

Table 14 below shows that the KMO value of the variables is 0.813, which indicates meritorious sampling adequacy. This table also shows the significant results of Bartlett's test of sphericity. In addition, the KMO statistic test indicates that it is feasible to conduct factor analysis (Wang et al., 2017).

Table 14: KMO and Bartlett's Test of Sphericity (CVF)

KMO measure of sampling adequacy		**0.813**
Bartlett's test of sphericity	Approx. chi-square	1794.114
	df	561
	Sig.	**0.000**

4.8.8 Reliability Analysis and Convergent Validity Assessment (CVF)

Cronbach's alpha measures the internal consistency of several constructs and their composite reliability, thus making the analysis reliable and robust. The composite reliability threshold is 0.7. In addition, Cronbach's alpha has a 0.5 cutoff point (Field, 2013). This study evaluates convergent validity and uses factor loadings and AVE (Hair et al., 2014). The results shown in Table 15 show that the two values are more significant than their cutoff points.

The results confirm the convergent validity of all items in the final measurement model, and the indicator variables are suitable for the constructs. In addition, the results in Table 15 below show excellent composite reliabilities of above 0.7, which is valid for all the constructs. The composite reliability for innovation is 0.789, 0.820 for the developmental culture, 0.806 for the OEP, 0.779 for HRM policy effectiveness, 0.824 for hierarchical culture, 0.835 for

organisational cohesion and 0.843 for rational culture. The reliabilities of the constructs vary from good to excellent; thus, the data are suitable for further SEM analysis using SmartPLS version 25.

Table 15: Convergent Validity and Reliability Analysis (CVF)

	Composite reliability		AVE	
INNOV	0.789	Good reliability because 0.789 is above 0.7	0.554	Convergent validity supported, as 0.554 is above 0.5
DE	0.820	Good reliability because 0.820 is above 0.7	0.533	Convergent validity supported, as 0.533 is above 0.5
OEP	0.806	Good reliability because 0.806 is above 0.7	0.582	Convergent validity supported, as 0.582 is above 0.5
HRM	0.779	Good reliability because 0.779 is above 0.7	0.541	Convergent validity supported, as 0.541 is above 0.5
HI	0.783	Good reliability because 0.783 is above 0.7	0.546	Convergent validity supported, as 0.546 is above 0.5
LR	0.797	Good reliability because 0.797 is above 0.7	0.502	Convergent validity supported, as 0.502 is above 0.5
OM	0.824	Good reliability because 0.824 is above 0.7	0.540	Convergent validity supported, as 0.540 is above 0.5
OC	0.835	Good reliability because 0.835 is above 0.7	0.503	Convergent validity supported, as 0.503 is above 0.5
RA	0.843	Good reliability because 0.843 is above 0.7	0.519	Convergent validity supported, as 0.519 is above 0.5

Note. INNOV: Innovation; DE: Developmental culture; OEP: Organisational Environmental performance; HRM: Human resource management policies; HI: Hierarchical culture; LR: Labour relations; OM: Organisational morale; OC: Organisational cohesion; RA: Rational culture.

The results also show that the AVE of all constructs are above 0.5. Therefore, the AVE indicates good convergent validity. For example, innovation is 0.554, developmental culture is 0.533, organisational environmental performance is 0.582, HRM policy is 0.541, hierarchical culture

is 0.546, labour relations is 0.502, organisational morale is 0.540, organisational cohesion is 0.503 and rational culture is 0.519. Therefore, the existing literature guides the choice of indicator variables in this study, and the variables converge and measure a specific and conceptually defined construct.

4.8.9 Discriminant Validity Assessment (CVF)

Discriminant validity measures the relationship between the square root of AVE estimates and the highest inter-construct correlation (Malhotra et al., 2017); thus, the square root of AVE is above all inter-construct correlation values. Table 16 below presents the correlation matrix between the constructs and the square root of the AVE for each construct (bold diagonal). Therefore, the results of this study establish discriminant validity.

Table 16: Correlation Matrix to Assess Discriminant Validity

	Innovation	**Development culture**	**Organisational Environmental performance**	**HRM policy effectiveness**	**Hierarchical culture**	**Labour relations**	**Organisational morale**	**Organisational cohesion**	**Rational culture**
INNOV	**0.745**								
DE	0.550	**0.730**							
OEP	0.354	0.345	**0.763**						
HRM	0.493	0.575	0.416	**0.736**					
HI	0.522	0.494	0.425	0.589	**0.739**				
LR	0.504	0.517	0.528	0.464	0.490	**0.709**			
OM	0.567	0.521	0.492	0.639	0.636	0.525	**0.735**		
OC	0.697	0.743	0.508	0.640	0.593	0.608	0.637	**0.710**	
RA	0.614	0.517	0.481	0.600	0.579	0.668	0.728	0.672	**0.720**

Note. INNOV: Innovation; DE: Developmental culture; OEP: Organisational Environmental performance; HRM: Human resource management policies; HI: Hierarchical culture; LR: Labour relations; OM: Organisational morale; OC: Organisational cohesion; RA: Rational culture.

4.9 Structural Equation Model (CVF)

PLS path models are two sets of linear equations. Thus, the equations measure inner and outer structural models (Taylor & Geldenhuys, 2019). The PLS estimates the model's partial relationships because it predicts in an iterative sequence of ordinary least squares (OLS) regressions. Thus, PLS-SEM maximises the explained variance of endogenous latent variables (Hair et al., 2012). It provides empirical estimates of the relationships, that is, the relationships between constructs (structural models) as well as between indicators and constructs (measurement models) (Do Nascimento & Macedo, 2016).

This study assesses convergent validity, internal consistency and reliability, and the discriminant validity for the reflective model to verify the coefficient of determination. It also measures the size effect f2 in the determination coefficient, the size and significance of path coefficients, and cross-validated redundancy Q2.

The structural model presents the interrelations between observable variables and latent constructs in the conceptual model because of the succession of structural equations, such as regression equations (Wong, 2013). However, a model with a low but significant loading of 0.50 suggests dropping an indicator unless a vital measurement theory exists to include that particular indicator (Hair et al., 2019b).

The researcher removes indicators with a factor loading lower than 0.7 from the model until saturation of the model when further modification is not permissible. The pathway analysis reveals the model's predictability and an association of the dependent and independent variables, as shown in Figure 6 below.

4.9.1 Proposed Structural Equation Model (CVF)

Figure 6 below shows the proposed model from the observations and the modification of certain factors with factor loadings of less than 0.7. As stated above, this study excludes these factors from this study until model saturation, after which further modification is not permissible. Hence, this study derives model paths from related theories per the formulated hypotheses.

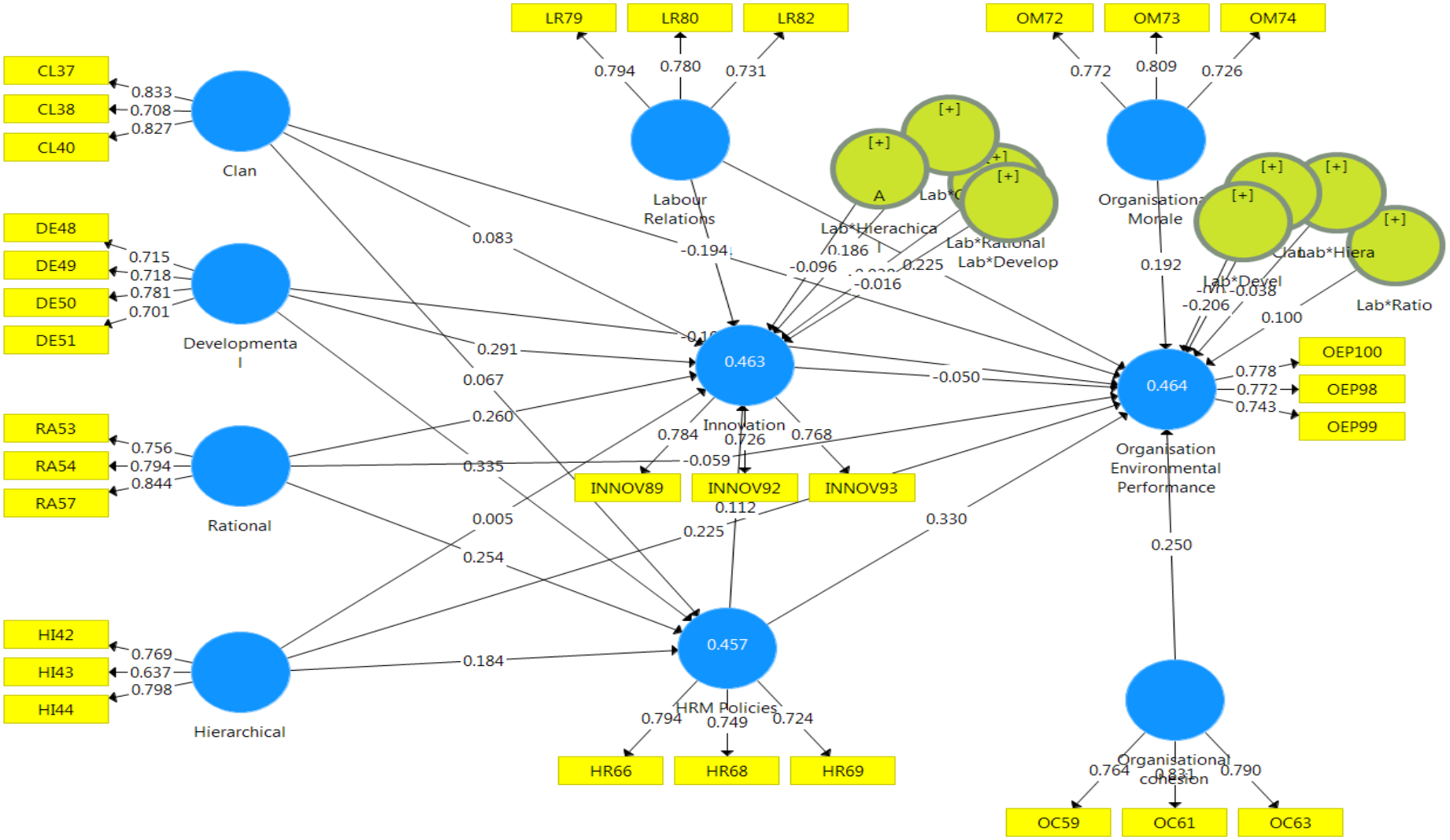


Figure 6: Proposed Structural Equation Model (CVF)

Figure 6 above shows the proposed saturated model. Thus, this study revises the model according to factors below the acceptable standard of 0.7.

Furthermore, SEM expands the likelihood of relationships between latent variables forming a structure and the measurement models (Schreiber et al., 2006). The PLS-SEM approach is appropriate for probing the models with multiple complex dependencies and independent relationships between the latent variables.

Additionally, SmartPLS analyses the CVF model derived from theory and incorporates the mediating effects, e.g., labour relations affect innovation and OEP. SEM also assesses the directionality of significant relationships and the theoretically proposed constructs (Schreiber et al., 2006). This study assessed the factorial loads, including the convergent and discriminant validity (see Figure 6 below).

4.9.2 R Square (CVF)

In this study, the author assesses the predictive power of the proposed model and examines the endogenous constructs' explained variance (R^2) (Peng & Lai, 2012). Hair et al. (2019a) suggest R^2 values of 0.25 as low, 0.50 as moderate, 0.75 as substantial, and those of 0.90 and above as acceptable.

Furthermore, PLS maximises the variance explained by endogenous variables (Peng & Lai, 2012). The results in Table 17 below show that all R^2 values are significant. It also depicts HRM policy effectiveness at 45.7% (the lowest predictor) and innovation at 46.3% (the highest predictor). Thus, they predict a variation of 46.4% in OEP.

Table 17: R Square (CVF)

	R Square	R Square Adjusted
Innovation	0.463	0.398
Organisational Environmental Performance	0.464	0.376
HRM Policies	0.457	0.432

4.9.3 F Square (CVF)

The effect size increases the R^2 with the proportion of variance explained by the endogenous latent variables. It also measures the extent of moderation of endogenous latent variables (Hair et al., 2019a) and, hence, measures the strength of the relationship between the latent variables.

In addition, the effect size (f^2) exceeded 0.02 in Table 18 below. Furthermore, the f2 coefficients of 0.35 are high, 0.15 is medium, and 0.02 is a low effect (Hair et al., 2014). Innovation and rational culture had a small effect size (0.02) on OEP. However, the remaining variables also had medium effect sizes ranging from 0.030 to 0.096.

Table 18: F Square (CVF)

	Innovation	Developmental	Organisational Environmental Performance	HRM Policies effectiveness
Clan	0.006		0.030	0.004
Innovation			0.002	
Developmental	0.068		0.008	0.117
Organisational Environmental Performance				
HRM Policies	0.012		0.096	
Hierarchical	0.000		0.045	0.038
Labour Relations	0.007		0.045	
Organisational Morale			0.028	
Organisational cohesion			0.042	
Rational	0.052		0.002	0.080

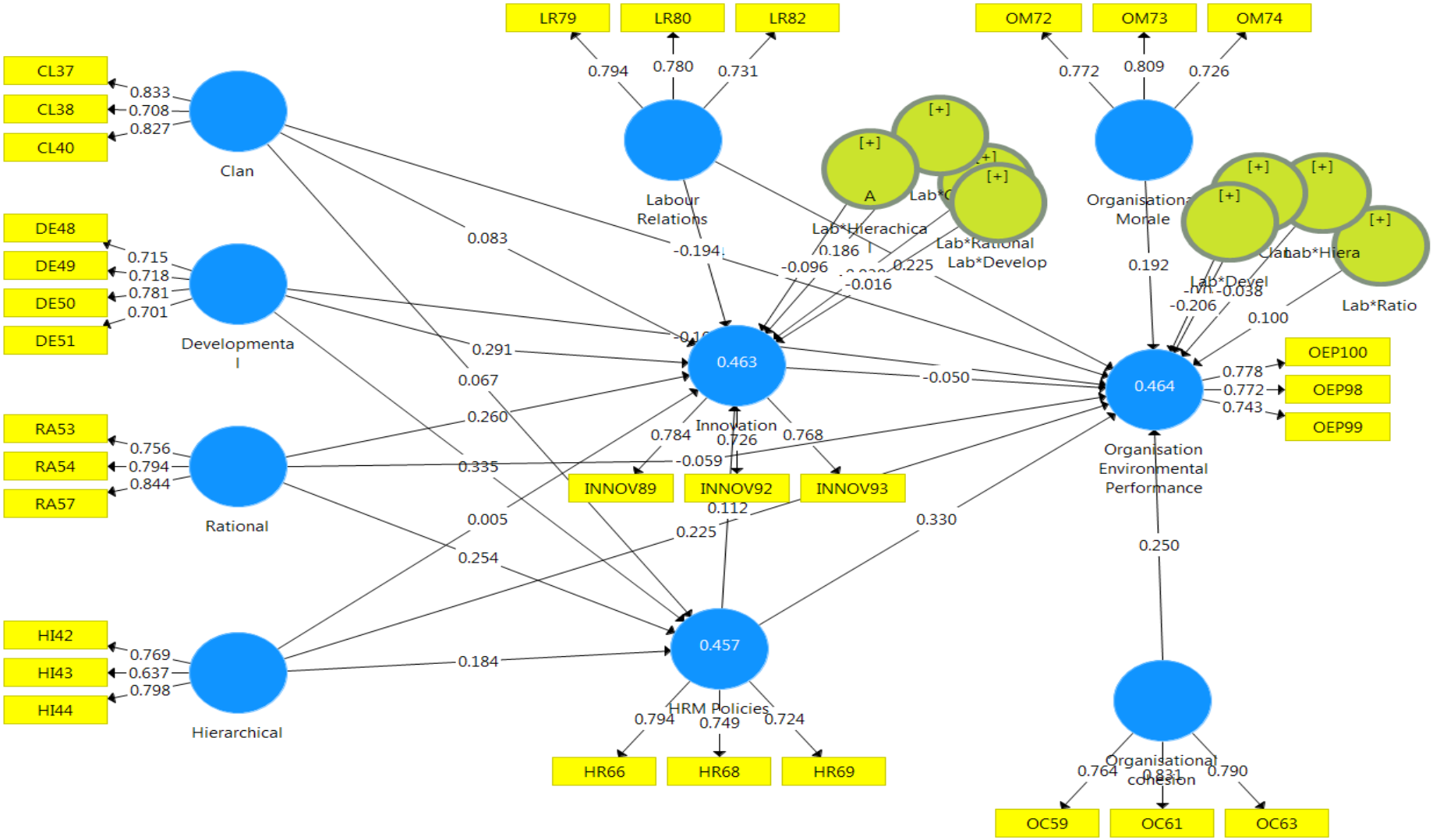


Figure 7: Final Model with Control Variables and Moderation Effects (CVF)

4.9.4 Convergent Reliability and Validity (CVF)

Cronbach's alpha measures the constructs' internal consistency and includes the composite reliability that makes the analysis more reliable. Therefore, Cronbach's alpha > 0.5 is the threshold, and the composite reliability is 0.7 (Field, 2013). The current study also evaluates convergent validity using factorial loadings. The AVE values are higher than the threshold, as illustrated in Table 19 below (Hair et al., 2014).

Furthermore, the results confirm the convergent validity of all items, especially in the final measurement model. Moreover, the selected items are suitable for their constructs, and the results show excellent composite reliability of more than 0.7 for all constructs.

Table 19 below shows that the AVE of the variable is greater than 0.5. Thus, the significant value of $\rho \leq 0.05$ is above the thumb rule. Similarly, the composite reliability of the variables exceeds the load criterion because these values are above 0.7.

Table 19: Reliability and Validity (CVF)

	Cronbach's Alpha	**Composite Reliability**	**Average Variance Extracted (AVE)**
Clan	0.702	0.833	0.626
Innovation	0.634	0.804	0.577
Developmental	0.708	0.819	0.532
Organisational Environmental Performance	0.648	0.808	0.585
HRM Policies	0.627	0.800	0.572
Hierarchical	0.589	0.781	0.545
Labour Relations	0.664	0.812	0.591
Organisational Morale	0.669	0.813	0.592
Organisational cohesion	0.724	0.838	0.633
Rational	0.717	0.841	0.638

4.9.5 Discriminant Validity (CVF)

This section discusses different criteria to assess discriminant validity,for example, the Fornell–Lacker criterion, cross-loadings and HTMT.

- **Fornell–Larcker Criterion (CVF)**

Discriminant validity shows the square root of AVE values in the diagonal line. The AVE is higher than the correlation coefficients, especially about the coefficients of a variable that are higher than the associated rows and columns, according to the Fornell–Larcker Criterion. Table 20 below presents the cross-loads of the reflective indicators, thus loading on specific latent constructs according to the criterion of 0.7.

Moreover, the results show no cross-loading of factors in the modified model and demonstrate the discriminant validity of cross-loading. This result is similar to the Fornell–Larcker test in Table 20 below. Similarly, Table 21 below depicts that the variables did not cross-load. Thus, the lack of cross-loading between factors implies discriminant validity.

Table 20: Fornell–Larcker Criterion (CVF)

FORNELL AND LARKER CRITERION										
	Clan	**Innovation**	**Developmental**	**Organisational Environmental Performance**	**HRM Policies**	**Hierarchical**	**Labour Relations**	**Organisational Morale**	**Organisational cohesion**	**Rational**
Clan	**0.791**									
Innovation	0.468	**0.760**								
Developmental	0.623	0.564	**0.729**							
Organisational Environmental Performance	0.260	0.326	0.338	**0.765**						
HRM Policies	0.500	0.513	0.582	0.510	**0.756**					
Hierarchical	0.546	0.443	0.481	0.451	0.507	**0.738**				
Labour Relations	0.348	0.448	0.491	0.539	0.481	0.464	**0.769**			
Organisational Morale	0.563	0.494	0.429	0.468	0.568	0.543	0.480	**0.770**		
Organisational cohesion	0.488	0.587	0.616	0.497	0.499	0.524	0.599	0.546	**0.795**	
Rational	0.485	0.547	0.457	0.398	0.531	0.491	0.581	0.643	0.572	**0.799**

- **Cross Loadings (CVF)**

Table 21 below shows the cross-loading of constructs. Thus, cross-loadings are more than the cut-off point of 0.7. The results demonstrate that the discriminant validity criterion agrees with the Fornell–Larcker test.

Table 21: Cross Loadings (CVF)

Cross Loadings										
	Clan	**Innovation**	**Developmental**	**Organisational Environmental Performance**	**HRM Policies effectiveness**	**Hierarchical**	**Labour Relations**	**Organisational Morale**	**Organisational cohesion**	**Rational**
CL37	0,833									
CL38	0,708									
CL40	0,827									
DE48			0,715							
DE49			0,718							
DE50			0,781							
DE51			0,701							
INNOV89		0,784								
INNOV92		0,726								
INNOV93		0,768								
OEP100				0,778						
OEP98				0,772						
OEP99				0,743						
HI42						0,769				
HI43						0,637				
HI44						0,798				
HR66					0,794					
HR68					0,749					
HR69					0,724					
LR79							0,794			
LR80							0,780			
LR82							0,731			
OC59									0,764	
OC61									0,831	
OC63									0,790	
OM72								0,772		
OM73								0,809		
OM74								0,731		
RA53										0,756

RA54										0,794
RA57										0,844

- **HTMT Ratio (CVF)**

Table 22 below shows all the HTMT ratios that are less than 0.9 cut-off point, thus proving discriminant validity. Moreover, the HTMT inference indicates that discriminant validity is conclusive. The sample average was within the confidence interval of HTMT 2.5% and HTMT 97.5%.

Table 22: HTMT Ratio (CVF)

HTMT									
	Clan	**Innovation**	**Developmental**	**Organisational Environmental Performance**	**HRM Policies effectiveness**	**Hierarchical**	**Labour Relations**	**Organisational Morale**	**Organisational cohesion**
Innovation	0.676								
Developmental	0.875	0.826							
Organisational Environmental Performance	0.376	0.494	0.480						
HRM Policies	0.755	0.804	0.860	0.794					
Hierarchical	0.858	0.722	0.759	0.698	0.807				
Labour Relations	0.526	0.656	0.727	0.783	0.777	0.776			
Organisational Morale	0.851	0.787	0.641	0.680	0.887	0.894	0.720		
Organisational cohesion	0.682	0.874	0.861	0.663	0.713	0.787	0.832	0.800	
Rational	0.706	0.811	0.645	0.571	0.774	0.760	0.832	0.900	0.786

4.9.6 Bootstrapping (CVF)

PLS is a nonparametric procedure. Therefore, this study uses bootstrapping to conduct significance load tests (Chengalur-Smith et al., 2012). Figure 8 below shows the results of this procedure. In addition, PLS-SEM measures the predictive capability of the model. Hence, it is necessary to judge the quality of the evaluation of measurement models. This study determines the structure of bootstrapping (Hair et al., 2014).

When the number of bootstrap samples increases, it does not necessarily increase the information in the original data. However, it reduces the random sampling errors from bootstrapping (Peng & Lai, 2012). In addition, the path coefficients have standardised values ranging from –1 to +1. The closer the relationship is to 1 or –1, the greater the positive or negative nature of the relationship (Sellitto et al., 2018).

Furthermore, this study estimates the significance of path coefficients. It uses t-values from the bootstrapping technique (Sellitto et al., 2018). Hence, the t-statistics for the measurement item loads. In addition, the loads on the latent constructs are also significant at the 5% significant level (Chengalur-Smith et al., 2012).

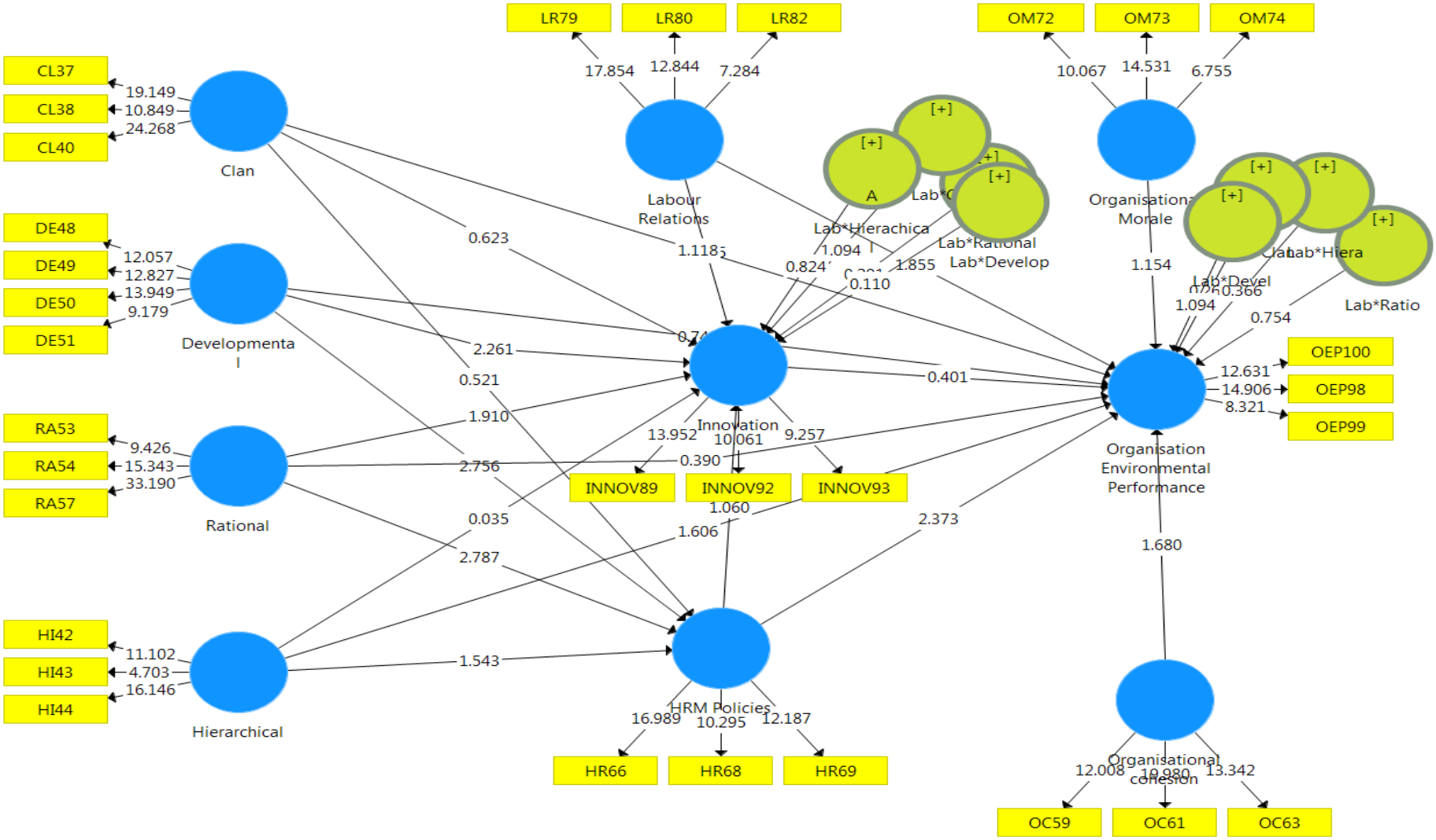


Figure 8: Final Model with Control Variables and Moderation Effects (CVF) (Bootstrapping)

4.9.7 Path Analysis (CVF)

Bootstrapping techniques show the confidence intervals of relationships and, thus, the relationships among the various constructs. In addition, it estimates an indirect and total effect (Streukens & Leroi-Werelds, 2016). The relationships between these constructs are direct or indirect, such as mediators and moderator effects (Ringle et al., 2018).

Furthermore, this study conducts bootstrapping, assesses the significance of the path coefficients with values ranging from 1 to − 1 (Hair et al., 2019a), and includes interpreting the indirect effects. Therefore, one or more intermediate constructs on a specific target construct (Hair et al., 2019a) include the significance of each path coefficient. In addition, this study determines if this path coefficient is consistent with the theory (Peng & Lai, 2012).

The path coefficients are the strength of one variable's impact on another (Wong, 2013). These are the symmetrical bootstrap confidence intervals and include the equivalent t-value of the bootstrap distribution. This study assesses the model parameters using several bootstrap replications, for example, minimum = 500 and maximum = 5 000 (Streukens & Leroi-Werelds, 2016). The bootstrapping results indicate the path coefficients and whether the path coefficients of the inner model are statistically significant. This study uses a two-sided t-test with a significance level of 5% to indicate the path coefficient. Thus, the coefficient is significant when the t-statistic is greater than 1.96.

This study discusses only the significant path coefficients (see Table 23 below) related to the proposed hypotheses. However, this study acknowledges the insignificant path coefficients present for future consideration.

4.9.8 Path Coefficients (CVF)

This section discusses various effects. The independent variables have direct effects on the dependent variable. It also discusses mediating and moderating effects.

The results in Table 23 below present the following direct effects:

- Developmental culture has a significant and positive association with innovation: $\beta = 0.291$ and $\rho = 0.017 < 0.05$. Hence, an increase per unit of developmental culture increases innovation by 29.1%.
- Developmental culture has a significant and positive association with HRM policy effectiveness: $\beta = 0.335$ and $\rho = 0.009 < 0.05$. Hence, an increase per unit of developmental culture increases HRM policy effectiveness. Therefore, the HRM policy effectiveness increases by 33.5 %.
- HRM policy effectiveness has a significant and positive association with OEP: $\beta = 0.330$ and $\rho = 0.015$, $p < 0.05$. Hence, an increase in the unit of HRM policy effectiveness increases OEP. Thus, HRM policy effectiveness increases by 33 %.
- Rational culture has a significant and positive association with HRM policy effectiveness: $\beta = 0.254$ and $\rho = 0.003 < 0.05$. Hence, an increase per unit of rational culture increases HRM policy effectiveness. Therefore, HRM policy effectiveness increases by 25.4%.

Table 23: Direct Effects (CVF)

PATH COEFFECIENT		
	Original Sample (O)	**P Values**
Clan -> Innovation	0.083	0.541
Clan -> Organisational Environmental Performance	-0.194	0.228
Clan -> HRM Policies	0.067	0.594
Innovation -> Organisational Environmental Performance	-0.050	0.693
Developmental -> Innovation	0.291	**0.017**
Developmental -> Organisational Environmental Performance	-0.109	0.442
Developmental -> HRM Policies	0.335	**0.009**
HRM Policies -> Innovation	0.112	0.285
HRM Policies -> Organisational Environmental Performance	0.330	**0.015**
Hierarchical -> Innovation	0.005	0.972
Hierarchical -> Organisational Environmental Performance	0.225	0.102
Hierarchical -> HRM Policies	0.184	0.149
Labour Relations -> Innovation	0.084	0.498
Labour Relations -> Organisational Environmental Performance	0.225	0.071
Organisational Morale -> Organisational Environmental Performance	0.192	0.215
Organisational cohesion -> Organisational Environmental Performance	0.250	0.051
Rational -> Innovation	0.260	0.054
Rational -> Organisational Environmental Performance	-0.059	0.673
Rational -> HRM Policies	0.254	**0.003**

The following section discusses the mediating effects of HRM policy effectiveness and innovation between organisational culture and environmental performance. It also includes the moderation effects of labour relations on innovation and environmental performance.

4.9.9 Indirect effects (CVF)

Table 24 below shows the results of the indirect effects, for example, the mediating effects of HRM policy effectiveness and innovation that mediate between the CVF and OEP. The results also reveal the moderation effect of labour relations, which moderates the relationship between CVF, innovation and OEP. Therefore, the results reveal the hypotheses of the moderation effects. The mediation effects were insignificant. Thus, this study rejects these hypotheses. However, the moderating effect of uncertainty avoidance and labour relations is an exception. Labour relations moderate OEP: $\beta = 0.249$ and $\rho = 0.041 < 0.05$. The results also show an increase per unit of moderation effect (labour relations * uncertainty avoidance). Thus, the moderation effect increases OEP by 25%.

Table 24: Indirect Effects (CVF)

MODERATION EFFECTS		
	Original Sample (O)	P Values
Lab*Mascul -> Innovation	0.064	0.553
Lab*Masculinity -> Organisational Environmental Performance	-0.198	0.098
Lab*Po -> Organisational Environmental Performance	-0.223	0.061
Lab*Power -> Innovation	0.029	0.802
Lab*Uncert -> Innovation	-0.000	0.999
Lab*Uncertain -> Organisational Environmental Performance	0.249	**0.041**
MEDIATION EFFECTS		
Uncertainty Avoidance -> HRM Policies -> Organisational Environmental Performance	0.059	0.228
Power Distance -> HRM Policies -> Organisational Environmental Performance	-0.034	0.307
Masculinity -> HRM Policies -> Innovation	0.055	0.327
Collectivism -> Innovation -> Organisational Environmental Performance	-0.013	0.655
Power Distance -> Innovation -> Organisational Environmental Performance	-0.008	0.740
HRM Policies -> Innovation -> Organisational Environmental Performance	-0.010	0.708
Uncertainty Avoidance -> HRM Policies -> Innovation	0.043	0.323
Power Distance -> HRM Policies -> Innovation	-0.025	0.420
Masculinity -> HRM Policies -> Organisational Environmental Performance	0.077	0.125
Collectivism -> HRM Policies -> Innovation	0.050	0.294
Collectivism -> HRM Policies -> Organisational Environmental Performance	0.069	0.116
Masculinity -> Innovation -> Organisational Environmental Performance	-0.008	0.748

The results show insignificant mediation effects. However, the exception is the moderation effect of uncertainty avoidance and labour relations. Thus, the results show a moderating effect on OEP.

The following section discusses the quality of the CVF model.

4.9.10 Model Quality and Predictive Capability (CVF)

Cross-validated redundancy in PLS-SEM approximates path and structural models and measures the data predictions (Hair et al., 2011). Blindfolding calculates Q2 and the extraction of cross-validated redundancy using a variable score (Ramayah et al., 2016). The study also uses cross-validated redundancy to assess the ability of a model to predict endogenous variables to prove the model quality (Ramayah et al., 2016) when Q2 coefficients are considerably higher than zero. The values 1-SSE/SSO, presented in column 1 of Table 29 below, show that the predictive relevance of a model exists, especially for endogenous latent variables (Streukens & Leroi-Werelds, 2016).

However, if Q2 is zero or negative, the model is irrelevant and cannot predict endogenous factors (Chuan & Penyelidikan, 2018). However, Sellitto et al. (2018) suggest that the model has a predictive relevance when Q2 is higher than zero, as well as an endogenous reflective construct. Cohen (1992) shows the effect size values of 0.02 (small), 0.15 (medium) and 0.35 (large).

In addition, the H2 values in Table 25 below for constructing cross-validity redundancy are above zero. This study made a similar observation by creating a common cross-validity. Thus, the results in Table 26 below indicate a medium predictive effect. The Q2 coefficients are higher than zero, as in the column labelled 1 – SSE/SSO in Table 25. Hence, a predictive relevance of the model exists. This model best represents the data for future use.

4.9.11 Construct Cross-validity Redundancy

The present study uses a blindfolding procedure to assess the predictive relevance and capability of the CVF model (Hair et al., 2011). These researchers recommend using the cross-validated communality shown in Table 26 below. The PLS-SEM estimates the measurement and structural models for data forecasting.

Additionally, Q2 assesses the model's ability to forecast endogenous variables and demonstrates the quality of the model (Ramayah et al., 2016). A value above zero indicates the relevance of the predictive model (Ramayah et al., 2016). Thus, Q2 values greater than 0.50 are large, and 0.25 medium and 0 are small, representing predictive relevance (Hair et al., 2019a).

Table 26 below shows that the model has small predictive power. Thus, all Q2 coefficients are slightly higher than zero. For example, the values in Column 1 are 1-SSE/SSO. These values are approximately 0.02, which indicates a small predictive relevance, particularly for innovation and HRM policy effectiveness. Therefore, evidence of the predictive relevance of the model of endogenous latent variables exists (Streukens & Leroi-Werelds, 2016).

Table 26 below presents the effect sizes of each independent variable on OEP. These variables have effect sizes above 0.15 (medium) but below 0.35 (large).

Table 25: Construct Cross-validity Redundancy (CVF)

	SSO	SSE	Q^2 (=1-SSE/SSO)
Innovation	279.000	223.140	0.200
Organisational Environmental Performance	279.000	221.836	0.205
HRM Policies	279.000	213.799	0.234

Table 26: Construct Cross-validity Communality (CVF)

Construct Cross-validated Communality				
	SSO	**SSE**	**Q² (=1-SSE/SSO)**	**Effect Size**
Clan	279.000	202.502	0.274	Medium
Innovation	279.000	225.563	0.192	Medium
Organisational Environmental Performance	279.000	282.647	0.240	Medium
HRM Policy Effectiveness	279.000	224.719	0.195	Medium
Hierarchical	279.000	238.463	0.145	Medium
Labour Relations	279.000	220.066	0.211	Medium
Organisational Morale	279.000	218.846	0.216	Medium
Organisational Cohesion	279.000	201.439	0.278	Medium
Rational	279.000	197.825	0.291	Medium

4.10 Quantitative Research at the Individual Level (SIV)

This study examines questionnaire data at the individual level, assesses structural relations, and tests hypotheses. It also uses descriptive statistics to overview the study sample before presenting the results. Furthermore, the EFA of the constructs helps obtain a theoretically expected factor solution. This study performs preliminary measurements to examine these factors, including the reliability of preliminary examinations of IndEP (Nazarian et al., 2017). This study also determines whether construct indicators are statistically valid and, thus, reliable for estimating predicted variables (Jayasinghe-Mudalige et al., 2012). The structural model examines the relationships between variables in the SIV model. This study also determines the predictive capacity that includes the validity of the measurement model (Taib & Hanafi, 2019).

4.10.1 Missing Values Analysis (SIV)

This study addresses the missing data in the sample according to the traits of the data and those of missing data and their reasons (Hazzi & Maldaon, 2015). The missing data is the most critical issue in data analysis because it influences the research objectives (Hair et al., 2010). Hazzi and Maldaon (2015) recommend removing missing data using imputation methods.

Hazzi and Maldaon (2015) also suggest using a single stochastic imputation. This study uses the expectation-maximisation techniques suitable for data that are missing at random (MAR), including missing data that is entirely missing at random (MCAR). The percentage of missing data should be less than 5%. The current study's results show a zero percentage of missing values. Thus, the data are suitable for further statistical analyses.

4.10.2 Test of Normality (SIV)

The parametric tests require normally distributed data (Hazzi & Maldaon, 2015). Normality tests increase the likelihood of obtaining statistically significant results. The Shapiro–Wilk and Kolmogorov–Smirnov tests measure the normality of the data. The data distribution differs from the normal distribution. Hence, it has the same mean and standard deviation (Field, 2013). The Shapiro–Wilk test is the most powerful test for determining the normality of the data (Fitrianto & Chin, 2016). Table 54 (see Appendix I below) shows the results of the Shapiro–Wilk and Kolmogorov–Smirnov tests.

The Shapiro–Wilk and Kolmogorov–Smirnov tests are significant at $\rho < 0.000$ when a ρ value is 0.05, indicating the data are a nonnormal distribution. These factors could significantly affect the subsequent statistical analyses, for example, subsequent analyses, such as CB-SEM and regression analysis. The Shapiro–Wilk and Kolmogorov–Smirnov tests are sensitive to sample size. Therefore, the results of these tests are unreliable for both high and low sample sizes (see Table 54 in Appendix I below).

In addition, these above mathematical tests disagree with the visual inspection of the data. This study finds certain variables approach the normal distribution and superimposes the normal distribution curves onto the histogram. This study uses graphic presentations to approximate

the normal distribution. The results of these graphic inspections are inconclusive regarding the hypothesis for normality, and the two methods did not agree with each other, owing to the sample size. Moreover, certain items deviate from normal due to the sensitivity to the sample size. This study conducts further analyses such as EFA and PLS-SEM. The hypotheses usually play a role in generalising the results of a study. The data is a nonnormal distribution. Thus, this study rejects the null hypothesis. It also conducts further inspections and graphically processes the data for normality.

This study uses numerical methods to support graphical techniques, for example, whisker plots, histograms and Q-Q plots (Fitrianto & Chin, 2016). Both the Q-Q plot and the histograms follow a diagonal line when the data distribution approaches normal. Most of the data in this study are near the diagonal line and, thus, display approximately normal distribution. Likewise, with a few exceptions, the results indicate normality. The researcher treats these outliers to achieve normality (see Table 55 in Appendix I below). However, the findings contrast with those of mathematical tests, for example, the Shapiro–Wilk test, which is sensitive to the sample size.

Outliers are data points that deviate sharply from other data points and present pervasive methodological challenges in organisational science research (Aguinis et al., 2013). Identifying and explaining outlier values is natural (Liao & Valliant, 2012). Thus, this study compensates for the variables of interest and outliers in the box plots. This study averaged the closed neighbours of the outliers for proper functioning in later analyses.

In addition, the skewness values range from 0.009 to 0.226, and the kurtosis values range from 0.025 to 0.386 (see Table 53 in Appendix I below). These results are within the cutoff range of ±2, except for the variable 'SIV37' ("I need to develop new ideas and be creative; to have a personal input."). Thus, because of these results, this study further investigates the data using EFA and PLS-SEM.

4.10.3 Reliability Tests (SIV)

Cronbach's alpha indicates whether the results are internally consistent and if a set of items may be closely related to a group (De Mooij & Benifla, 2017). The alpha value ranges from '0' (uncorrelated) to '1' (correlated), especially when the coefficient is higher and indicates a superior measure with a commonly accepted lower limit of 0.70 (Al Sahouly, 2017).

The study results show a strong Cronbach's alpha for the dependent variables, for example, the results for internal satisfaction factors ($\alpha = 0.878$), external satisfaction factors ($\alpha = 0.855$) and OEP ($\alpha = 0.897$) (see Table 27 below). The Cronbach's alpha is higher than 0.7. Thus, the construct has sufficient internal consistency (De Mooij & Benifla, 2017). The internal consistency of the items is sufficiently high. Hence, this study concludes that these measures are reliable and conduct a linear regression, PLS-SEM and EFA.

Table 27: Reliability Tests (SIV)

Variables	Cronbach's alpha	N of items
Internal satisfaction factors	0.878	7
External satisfaction factors	0.855	6
Individual environmental performance	0.897	6

4.10.4 Factor Analysis (SIV)

EFA is a statistical technique that analyses correlations and patterns to uncover empirically unobserved (i.e., distinct latent) constructs (Sakaluk & Short, 2017). EFA aims to identify the structure of the variable to explain each specified underlying item (Mustapha & Bolaji, 2015). This study conducts an EFA through PCA of the participants' value statements in the questionnaires. This investigation uses factor analysis to analyse the relationship between individual item variances and shared common variance items.

In addition, the principal component analysis analyses the relationships between the individual and total (standard error) variance of shared items. The Kaiser (eigenvalue > 1) rule guides the extraction of the components before factor analyses. This current study uses factor analysis to measure sampling adequacy and Bartlett's test of sphericity to ensure that the sample is appropriate and suitable for subsequent statistical analyses (Field, 2007).

- **Convergent and Discriminant Validity Analysis (SIV)**

Construct validity includes convergent and discriminant validity (Bertsch, 2011; Herzhoff & Tackett, 2012) and indicates an indicator of a specific construct (Wang et al., 2015). It also determines whether constructs that relate theoretically are empirically correlated. Discriminant validity indicates unrelated and uncorrelated constructs (Yu & Wu, 2009).

- **Multicollinearity (SIV)**

Table 56 (see Appendix I below) summarises the measures of the correlation matrix. This measure is the ‘determinant’ to see whether it exceeds 0.00001. However, the results show no multicollinearity when it exceeds 0.00001. The determinant is 6.08 × 10 – 14 (6.08E – 014) above 0.00001, so the results show that multicollinearity did not exist. Hence, this study could continue with EFA, regression analysis and PLS-SEM.

- **Kaiser–Meyer–Olkin and Bartlett’s Test of Sphericity (SIV)**

The Kaiser-Meyer-Olkin (KMO) and Bartlett's test of sphericity verify whether both multivariate normality and sampling adequacy are sufficient. Statistical analysis software, such as SPSS, measures the sampling adequacy using the KMO test and accepts the result of the KMO test when it is higher than 0.6 (Koohang & Hatch, 2017). The KMO test is the ratio of the actual square to the partial square that ranges from '0' to '1' (Bertsch, 2011), the ratio correlation between the variables and partial square.

According to the KMO statistics in this study, all factors had coefficients of 0.50 or higher. Thus, this study deems these measures acceptable, while values higher than 0.7 are good, values higher than 0.8 are great, and values higher than 0.9 are superb (Bertsch, 2011). In

addition, Bartlett's test of sphericity values is acceptable at 95% confidence, especially when all factors are significant at ρ = 0.05 (Santos & Lima, 2017).

Furthermore, Table 28 below shows a sampling value of 0.930 for KMO. Bartlett's test of sphericity includes an approximate chi-square value of 10818 680 (ρ = 0.05) with df = 561. The study results provide evidence that the EFA is appropriate. However, if the KMO criterion is below 0.5, it is impossible to extract the significant factors.

The following sections address normality.

Table 28: KMO and Bartlett's Test of Sphericity (SIV)

KMO measure of sampling adequacy		0.930
Bartlett's test of sphericity	Approx. chi-square	10818.680
	df	561
	Sig.	**0.000**

4.10.5 Assessment of Univariate Normality (SIV)

Table 52 (see Appendix I below) shows the skewness and kurtosis coefficients of all items in the final model. Kurtosis and skewness between +2 and –2 are acceptable (George & Mallery, 2010). Thus, they show normal univariate distribution. These results are also within the range specified for a normal data distribution. The central limit theorem indicates that the normality hypothesis has a negligible effect. Thus, this study will have a negligible effect on the data analysis results when the sample size exceeds 167 (Field, 2013).

4.10.6 Reliability Analysis, Convergent and Discriminant Validity Assessment (SIV)

The results in Table 29 below show convergent validity with values greater than 0.5. Hence, the results suggest convergent validity for all items.

This study uses Cronbach's alpha to measure internal consistency, and the constructs' composite reliability provides a solid overview of reliability analysis. The Cronbach threshold for alpha

is greater than 0.5, and composite reliability is above 0.7 (Field, 2013). Table 29 below shows the reliability of all scales in this study. Therefore, the composite reliability and Cronbach's alpha values results are acceptable (Malhotra et al., 2017).

Furthermore, factor loadings of all constructs are above the recommended threshold of 0.7 (Field, 2013). Similarly, AVEs for all items exceed the required threshold of 0.5 (Chin et al., 1997). Hence, these statistics confirm that convergent validity exists for all items that are all appropriate measures of their latent constructs. The results also show that the estimation of internal data consistency is adequate because it exceeds the recommended threshold of 0.70 (Mustapha & Bolaji, 2015).

Table 29: Reliability and Validity Assessment

Constructs	Items	Factor loadings	CR	CA	AVE	Final (initial) number of items per construct
Ind-EP	Ind-EP4	0.862	0.934	0.933	0.825	3 (6)
	Ind-EP5	0.949				
	Ind-EP6	0.911				
ESF	ESF1	0.8	0.875	0.861	0.646	4 (6)
	ESF3	0.915				
	ESF4	0.904				
	ESF5	0.537				
ISF	ISF1	0.786	0.882	0.892	0.601	5 (7)
	ISF2	0.831				
	ISF5	0.785				
	ISF6	0.73				
	ISF7	0.739				
SIV	SIV1	0.73	0.904	0.909	0.512	9 (20)
	SIV19	0.695				
	SIV2	0.754				
	SIV20	0.702				
	SIV3	0.724				
	SIV4	0.729				
	SIV5	0.739				
	SIV6	0.694				

	SIV7	0.666				

Note. Ind-EP: Individual Environmental Performance; ESF: Extrinsic satisfaction factors; ISF: Intrinsic satisfaction factors; SIV: Schwartz's individual values.

4.10.7 `Discriminant Validity – Correlation Matrix and Square Root of AVEs

Convergent and discriminant validity ensure the consistency of the measurement model (Shau, 2017). Discriminant validity compares the square root of the AVE estimates with the highest inter-construct correlations. (Malhotra et al., 2017). The AVE's square root is above all inter-construct correlation values that confirm the convergent validity of the scale. The parameters, thus, relate to the items of the predicted factors and are statistically significant because their values are greater than 0.5.

The study's findings show the presence of discriminant validity because of the lack of cross-loading (Mustapha & Bolaji, 2015). The values in the SIV are orthogonal in structure, whereas the adjacent values are similar. Hence, the structural model is appropriate for assessing the proposed hypotheses (see Table 30 below).

Table 30: Correlation and Square Root of AVE's Matrix (SIV)

	ISF	**SIV**	**ESF**	**IND-EP**
ISF	**0.775**			
SIV	**0.844**	**0.715**		
ESF	0.649	0.400	**0.804**	
Ind-EP	0.399	0.494	0.066	**0.908**

Note. The values of the diagonal represent the squared root of AVEs. ISF: Intrinsic satisfaction factors; ESF: Extrinsic satisfaction factors; SIV: Schwartz's values; Ind-EP: Individual environmental performance.

4.10.8 Factor Analysis Conclusion (SIV)

The variables relationships indicate that the final measurement model fits the data. That is, they are suitable for further analysis, and the instruments used in the final measurement model of this study are reliable and valid. The researcher now turns to a structural model because of its satisfactory results.

4.11 Structural Model (SIV)

PLS-SEM is a soft or distribution-free model suitable for nonnormal distribution data (Hair et al., 2012). The structural model represents the relationships between constructs, including the latent-variable hypotheses in the research model (Mustafa et al., 2017). In addition, SmartPLS 3 tests the model hypotheses and include individual values, extrinsic satisfaction factors, demographic characteristics, intrinsic satisfaction factors and IndEP (see Figure 9 below).

This study involved validity and reliability tests to demonstrate convergent validity (Ab Hamid et al., 2011) and a discriminant validity test to determine the suitability of the data for the model. This study revised the model if the data was unsuitable (Ab Hamid et al., 2011).

The present study evaluated factor loads, and if they exceeded 0.70, this study considered them high, while loads between 0.40 and 0.70 were deemed satisfactory. Figure 9 shows that the factor loadings are above 0.7. Thus, this model is suitable for further analysis. This investigation improved the model's reliability by discarding the low-load indicators (Hair et al., 2011). This study removed items with factor loadings of lower loads, mainly when the model attained uni-dimensionality (Zainudin, 2012).

The composite reliability and AVE should be higher than 0.70 and 0.50 (Hair et al., 2011). The study included predictors or latent variables with paths reaching a significance level of 0.05. It also conducted a bootstrapping procedure (Yazdi et al., 2017). This bootstrapping analysis comprised random sampling with replacement (Yazdi et al., 2017). This study also used the blindfolding technique to assess the predictive relevance of the model by determining the q-squared measure.

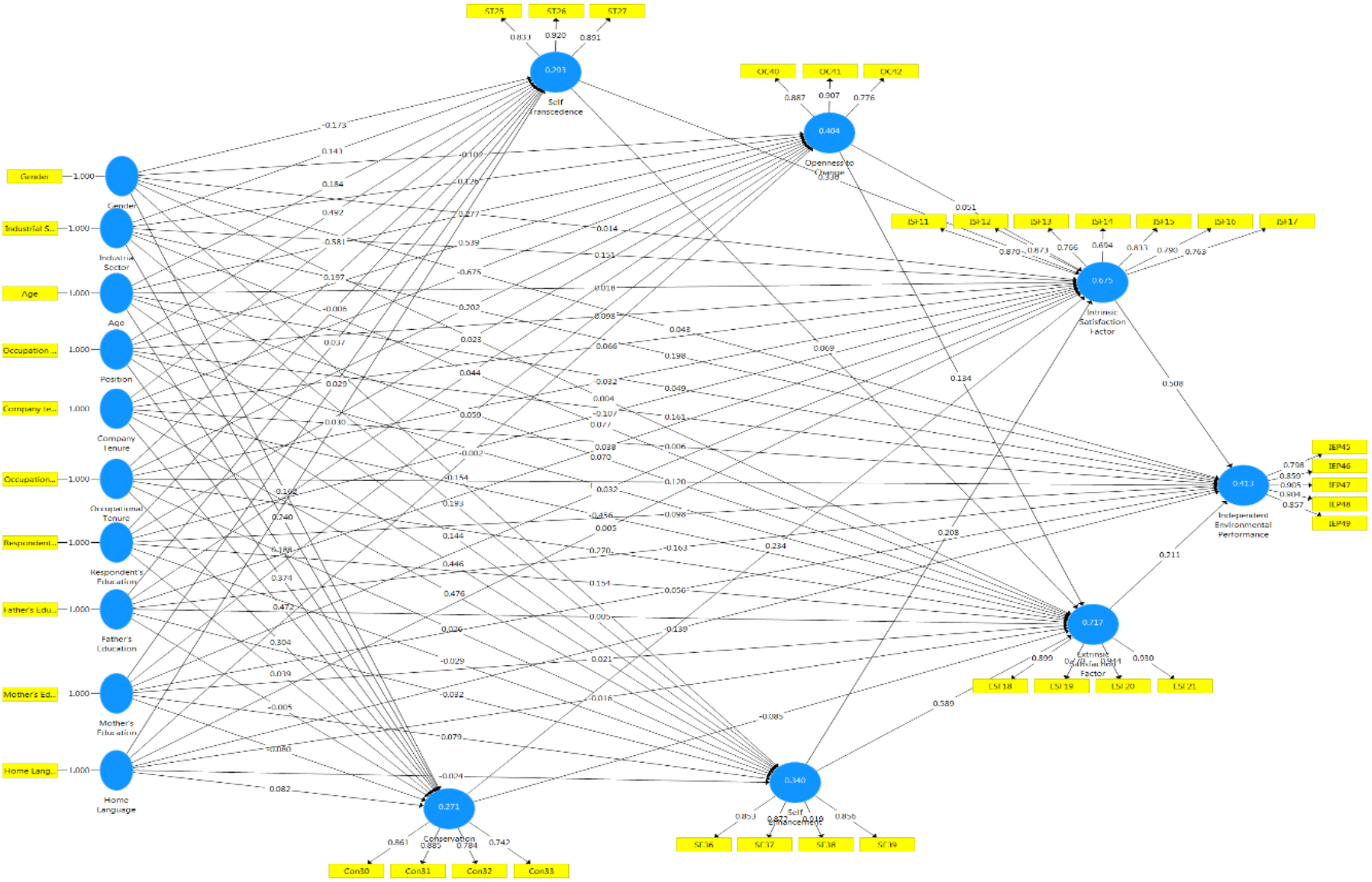


Figure 9: Proposed Model (SIV)

4.11.1 R Square (SIV)

This study determined the quality of the structural model and assessed the R^2 before examining the hypotheses. The R^2 shows the endogenous variable variation, as explained by the exogenous variables and tests the predictive relevance of the model. The structural model examines the predictive capabilities of the model. This study also examined the relationships by evaluating the internal structural model (Shanmugapriya & Subramanian, 2015). The criteria for evaluation are the path coefficients (β-values) that include the effect size and t-statistic values, as well as the predictive relevance of the model (Shanmugapriya & Subramanian, 2015).

Furthermore, the study results show that the independent variables predict 40 % of the IndEP (R^2 = 0.397). Thus, various variables contribute to the variance in the IndEP. For example, extrinsic satisfaction factors contribute to 65%; intrinsic satisfaction factors (R^2 = 0.656) contribute to 66%; openness to change (R^2 = 0.404) contributes to 40% of the shared variance; self-transcendence (R^2 = 0.293) contributes 29% of the variation; self-enhancement (R^2 = 0.320) contributes to 32% of the shared variance and conservation (R^2 = 0.248) contributes 25% of the shared variance. Therefore, intrinsic satisfaction factors are the most significant contributors to the shared variance, while conservation is the least significant contributing factor (see Table 31 below).

Table 31: R Square (SIV)

R Square		
	R Square	**R Square Adjusted**
Conservation	0,248	0,172
Extrinsic Satisfaction Factor	0,653	0,638
Individual Environmental Performance	0,397	0,313
Intrinsic Satisfaction Factor	0,656	0,641
Openness to Change	0,404	0,337
Self Enhancement	0,32	0,251
Self-Transcendence	0,293	0,212

4.11.2 F Square (SIV)

F-square measures each independent variable's effect on the IndEP. Hence, the IndEP is a dependent construct. SmartPLS calculates a significant effect of the constructs, and this study calculates it by omitting independent constructs from changes in square correlation values. According to Cohen (1998), the effect is large if f2 is 0.35, medium if f2 is 0.15 and small if f2 is 0.02. The effect size of the independent constructs is small, close to 0.02 and less than 0.15, except for the medium effect size for the industrial sector (0.168) (see Table 32 below).

Table 32: F Square (SIV)

F Square							
	Conservation	**Extrinsic Satisfaction**	**Individual Environmental Performance**	**Intrinsic Satisfaction**	**Openness to Change**	**Self Enhancement**	**Self-Transcendence**
Age	*0,021*		*0,002*		*0,054*	0,015	0,02
Company Tenure	*0,06*		*0,000*		0,189	*0,067*	*0,117*
Conservation		0,014		*0,004*			
Extrinsic Satisfaction Factor	0,000		*0,032*				
Father's Education			*0,02*		0,001	0,000	0,001
Gender			*0,005*		0,015		*0,037*
Home Language	0,076		*0,023*		0,000	0,003	0,001
Individual Environmental Performance							
Industrial Sector			**0,168**		*0,023*	*0,056*	0,0025
Intrinsic Satisfaction Factor							
Mother's Education	0,006		0,002		0,004	0,006	0,001
Occupational Tenure	*0,025*		0,005		0,016	*0,000*	*0,012*
Openness to Change				0,006			
Position	*0,065*		0,012		0,197	*0,002*	*0,000*
Respondent's Education	0,000		0,006		0,000		
Self Enhancement		0,434		**0,103**			
Self-Transcendence		0,008		**0,126**			

4.11.3 Construct Reliability and Validity

This study assessed the reliability and validity of the model before the structural model analysis (see Table 33 below) (Yazdi et al., 2017). Convergent validity is the association between constituent items and effective combinations that allows for the constitution of latent characteristics (Reichenheim et al., 2014). Hence, composite reliability and AVE show good reliability and validity (Yazdi et al., 2017).

Validity refers to the degree to which an instrument accurately measures its goals and is meaningful and consistent (Hafiz & Shaari, 2013). Thus, Cronbach's alpha estimates verify the reliability, and composite items comprise each construct scale (Hafiz & Shaari, 2013). The acceptable Cronbach's alpha value is 0.70. This study uses this threshold when determining internal scale consistency (Hafiz & Shaari, 2013).

The research results show Cronbach's alpha values higher than the acceptable thresholds. That is, 0.7 for composite reliability, while AVE exceeds 0.5. These results confirm convergent validity (Wong, 2013). This study removed low-loading items from the model, thus resulting in a re-analysis of the model (Reichenheim et al., 2014) that improved the convergent validity of all the constructs. Hence, validity appears excellent in the final model as all AVE levels exceed 0.50 (Sharma & Jha, 2017).

Table 33: Construct Reliability and Validity (SIV)

	Cronbach's Alpha	**Composite Average**	**Average Extracted Variance**
Conservation	0,836	0,891	0,671
Extrinsic Satisfaction Factor	0,908	0,937	0,789
Individual Environmental Performance	0,916	0,937	0,749
Intrinsic Satisfaction Factor	0,905	0,927	0,68
Openness to Change	0,820	0,893	0,737
Self Enhancement	0,898	0,929	0,766
Self-Transcendence	0,856	0,913	0,778

4.11.4 Discriminant Validity

The results corroborate the discriminative validity of the factors because of the high-dimensional structure specification. Significant uncorrelated elements of the various construct dimensions have high structural specifications (Reichenheim et al., 2014).

The following sections discuss the various criteria for discriminant validity.

- **Fornell–Larcker Criterion (*SIV*)**

Discriminatory validity occurs when the square root of AVE in each latent variable is higher than other latent-variable correlation values (Wong, 2013). The AVE is higher than the correlation square of the two constructs to support discriminant validity (Fornell & Larcker, 1981). Furthermore, all constructs' AVE square root values are higher than the highest inter-construct correlations, thereby establishing discriminative validity (Sharma & Jha, 2017). Each AVE value exceeds the correlation square, indicating the discriminant validity of the constructs (Ab Hamid et al., 2011). Therefore, the results in Table 34 below satisfy the Fornell–Larcker criterion.

Table 34: Fornell–Larcker Criterion (SIV)

	Conservation	**Extrinsic Satisfaction**	**Individual Environmental Performance**	**Industrial Sector**	**Intrinsic Satisfaction**	**Openness to Change**	**Self Enhancement**	**Self-Transcendence**
Conservation	**0,819**							
Extrinsic Satisfaction Factor	0,474	**0,888**						
Individual Environmental Performance	0,638	0,230	**0,865**					
Industrial Sector	0,291	0,176	0,379	**0,825**				
Intrinsic Satisfaction Factor	0,679	0,713	0,488	0,101	**0,825**			
Openness to Change	0,677	0,703	0,351	0,445	0,701	**0,858**		
Self Enhancement	0,568	0,787	0,322	0,746	0,687	0,753	**0,875**	
Self-Transcendence	0,74	0,579	0,519		0,746	0,751	0,627	**0,882**

- **HTMT *(SIV)***

This study examined HTMT for discriminant validity. The HTMT ratio requires reflective indicators with values below 0.90. Table 35 below shows that the constructs have a ratio of less than 0.90. Hence, these results confirm discriminative validity.

Table 35: HTMT (SIV)

	Age	Company Tenure	Conservation	Extrinsic Satisfaction Factor	Father's Education	Gender	Home Language	Individual Environmental Performance	Industrial Sector	Intrinsic Satisfaction Factor	Mother's Education	Occupational Tenure	Openness to Change	Position	Respondent's Education
Company Tenure	0,687														
Conservation	0,285	0,134													
Extrinsic Satisfaction Factor	0,011	0,319	0,527												
Father's Education	0,034	0,025	0,071	0,209											
Gender	0,162	0,242	0,171	0,04	0,031										
Home Language	0,042	0,194	0,208	0,268	0,077	0,049									
Individual Environmental Performance	0,274	0,217	0,728	0,245	0,064	0,141	0,213								
Industrial Sector	0,167	0,226	0,323	0,186	0,056	0,134	0,061	0,388							
Intrinsic Satisfaction Factor	0,082	0,127	0,773	0,790	0,172	0,106	0,247	0,519	0,354						
Mother's Education	0,050	0,082	0,022	0,232	0,562	0,058	0,168	0,055	0,031	0,150					
Occupational Tenure	0,640	0,780	0,144	0,297	0,200	0,197	0,319	0,131	0,142	0,200	0,180				
Openness to Change	0,128	0,186	0,823	0,791	0,246	0,119	0,303	0,409	0,187	0,815	0,241	0,240			
Position	0,264	0,199	0,364	0,409	0,410	0,049	0,384	0,366	0,193	0,467	0,262	0,177	0,531		
Respondent's Education	0,144	0,073	0,118	0,286	0,597	0,146	0,066	0,111	0,05	0,163	0,460	0,123	0,255	0,496	
Self Enhancement	0,041	0,212	0,637	0,87	0,172	0,120	0,293	0,338	0,233	0,758	0,202	0,302	0,866	0,438	0,168
Self-Transcendence	0,103	0,127	0,870	0,657	0,170	0,106	0,216	0,572	0,208	0,844	0,117	0,201	0,899	0,433	0,184

- **Cross loading *(SIV)***

Discriminant validity is the difference between one latent variable and another (Bertsch, 2011). However, research results from the reviewed literature suggest that SIV successfully measures these values, although this instrument needs to have discriminant validity (Becker et al., 2017). Hence, this limitation raises whether a ten-factor structure is the most appropriate. This construction is a representative structure used to measure value priorities (Becker et al., 2017). Discriminatory validity exists between the constructs based on the cross-load criterion. However, it was significantly higher among the indicator variables among the various latent variables. This fact is especially true in the current study. Thus, the results are strongly consistent with the SIV structure. These results show the circular continuum of individual values. However, the values are opposite (see Table 36 below).

Table 36: Cross Loading (SIV)

Cross Loadings							
	Conservation	**Extrinsic Satisfaction Factor**	**Individual Environmental Performance**	**Intrinsic Satisfaction Factor**	**Openness to Change**	**Self Enhancement**	**Self Transcendence**
Con30	0,859						
Con31	0,881						
Con32	0,787						
Con33	0,744						
ESF18		0,899					
ESF19		0,769					
ESF20		0,944					
ESF21		0,93					
ISF11				0,875			
ISF12				0,874			
ISF13				0,708			
ISF15				0,850			
ISF16				0,822			
ISF17				0,807			
Ind-EP45			0,799				
Ind-EP46			0,860				
Ind-EP47			0,905				
Ind-EP48			0,903				
Ind-EP49			0,858				
SE36						0,855	
SE37						0,871	
SE38						0,918	
SE39						0,855	
ST25							0,832
ST26							0,920
ST27							0,892

4.11.5 Bootstrapping (SIV)

Shau (2017) asserts that all concepts are valid and reliable before relationships and the moderation and mediation measurements. Consequently, noncompliance with validity and reliability results in inaccurate statistical errors, leading to negligible and insignificant findings, conclusions and generalisation (Shau, 2017).

SmartPLS generates t-statistics. This study tests the significance of the inner and outer models. In addition, SmartPLS uses bootstrapping procedures that require multiple sub-samples, for example, 5 000 sub-samples of the original sample. This study creates this process with replacement, resulting in standard errors. These standard bootstrap errors provide approximate t-values that are significant tests of structural paths that assess if these paths in the models approach the normality of the data (Wong, 2013).

Bootstrapping also evaluates the path coefficients. Thus, SmartPLS 3 aims to evaluate the significance of the path coefficients (see Figure 10 below).

These path coefficients are discussed in the following sections.

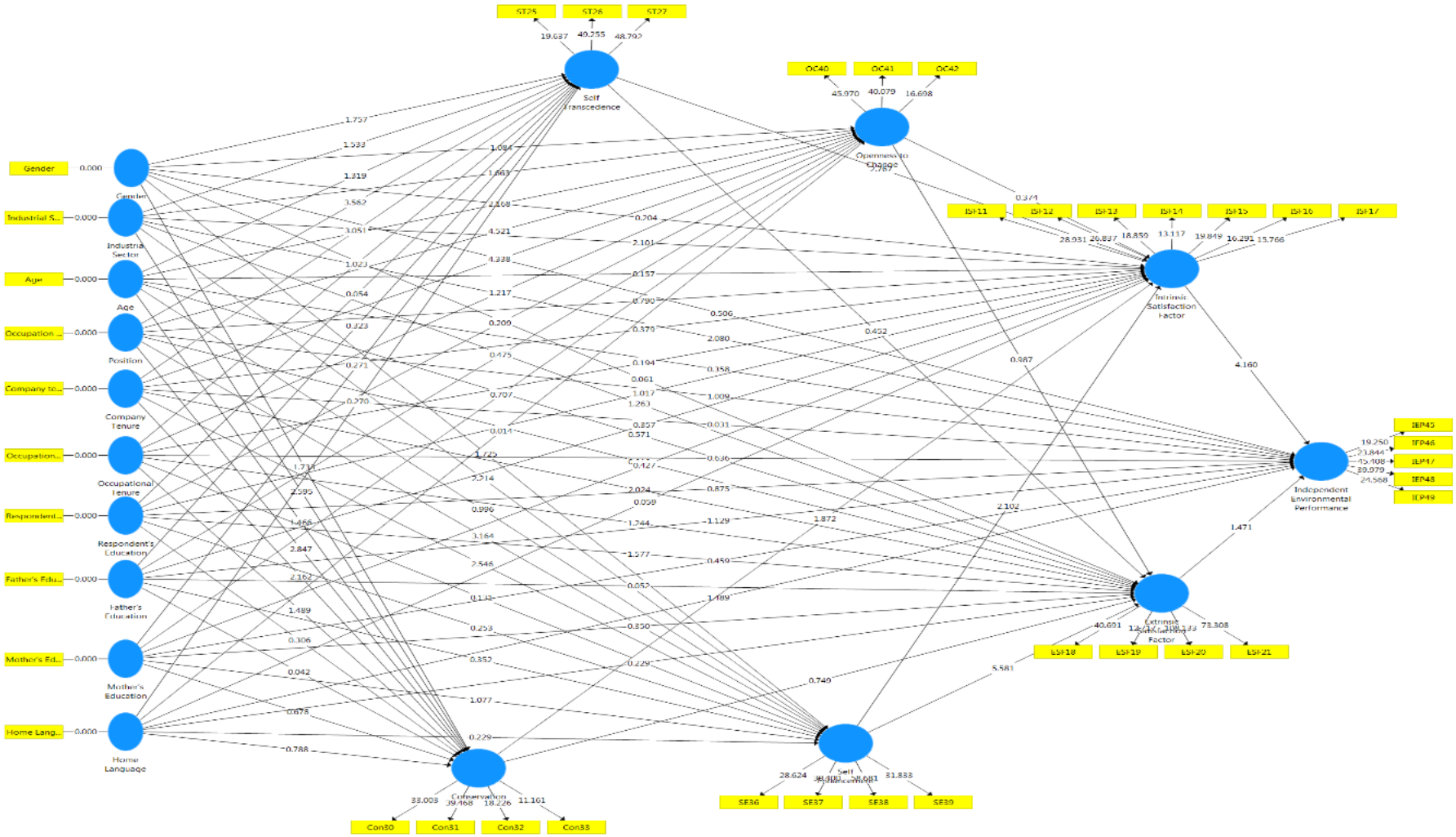


Figure 10: Final Structural Model (SIV)

4.11.6 Direct Effects (SIV)

The hypothetical path relationship between the variables is statistically significant when all standard path coefficients exceed 0.1 (Yazdi et al., 2017). Subsequently, the bootstrapping procedure yields t-statistic values > 1.96. This study also uses a two-tailed t-test with a significance level of 5% that yields a significant path coefficient when the t-statistic is higher than 1.96 (Yazdi et al., 2017). SmartPLS 3 also generates results that show statistically significant associations (see Table 37 below). The researcher only discusses the significant paths while acknowledging the insignificant results as relevant for future research. This study presents the following results.

- Age has a significant and positive relationship with openness to change: $\beta = 0.144$ and $\rho = 0.021 < 0.05$. The unit increase in age enhances openness to change by 14.4%. Therefore, this study does not reject this hypothesis.
- Company tenure has a significant and negative association with conservation values: $\beta = -0.472$ and $\rho = 0.020 < 0.05$. The unit increase in company tenure decreases conservation by 47%. Hence, this study does not reject this hypothesis.
- Company tenure has a significant and negative association with openness to change: $\beta = -0.675$ and $\rho = 0.000 < 0.05$. The unit increase in company tenure decreases openness to change by 68%. Therefore, this study does not reject this hypothesis.
- Company tenure has a significant and negative association with self-enhancement: $\beta = -0.476$ and $\rho = 0.011 < 0.05$. The unit increase in company tenure decreases self-enhancement by 48%. Therefore, this study does not reject this hypothesis.
- Company tenure has a significant and negative prediction on self-transcendence: $\beta = -0.581$ and $\rho = 0.002 < 0.05$. The unit increase in company tenure decreases self-enhancement by 58%. Therefore, this study does not reject this hypothesis.
- Company tenure has a significant and negative association with extrinsic satisfaction factors: $\beta = -0.827$ and $\rho = 0.001 < 0.05$. The unit increase in company tenure decreases extrinsic satisfaction factors by 83%. Therefore, this study does not reject this hypothesis.

- Company tenure has a significant and negative association with intrinsic satisfaction factors: $\beta = -0.502$ and $\rho = 0.008 < 0.05$. The unit increase in company tenure decreases the intrinsic satisfaction factor by 50%. Therefore, this study does not reject this hypothesis.
- The industrial sector has a significant and positive association with conservation: $\beta = 0.240$ and $\rho = 0.011 < 0.05$. The unit increase in the industrial sector improves conservation by 24%. Therefore, this study does not reject this hypothesis.
- The industrial sector has a significant and positive association with IndEP, i.e., $\beta = 0.198$ and $\rho = 0.037 < 0.05$. The unit increase in the industrial sector improves IndEP by 20%. Therefore, this study does not reject this hypothesis.
- The industrial sector has a significant and positive association with intrinsic satisfaction factors: $\beta = 0.151$ and $\rho = 0.047 < 0.05$. The increase in the industrial sector improves the intrinsic satisfaction factors by 15%. Therefore, this study does not reject this hypothesis.
- The industrial sector has a significant and positive association with self-enhancement: $\beta = 0.193$ and $\rho = 0.034 < 0.05$. The unit increase in the industrial sector improves self-enhancement by 19%. Therefore, this study does not reject this hypothesis.
- Intrinsic satisfaction factors have a significant and positive association with IndEP: $\beta = 0.508$ and $\rho = 0.047 < 0.05$. The increase in intrinsic satisfaction factors improves the IndEP by 51%. Therefore, this study does not reject this hypothesis.
- The position has a significant and positive association with conservation: $\beta = 0.374$ and $\rho = 0.002 < 0.05$. The unit increase in position improves conservation by 37%. Therefore, this study does not reject this hypothesis.
- The position has a significant and positive association with extrinsic satisfaction: $\beta = 0.105$ and $\rho = 0.003 < 0.05$. The unit increase in position improves extrinsic satisfaction factors by 11%. Therefore, this study does not reject this hypothesis.
- The position has a significant and positive association with IndEP, i.e., $\beta = 0.161$ and $\rho = 0.021 < 0.05$. The unit increase in position improves IndEP by 16%. Therefore, this study does not reject this hypothesis.
- The position has a significant and positive association with intrinsic satisfaction factors: $\beta = 0.098$ and $\rho = 0.002 < 0.05$. The unit increase in position improves

the intrinsic satisfaction factor by 10%. Therefore, this study does not reject this hypothesis.

- The position has a significant and positive association with openness to change: $\beta = 0.539$ and $\rho = 0.000 < 0.05$. The unit increase in position improves openness to change by 54%. Therefore, this study does not reject this hypothesis.
- The position has a significant and positive association with self-enhancement: $\beta = 0.446$ and $\rho = 0.002 < 0.05$. The unit increase in position improves self-enhancement by 45%. Therefore, this study does not reject this hypothesis.
- The position has a significant and positive association with self-transcendence: $\beta = 0.492$, $\rho = 0.000 < 0.05$. The unit increase in position improves self-transcendence by 49%. Therefore, this study does not reject this hypothesis.
- Self-enhancement has a significant and positive association with extrinsic satisfaction: $\beta = 0.589$ and $\rho = 0.000 < 0.05$. The unit increase in self-enhancement improves extrinsic satisfaction by 60%. Therefore, this study does not reject this hypothesis.
- Self-enhancement has a significant and positive association with intrinsic satisfaction factors: $\beta = 0.208$ and $\rho = 0.042 < 0.05$. The unit increase in self-enhancement improves intrinsic satisfaction factors by 21%. Therefore, this study does not reject this hypothesis.
- Self-transcendence has a significant and positive association with intrinsic satisfaction factors: $\beta = 0.330$ and $\rho = 0.007 < 0.05$. The unit increase in self-enhancement improves intrinsic satisfaction factors by 33%. Therefore, this study does not reject this hypothesis.
- Self-transcendence has a significant and positive association with independent environmental performance: $\beta = 0.153$ and $\rho = 0.024 < 0.05$. The unit increase in self-transcendence increases the independent environmental performance by 15%. Therefore, this study does not reject this hypothesis.

Table 37: Direct Effects (SIV)

	Original Sample (O)	P Values
Age → Conservation	0.188	0,135
Age → Extrinsic Satisfaction Factors	0.070	0,568
Age → Independent Environmental Performance	0.018	0,737
Age → intrinsic Satisfaction Factors	0.277	0,862
Age → Openness to Change	0.144	**0,021**
Age → Self Enhancement	0.184	0,323
Age → Self Transcendence	-0,472	0,146
Conservation → Extrinsic Satisfaction Factors	-0,085	0,466
Conservation → Intrinsic Satisfaction Factors	0,234	0,070
Extrinsic Satisfaction Factors → Independent Environmental Performance	-0,211	0,144
Father's Education → Conservation	-0,005	0,966
Father's Education → Extrinsic Satisfaction Factor	0,005	0,957
Father's Education → Independent Environmental Performance	-0,163	0,254
Father's Education →Intrinsic Satisfaction Factor	0,038	0,702
Father's Education →Openness to Change	0,044	0,639
Father's Education →Self Enhancement	-0,032	0,715
Gender →Conservation	0,037	0,731
Gender →Extrinsic Satisfaction Factors	0,004	0,951
Gender →Independent Environmental Performance	-0,043	0,614
Gender →Intrinsic Satisfaction Factors	0,014	0,835
Gender →Openness to Change	-0,102	0,271
Gender →Self Enhancement	-0,154	0,08
Gender →Self Transcendence	-0,173	0,067
Home Language →Conservation	-0,082	0,434
Home Language →Extrinsic Satisfaction Factors	-0,016	0,817
Home Language →Independent Environmental Performance	-0,139	0,147
Home Language →Intrinsic Satisfaction Factors	0,005	0,955
Home Language →Openness to Change	-0,002	0,989
Home Language →Self Enhancement	-0,024	0,816
Home Language →Self Transcendence	0,030	0,795
Industrial Sector →Conservation	0,240	**0,011**
Industrial Sector →Extrinsic Satisfaction Factors	0,077	0,215
Industrial Sector →Independent Environmental Performance	0,198	**0,037**
Industrial Sector →Intrinsic Satisfaction Factors	0,151	**0,047**
Industrial Sector →Openness to Change	0,126	0,087
Industrial Sector →Self Enhancement	0,193	**0,034**
Industrial Sector →Self Transcendence	0,143	0,092
Intrinsic Satisfaction Factors → Independent Environmental Performance	0,508	**0,000**

Mother's Education → Conservation	-0,08	0,523
Mother's Education → Extrinsic Satisfaction Factors	-0,021	0,741
Mother's Education → Independent Environmental Performance	0,056	0,67
Mother's Education → Intrinsic Satisfaction Factors	-0,032	0,677
Mother's Education → Openness to Change	0,059	0,515
Mother's Education → Self Enhancement	0,079	0,286
Mother's Education → Self Transcendence	-0,029	0,79
Occupational Tenure →Conservation	0,304	0,102
Occupational Tenure →Extrinsic Satisfaction Factors	0,27	0,254
Occupational Tenure →Independent Environmental Performance	0,12	0,532
Occupational Tenure →Intrinsic Satisfaction Factors	-0,032	0,849
Occupational Tenure →Openness to Change	0,202	0,218
Occupational Tenure →Self Enhancement	0,026	0,896
Occupational Tenure →Self Transcendence	0,197	0,308
Openness to Change → Extrinsic Satisfaction Factors	0,134	0,325
Openness to Change →Intrinsic Satisfaction Factors	0,051	0,711
Position →Conservation	0,374	**0,002**
Position →Extrinsic Satisfaction Factors	0,105	**0,003**
Position →Independent Environmental Performance	0,161	**0,021**
Position →Intrinsic Satisfaction Factors	0,098	**0,001**
Position →Openness to Change	0,539	**0,000**
Position →Self Enhancement	0,446	**0,002**
Position→ Self Transcendence	0,492	**0,000**
Respondent's Education →Conservation	0,0039	0,757
Respondent's Education →Extrinsic Satisfaction Factors	0,154	0,095
Respondent's Education →Independent Environmental Performance	0,098	0,445
Respondent's Education →Intrinsic Satisfaction Factors	-0,107	0,317
Respondent's Education →Openness to Change	-0,023	0,831
Respondent's Education →Self Enhancement	-0,029	0,793
Respondent's Education → Self Transcendence	-0,006	0,957
Self Enhancement →Extrinsic Satisfaction Factors	0,589	**0,000**
Self Enhancement →Intrinsic Satisfaction Factors	0,208	**0,042**
Self-Transcendence →Extrinsic Satisfaction Factors	0,069	0,666
Self-Transcendence →Intrinsic Satisfaction Factors	0,330	**0,007**
Age →Openness to Change	0,277	0,021
Age →Self Enhancement	0,144	0,323
Age →Self Transcendence	0,184	0,146
Company Tenure →Conservation	-0,472	**0,020**
Company Tenure →Extrinsic Satisfaction Factors	-0,827	**0,001**
Company Tenure →Independent Environmental Performance	-0,074	0,711
Company Tenure →Intrinsic Satisfaction Factors	-0,502	**0,008**
Company Tenure →Openness to Change	-0,675	**0,000**
Company Tenure →Self Enhancement	-0,476	**0,011**

Company Tenure→ Self Transcendence	-0,581	**0,002**
Conservation →Extrinsic Satisfaction Factors	-0,085	0,466
Self-Transcendence →Independent Environmental Performance	0,153	**0,024**
Self-Transcendence → Intrinsic Satisfaction Factors	0,33	**0,007**

4.11.7 Indirect Effects (SIV)

The following discussion refers to the results presented in Table 38 below that demonstrate the various mediating effects of the model and significant associations.

- Company tenure has a significant and negative association with extrinsic satisfaction factors. Self-enhancement has a mediating variable: $\beta = -0.0280$, and $\rho = 0.014 < 0.05$. Self-enhancement mediates a unit increase in company tenure and decreases extrinsic satisfaction factors by 28%. Hence, this study does not reject this hypothesis. The unit of company tenure directly decreases the extrinsic satisfaction factors by 83%. However, mediation by self-enhancement improves this relationship by 55%.
- Position has a significant and positive association with extrinsic satisfaction. Self-enhancement has a mediating variable: $\beta = 0.263$ and $\rho = 0.007 < 0.05$. Self-enhancement mediates a unit increase in position and improves IndEP by 26%. Hence, this study does not reject this hypothesis. A unit in a position directly increases the extrinsic satisfaction factor by 10%. However, mediation through self-enhancement improves this relationship by 16%.
- Intrinsic satisfaction factors mediate self-enhancement and have a significant and positive association with IndEP: $\beta = 0.168$ and $\rho = 0.029 < 0.05$. Extrinsic satisfaction mediates a unit increase in self-enhancement and decreases IndEP by 17%. Thus, this study does not reject this hypothesis. The results show an insignificant direct relationship because, without the mediating effect of the extrinsic satisfaction factors, the relationship does not exist.
- Positions mediated by self-transcendence have a significant and positive association with intrinsic satisfaction: $\beta = 0.162$ and $\rho = 0.039 < 0.05$. Mediation by self-transcendence increases the number of units in a position and improves the intrinsic satisfaction factors by 16%. Thus, the results failed to reject this hypothesis. An increase in the unit of position improves the intrinsic satisfaction factor by 10% and increases by 6% in the presence of the mediating effect of self-transcendence.

Table 38: Specific Indirect Effects (SIV)

	Original Sample (O)	P Values
Company Tenure → Self Enhancement → Extrinsic Satisfaction Factor	-0,28	**0,014**
Position → Self Enhancement → Extrinsic Satisfaction Factor	0,263	**0,007**
Self Enhancement → intrinsic Satisfaction Factor→ Individual Environmental Performance	0,168	**0,029**
Position → Self-Transcendence → intrinsic Satisfaction Factor	0,162	**0,039**

Once the construct measurements are reliable and valid, the researcher adjudicated the structural model to examine its predictive abilities and the relationships between model parts (Yazdi et al., 2017).

The following section discusses the predictive abilities of the model.

4.11.8 Model-Based on Predictive Relevance Analysis (SIV)

PLS-SEM modifies the model to fit empirical data. This study used this process to achieve the best approximation of the parameters. The PLS-SEM maximises the explained variance of latent endogenous variables. Thus, this study determines the model's predictive power (Hair et al., 2014), and the PLS-SEM measures the predictive capacity of a model to judge its quality.

The Q^2 value measures the prediction error. This study uses a simple mean PLS prediction (Sellitto et al., 2018). The Q^2 value also indicates that the PLS-SEM model has a predictive performance, especially when the predictive error is smaller than the simple mean prediction (Sellitto et al., 2018). Hence, the results are positive for Q^2. When Q^2 is above zero for an endogenous reflective item, it indicates predictive relevance. Otherwise, it lacks predictive relevance (Sellitto et al., 2018) (see Table 39 below). This study used Cohen's (1998) criteria. Self-transcendence has the lowest predictive value (0.169). However, the largest factor is extrinsic satisfaction (0.501).

Table 39: Construct Cross-validity Redundancy (SIV)

Constructs Cross-validity Redundancy			
	SSO	**SSE**	**Q2 (1- SSO/SSE)**
Conservation	396,000	340,812	0,139
Extrinsic Satisfaction Factor	396,000	197,762	0,501
Individual Environmental Performance	495,000	366,244	0,260
Intrinsic Satisfaction Factor	693,000	427,827	0,383
Independent Environmental Performance	495,000	366,244	0,260
Openness to Change	297,000	225,493	0,241
Self Enhancement	396,000	305,869	0,228
Self-Transcendence	297,000	246,809	0,169

The result of the blindfolding procedure includes the predictive relevance of the model and all the Q^2 coefficients are higher than zero. Table 40 below shows these values in column (1 – SSE/SSO). The predictive relevance of the model relates to endogenous latent variables (Wong, 2013). The results in Table 40 below also show positive Q^2, thus, the model has a predictive performance. All independent variables have high predictive relevance to the individual environmental performance, however, the smallest value (0.442) is open to change, while the largest is the extrinsic satisfaction factor (0.60).

Table 40: Construct Cross-validity Communality (SIV)

Constructs Crossvalidated Communality			
	SSO	SSE	Q2 (1- SSO/SSE)
Conservation	396,000	224,268	0,434
Extrinsic Satisfaction Factor	396,000	158,53	0,6
Individual Environmental Performance	495,000	208,395	0,579
Intrinsic Satisfaction Factor	693,000	344,798	0,502
Openness to Change	297,000	165,817	0,442
Self Enhancement	396,000	174,631	0,559
Self-Transcendence	297,000	148,906	0,499

4.11.9 Group Difference Analysis Between Genders

This section compares the relationship between the male and female models. This study uses the IBM AMOS (different from the multigroup study). These groups consist of 233 respondents, 196 males and 37 females. (See Table 41 below.)

The study uses the metrical invariance test, chi-square difference test and constraint-free pattern. Thus, the paths may differ between the two groups. When comparing them to the constraint pattern, all paths are equally controlled between the groups, and the test shows a significant difference in the patterns of the relationships, i.e., between the male and female respondent groups (chi-square = 61.047; ρ 0.05). Age also affects the SIV in males; thus, β = 0.379 and ρ 0.05.

Company tenure significantly influences extrinsic satisfaction but only in the male category (β = –0.258 and ρ < 0.05) and is similar for age (β = 0.225 and ρ < 0.05). SIV has a significant impact on extrinsic satisfaction for males (β = 0.877 and ρ < 0.05) and females (β = –0.445, ρ < 0.05). Intrinsic satisfaction significantly affects extrinsic satisfaction in males (β = 0.877; ρ < 0.05) and females (β = 1.003; ρ < 0.05). The fathers' education significantly influences the females' extrinsic satisfaction (β = − 0.164; ρ < 0.05).

The respondents' education also significantly impacts individual environmental performance ($\beta = 0.154$; $\rho < 0.05$). However, the company tenure ($\beta = 0.245$; $\rho < 0.05$) was only observed in females and is similar to that of the extrinsic satisfaction factor ($\beta = –0.318$ and $p < 0.05$). Both males ($\beta = 0.339$ and $\rho < 0.05$) and females ($\beta = 0.519$ and $\rho < 0.05$) have a significant effect on the individual environmental performance.

Table 41: Comparison of Relationships Between Males and Females

Gender comparison			Male		Female	
			p-value	Regression weight	p-value	Regression weight
SIV	<---	Respondents' education	0.258	0.11	**0.029**	0.185
	<---	Company tenure	0.252	–0.156	0.525	–0.076
	<---	Age	***	0.379	**0.002**	0.275
	<---	Occupational tenure	0.726	-0.049	0.803	–0.026
	<---	Fathers' education	0.105	0.175	0.765	0.028
	<---	Mothers' education	0.622	0.046	0.846	–0.017
ISF	<---	Respondents' education	**0.002**	0.208	**0.039**	0.121
	<---	Company tenure	0.429	0.072	0.266	0.091
	<---	Age	0.09	–0.1	0.132	0.093
	<---	SIV	***	0.796	***	0.781
	<---	Occupational tenure	0.14	–0.139	**0.003**	–0.218
	<---	Fathers' education	0.409	–0.06	0.866	–0.011
	<---	Mothers' education	0.537	0.039	0.659	–0.026
ESF	<---	Respondents' education	0.151	0.129	0.585	0.04
	<---	Company tenure	**0.034**	–0.258	0.814	0.024
	<---	Age	**0.006**	0.225	0.599	0.041
	<---	SIV	**0.01**	–0.415	**0.004**	–0.445

	<---	ISF	***	0.877	***	1.003
	<---	Occupational tenure	0.73	0.042	0.85	0.018
	<---	Fathers' education	0.81	0.023	**0.042**	–0.164
	<---	Mothers' education	0.477	–0.058	0.582	0.041
Ind EP	<---	Respondents' education	0.29	0.098	**0.044**	0.154
	<---	Company tenure	0.897	–0.016	**0.021**	0.245
	<---	Age	0.702	0.033	0.551	–0.048
	<---	SIV	**0.045**	0.339	**0.002**	0.519
	<---	ISF	0.088	0.339	0.977	0.006
	<---	ESF	0.12	–0.156	**0.003**	–0.318
	<---	Occupational tenure	0.544	0.077	**0.013**	–0.242
	<---	Fathers' education	0.582	–0.054	0.287	–0.089
	<---	Mothers' education	0.613	–0.043	0.59	0.041

4.12 Conclusion

This section has presented the quantitative results of this study using graphs and tables. These results show various associations and interactions between organisational culture and innovation. This chapter also presented the statistical results: the CDT and CVF at the aggregate level and the SIV at the individual level from the PLS-SEM outcomes.

The chapter first presented the results of respondents' demographic characteristics based on measures of central tendency, including skewness and kurtosis. It also depicted the missing-value analysis results and the normality and outliers test, e.g., a model based on correlation coefficients. This chapter also discussed the outcomes of the reliability, convergent, discriminant validity and multicollinearity analyses. It also presented the results of the

hypothesis testing and tests that were conducted using path analysis and coefficients. Finally, this chapter discussed the results of model quality and predictive capabilities.

Chapter five presents an analysis and discussion of the findings.

CHAPTER FIVE
DISCUSSION OF THE FINDINGS

5.1 Introduction

This chapter discusses the findings of this study and addresses the research questions and sub-questions. It also summarises the main findings of the study as well as their implications arising from testing the three theoretical models.

5.2 Hofstede's Cultural Dimensions Theory (1980)

PLS facilitates the investigation of the impact of the CDT on OEP. This study analyses the relationship between cultural dimensions and OEP and examines mediators' roles, such as innovation, HRM policy effectiveness and the moderating effect of labour relations. This chapter clarifies the findings of the hypothetical tests of the models and examines the mediation and moderation roles of the various variables in the models.

The study findings show that collectivism is significantly and positively associated with HRM policy effectiveness and support the findings of both Obeidat et al. (2016) and Alhileen and Mahdawi (2021), both of which found that individualism and collectivism had a significant impact on HRM. Researchers Kim et al. (2022) and Rode et al. (2016) also found that individualism and collectivism relate to performance-based appraisal and include compensation and informal recruitment as the outcomes, plus the fact that training is significant and positively relates to organisational commitment and high institutional collectivism.

This study's findings also support those of Ahmed and Shafiq (2014), namely that Hofstede's cultural dimensions influence various perspectives on organisational performance. They also echo Yuniawan et al. (2020) in that collectivism significantly affects affective commitment and increases employee performance. Likewise, they reinforce those of Triguero-Sanchez et al. (2018), who found that a collectivism-based organisational culture increases the affective commitment of public employees.

This study's results imply that careful organisational management requires effective communication, clear objectives, a conducive workplace, well-defined employee expectations, structure, and responsibility. Organisations should continuously coach and mentor their

employees, empower them through training and include them in participative decision-making processes to improve OEP (Abdullah et al., 2019).

The results of this study indicated several advantages to organisations that is, organisations can improve their OEP through team-building initiatives and group rewards and incentives that encourage employees to innovate and prove ecological performance. These results also highlight the importance of management and employees working together and coordinating common organisational goals because such measures will encourage employees to have a common purpose in improving OEP.

The study results are consistent with those reported by Wahjudi et al. (2018). That is, uncertainty avoidance significantly and positively affects business performance. They also support the findings of Gallego-Álvarez and Pucheta-Martínez (2020), who found that uncertainty avoidance positively relates to voluntary environmental information disclosure. These latter findings are prevalent in companies in industries with high environmental risks. However, the study results do not support Al Mubarak et al. (2017) findings, which argue that uncertainty avoidance negatively correlates with TQM performance.

An organisation that avoids uncertainty will formulate and implement rules and regulations to ensure employees achieve organisational goals (Fietz & Günther, 2021). Such measures encourage employees to work hard because employees understand the rationale of these rules and regulations (Jang et al., 2018). Employees also perform well and achieve organisational objectives if they are loyal. These employees have values that embrace the organisation's culture and commit themselves to achieving its goals (Ludolf et al., 2017). Employees should have faith in and respect management and their judgments. They should also understand the organisation's rules and regulations, thus protecting themselves and the organisation from dangerous situations.

It appears that organisations with uncertainty avoidance can improve their environmental performance. Hence, organisations should implement rules and procedures that foster employee innovation and enhance OEP. In addition, these rules and procedures could address employees' concerns, risks and uncertainties, thus ensuring that employees perform in an environment that encourages their self-confidence. Organisations should motivate and manage employees' anxiety through mentoring and coaching. The results of this study are similar to

those of previous studies that found a relationship between uncertainty avoidance and various outcomes, as well as the fact that organisations achieve these outcomes under various circumstances.

Furthermore, the study findings revealed that masculinity significantly and positively predicts HRM policy effectiveness. However, in contrast to the findings of Nagy and Molnárné (2018), this study's results indicated an insignificant relationship between environmentally conscious behaviour, masculinity, and femininity. However, the current study's results agree with Petruzzella et al. (2017) that masculinity predicts corporate environmental commitment.

This study's results corroborate Osibanjo et al. (2013) in that an organisational culture relates to the recruitment process. Organisations should have training programmes, job performance management, employee performance, salary structures and compensation strategies relating to their culture. The study findings validate those of Obeidat et al. (2016), that is, masculinity significantly and positively affects HRM practices. The findings also agree with those of Alhileen and Mahdawi (2021) that masculinity positively influences the organisation's human resources. HRM policy effectiveness in a masculine culture promotes status by acknowledging performance as a symbol; the HRM policy achieves this result through recruitment, selection and hiring and emphasises performance appraisal practices according to the agreed goals. Such organisations have a straightforward career and development framework aligned with employees' career aspirations supported by a solid training and development plan to ensure their employees are skilled and capable of progressing.

The results of this study show an association between uncertainty avoidance and HRM policy effectiveness. However, these findings are inconsistent with those of Kim et al. (2022). Thus, their results demonstrated the effects of performance-based appraisals and compensation. They also showed that informal recruitment forms a causal relationship with low uncertainty avoidance to ensure more substantial government effectiveness.

The results of this study contrast with the findings of Nagy and Molnárné (2018) because the relationship between HRM policies and uncertainty avoidance is insignificant. Thus, an uncertainty-avoidance culture should promote stable, secure and safe work environments. Rules and laws ensure a suitable work environment because employees feel uncomfortable in

unstable and unstructured workplaces, while a clear vision, mission and goals are essential for organisations to succeed.

This study's findings show a significant positive relationship between uncertainty avoidance and innovation. However, these results contradict the findings of Ullah et al. (2022) that uncertainty avoidance reduces innovation. This study's findings, however, agree with Espig et al. (2022), who found that low aversion to uncertainty boosts innovation. They also corroborate those of Beyene et al. (2016), who found that a culture with high uncertainty avoidance significantly and negatively impacts innovation performance.

This study's findings support those of Gallego-Álvarez and Pucheta-Martínez (2021) that uncertainty avoidance positively impacts corporate innovation. They also echo Almeida et al. (2020) that organisational values positively and significantly relate to the reward system. Therefore, organisations in an uncertainty-avoidance culture need policies that inspire and guide innovation because such policies reward employees without compromising their safety and security. Hence, organisations should trust and support employees to enable innovation in ambiguous situations.

The study's results also show that good labour relations are significantly and positively associated with improved OEP, thus consistent with Samwel's (2018). This study further indicates a significant and positive relationship between OEP and labour relations, while Samwel (2018) found that employee performance relates to labour relations. The results of this study support those of Rožman and Štrukelj (2021), who found that organisational climate has a significant and positive impact on employee involvement. The examples of organisational climate include leadership styles, employee relations, satisfaction, motivation and commitment.

The results of this study support Kuzu and Özilhan's (2014) findings that employee relations are significantly and positively associated with employee performance. The outcomes of this study also agree with those of Wang and Seifert (2017) that a salary reduction has adverse effects due to high employee involvement practices. The current study's findings are consistent with those of Ngari (2013) that labour relations significantly and positively affect organisational performance, good employment practices, and communication.

This study's findings are consistent with the findings of Muthoka et al. (2016) that employee empowerment, employee compensation, and conflict resolution practices significantly influence organisational performance. These results also support Ali et al. (2018) that employee relations influence OEP because the employee relations climate has a significant and positive mediating effect.

A relationship also exists between strategic HRM practices and operational performance (Rožman & Štrukelj, 2021), and suitable employment relationships increase job satisfaction, motivation and productivity (Rožman & Štrukelj, 2021). Hence, good labour relations are a source of employee well-being and morale and enhance the OEP through excellent training and development policies. Thus, organisations should also consider adequate compensation for job security and promote innovation (Nyongabsen & Balu, 2018).

The findings of this study agree with those of previous studies that organisations with good labour relations achieve improved OEP and could improve their OEP by promoting good labour relations to satisfy employees' expectations. The study's results suggest that improved and acceptable wages encourage employees to innovate, while good management skills promote good labour relations. Hence, organisations should care about the well-being of their employees because this could enhance productivity and efficiency and lead to improved OEP.

The present study's findings show that labour relations' moderating effect on uncertainty avoidance is positively and significantly associated with OEP. These results support the findings of Bartram et al. (2009), which indicated that the quality of patient care increases with staff participation in decision-making. The results of this study also agree with those of Liu and Wan (2020) that labour contracts and dispute resolution strategies significantly and positively affect employees' work, and management concerns also positively moderate the effects of dispute resolution and employees' work performance.

Organisations should strive to improve their innovation and OEP by engaging employees in decision-making. Such a measure builds trust, commitment and loyalty, thus making employees feel valued, enhancing their enthusiasm and making them proud of their workplace and work activities (Osborne & Hammond, 2017). The moderating effects of labour relations also strengthen employees' dedication, commitment and cooperation, thus promoting creativity

and encouraging employees to put more effort into achieving organisational goals and improving the OEP.

Good labour relations are moderators. Thus, organisations should embrace employees' rights and interests by building harmonious relationships with organised labour and establishing fair dispute-resolution procedures. They should ensure a stable and secure workplace when dealing with ambiguous situations. Organisations also should promote equitable remuneration and incentives and encourage innovation by empowering employees through training and development.

The results of this study provided insight into the significant and positive moderating effects of organisational culture on OEP, such as the relationship between uncertainty avoidance and OEP. These results also showed positive and significant relationships between HRM policy effectiveness and collectivism, masculinity and uncertainty avoidance.

Finally, the results offer insight into how organisations can systematically use Hofstede's specific cultural dimensions (1980) to improve OEP and innovation and also reveal the role of innovation and OEP at the organisational level. The study depicts CDT as operationalised by the GLOBE study. This study concludes that organisations should contemplate labour relations, HRM policy and Hofstede's cultural dimensions as significant determinants of innovation and OEP because collectivism, masculinity and uncertainty avoidance are essential in SA ISO 14001-certified organisations.

5.3 Competing Values Framework

This section discusses the outcomes of the various hypotheses of the CVF model and includes the roles of the mediation and moderation variables. It identifies and develops a conceptual framework from CVF, for example, CVF, innovation, and OEP. This section also examines how this model is moderating and mediating effects to comprehend innovation better and OEP in SA ISO 14001-certified organisations.

Precedent studies demonstrate that a developing culture relates to HRM policy effectiveness. This study's results support Quang's (2020) findings, which revealed that adhocracy significantly and positively affects performance and that HRM practices have a significant and

positive moderating influence on the relationship between adhocracy culture and performance. They also are consistent with the findings of Muneera et al. (2021) which indicated that adhocracy culture significantly and positively affects intellectual capital, while intellectual capital influences innovation. However, the study results are inconsistent with those of Muhammad et al. (2020) because they revealed the misalignment of adhocracy culture and the related HR policies, plus the fact that adhocracy culture does not affect organisational performance.

The results of this study suggest that organisations with an adhocracy culture are dynamic and flexible. Such an organisation's HRM policies should include flexible working hours and job rotation to improve OEP and innovation, adaptable and continuous employee training and development, and competitive remuneration.

In line with previous research, this study found that it is essential for organisations to be competitive in the labour markets and, thus, they should implement flexible recruitment and selection practices (Massaras et al., 2014). It also revealed that effective HRM policies allow organisations to accommodate market demand according to the required skills and capabilities. The study results also indicated that such HRM policies will allow the organisation to adapt to the dynamic business environment through HR capital and capabilities. Furthermore, they showed the alignment of HRM policy effectiveness with development culture, likely to impact innovation and OEP positively.

Organisations should strive to achieve an excellent external fit by adapting and focussing on satisfying the market demand through new products and innovation. The findings of this study are consistent with those of previous research. For example, organisations should align adhocracy cultures with appropriate HRM policy effectiveness, focusing on taking opportunities, ideas and innovation.

This study's findings also show that rational culture affects HRM policy effectiveness. Muhammad et al. (2020) found that market culture and HRM practices affect market share performance. The results are consistent with Quang's (2020) statement that HRM partially mediates the relationship between market culture and performance.

Organisations in market culture promote rational HRM practices and approaches that encourage innovative capacity and market share (Muhammad et al., 2020). The results of this study are inconsistent with those of Ferreira (2014) because they indicate that market culture negatively and significantly relates to human capital. However, they are consistent with previous studies that found that HRM policy effectiveness in a rational culture relates to flexibility, proactiveness and innovation. Thus, employees of such organisations understand the organisational vision and support organisational success because they are result-oriented.

In common with previous studies, the results indicate that the effectiveness of HRM policy in the market culture forges strong cohesion that relies on grounded teamwork and employee engagement. Therefore, organisational commitment to employees, participation, and loyalty that align with the Ubuntu principles is essential. These findings also concur that organisations in a market culture have HRM policy effectiveness for immediate gain. The HRM competence in these organisations focuses on bottom-line profitability measures because they relentlessly obtain resources that provide them with a competitive advantage.

The outcomes of this study show that innovation relates to developmental culture and supports those of Raj and Srivastava (2013). In common with the findings of Kokt and Makumbe (2020), these outcomes indicate that both organisational culture and market culture positively and significantly affect innovation.

The findings of this study also support those of Setiawan et al. (2020), which found that adhocracy culture relates to innovative employee behaviour. Likewise, they agree with Olynick and Li (2020) that an adhocracy culture is suitable for increasing organisational creativity. They additionally agree with the findings of Naranjo-Valencia et al. (2016), confirming that an adhocratic culture considerably impacts performance. The study's outcomes are consistent with del Rosario et al. (2017), who discovered that an adhocracy culture considerably impacts innovation. Therefore, organisations with developmental cultures can adapt to new environments by engaging in innovative and creative endeavours. In addition, organisations have essential resources, such as human resources (Tian et al., 2018).

Organisations should understand the existing culture and its impact on the effectiveness of HRM policies and encourage employees to engage in the expected behaviour outlined in these policies. Organisations should acknowledge and comprehend the existing national and social

cultures and reflect these in their recruitment, selection and hiring policies. If such HRM policies are related to training and development activities, they can improve employees' innovation skills and capabilities.

Organisations should ensure proper alignment and fit between organisational culture and HRM policies because it will lead to innovation. Organisations should improve their OEP. Thus, HRM should improve employees' environmental knowledge and skills to enhance organisational profitability.

Therefore, cultural values manifest in all operational HRM practices, for example, employee selection, recruitment, hiring, development, motivation, termination and appraisal (Kosiorek & Szczepańska, 2016). When employees' HRM roles are significant, their efficiency and growth increase. Organisations require an HR framework because it influences all the functions and practices (Anwar & Abdullah, 2021).

5.4 Schwartz Individual Values

Alija et al. (2022) found that age varies according to student evaluation values, while the study reveals that age relates to openness to change. This study agrees with Sorvali et al. (2022) that older individuals (for example, farmers) rate universalism highly. These results also support Borg's (2018) findings that self-direction, power and tradition were the least consistent among the youngest participants, although consistent with the oldest sub-group and middle-aged individuals.

The outcomes of this study are consistent with those of Dias et al. (2020), namely that age and concerns about climate change vary with openness to change. These results contrast the findings of Koivula (2008), who discovered that age had a slight positive correlation with organisational change. The study's findings agree with Szekeres et al. (2019) that the stimulation value decreases in older adults who view novelty and risk as a threat, while hedonism could decrease because of the dulling of the senses.

The study's findings agree with those of Poortinga et al. (2019), who found that individuals prioritise conservation over openness-to-change values and had lower levels of concern regarding the impact of climate change. The results also agree with Poortinga et al. (2019) because they indicate that compared to younger respondents, older respondents are more concerned about environmental issues, especially the impact of climate change. The study's results show differences in the value of openness to change across generations, with the younger generation being more willing to explore novelty situations and take risks. Younger employees embrace change more readily than older ones, while conservation values increase with age. Organisations should factor in age differences when embarking on innovative initiatives.

This study shows that the industrial sector and employee position relate to conservation values. The findings also reveal that company tenure relates to conservation value and associates with long-serving employees who are usually in higher positions and, thus, stable, committed and loyal to their organisations. Conservation values relate to employees in high positions who care for others and protect their junior colleagues and the environment. However, such employees maintain the status quo and resist change and innovation. Although such organisations will be

able to protect nature, they should have alternative approaches that will inspire employees to participate in innovation programmes.

The results of this study support those of Garcia et al. (2017) that companies in sensitive industries have superior environmental performance and, thus, have a significant socio-environmental impact. Such organisations include those involved with energy, oil and gas, chemicals, paper and pulp, mining and steelmaking. These results also agree with Sorvali et al. (2022) that self-enhancement, conformity, stimulation values and achievement are essential for larger firms. However, this study's findings differ from Sungmala and Verawat (2021) because they provided no evidence that industries have no significant effect on work engagement. Specific industrial sectors have a code of practice emphasising environmental protection, and these conservation values permeate into member organisations.

In addition, the study's results show that company tenure and position influence openness to change and self-transcendence and thus support those of Pinar et al. (2022). These researchers state that individuals embrace openness to change, enjoy independence, work efficiently, and are free to engage in various experiences.

The study's results also support Nieß and Zacher (2015) that upward job changes predicted openness to change and experience, including managerial and professional positions. They likewise support Alija et al. (2022) that the academic staff titles varied in their students' evaluation values. However, this study's findings disagree with those of Jackalas et al. (2016), who discovered a negative relationship between employee motivation and length of service.

Organisations should consider job titles and tenure in their HRM policies because these influence openness to change and self-transcendence. Younger employees are willing to accept changes, take risks and innovate, while older employees with longer tenures are not. Young, knowledgeable employees in higher positions embrace risk and novelty and participate in innovation to improve OEP. However, employees with many years of service tend to nurture others.

High openness to change relates to intrinsic values (Prentice et al., 2018); thus, individuals with openness to change value life satisfaction (Pulfrey & Butera, 2016) and seek positive effects.

Thus, organisations should initiate behaviours related to openness to change, for example, pleasure-seeking or stimulating activities.

Employees derive pleasure from resolving environmental problems, conserving resources and engaging in environmental activism. Nieves and Quintana (2018) find that companies depend on human capital because a knowledge-based workforce has a lasting competitive edge. Innovative employees strive to stimulate themselves by innovating to improve their OEP.

The findings of this study support Bell and Barkhuizen (2011) that the value of openness to change relates to wisdom. Hence, because organisations need to react to rapid technological and educational development, they have diverse workforces. Organisations should also be willing to undertake organisational restructuring. Such organisations are capable of achieving a sustainable competitive advantage. Employees with an openness to change values prefer novelty and welcome challenges (Levontin & Bardi (2019). This behaviour enables them to achieve goals by mastering challenges through learning and skills development programmes that enable them to find new ways to improve their IndEP.

Individuals who prefer open-to-change values comprehend environmental pollution and degradation and have the potential to resolve complex environmental challenges. Hence, organisations should inspire and allow employees to take risks to resolve environmental problems creatively. Organisations should provide employees with adequate resources to improve their IndEP. Organisations should support and train employees to implement innovative ideas because such encouragement will help resolve internal and external environmental challenges.

The findings of this study are consistent with Papaioannou and Krommidas (2020), who found that self-transcendence or selfless goals predict autonomous motivation and influence well-being and group learning preferences that result in positive feelings towards physical education. These results also agree with Ros (2021), who found that self-transcendence values and volunteerism promoted pro-environmental intentions and practices. These results are also consistent with Seibert et al. (2020), who reported a positive association between self-transcendence and safety climate.

The study's results support Zelenski and Desrochers (2021); nature promotes self-transcendent emotions, leading to pro-social behaviours. The results also agree with Barni (2019) that the relationship between self-transcendence and self-efficacy varies according to individuals' motivation. An intrinsically satisfied person favours benevolent values and prioritises the well-being of others over their own and, thus, upholds the common good by protecting their environment.

The longest-serving employees are loyal and committed to the organisation and align themselves with its vision and mission. Employees who value self-transcendence are willing to assist and familiarise newly appointed employees with organisational culture. These findings support Omori and Bassey (2019), who found that employees' performance improves over time as employees gain work experience. Miah (2018) also found that the more satisfied employees are with their work, organisation and culture, the longer they remain with a company.

The study's results reveal that the industrial sector and position influence self-enhancement, while company tenure is negatively related to self-enhancement. Self-enhancement mediates the relationship between organisational tenure and extrinsic satisfaction. These results also agree with Sungmala and Verawat (2021) that the number of years employees work for a company affects their engagement.

Jena (2015) discovered that experienced employees advance through their organisational structures and that such progression positively influences their feelings and attitudes towards their jobs and organisation. The longer employees remain with a company, the more accustomed they are to its vision, mission, policies and procedures and, thus, are committed and loyal to the organisation. However, such commitment depends on their values and preferences. Hence, employees need to improve their OEP more actively.

This study's results support De Dominicis et al. (2017) that self-interested individuals are pro-environmental when personal benefits are present. These results are also consistent with Yildirim (2021), who found that need satisfaction and global self-esteem positively predict self-enhancement. They also agree with Yasir et al. (2022) that self-enhancement directly or indirectly interacts with sustainable entrepreneurial intentions. However, self-enhancement decreases with an employee's tenure in an organisation, while power and achievement may increase as employees progress. This study's findings contradict those of Shaju and Subhashini

(2017), who stated that the longest-serving employees invest more in mental and physical effort and have greater loyalty and commitment than those who do not.

Employee value depends on employees' length of service, job titles and positions. Employees may stay longer and progress in their careers if they are extrinsically motivated by rewards and recognition. The longest-serving employees have experience, occupy higher positions, and, thus, have responsibility and authority. They are more familiar with the organisational culture, practices, and procedures for training newly appointed employees. However, such employees might need to pay more attention to HRM rules and procedures.

Additionally, the industrial sector and employees' positions positively influence IndEP. The findings of this study support Ugwu and Ugwu (2017), who found that job positions significantly predict the task-based and contextual performance of employees (librarians). These results are consistent with Kalia and Bhardwaj (2019) that low salaries and job insecurity adversely affected employee performance. The study's findings match those of Jackalas et al. (2016), who found that employee motivation relates to their level of seniority. However, the study's results contradict Kalia and Bhardwaj (2019), who found that a change in designation without benefits negatively affects employee performance. The study's outcomes are consistent with those of Amegayibor (2021), who found that tenure influences employee output.

The study's findings support those of Ngari et al. (2018), who stated that specific high industrial sector standards improved both individual and OEP. These results also support Guerci et al. (2016), who discovered that an organisation's internal and external resources are related to environmental stakeholder pressure. These resources aid organisations in improving environmental performance. The study's findings also agree with Kalia and Bhardwaj (2019,) who found that the organisational type and size significantly affected job performance. Hence, organisations should follow the legitimate expectations of various stakeholders, for example, regulatory compliance, communities and customers' expectations.

Furthermore, this study demonstrated that the industrial sector and its employees' position predict intrinsic satisfaction. However, company tenure negatively influences intrinsic and extrinsic satisfaction. These findings also show that position is positively associated with extrinsic satisfaction. By contrast, Szekeres et al. (2019) found that demographic characteristics are marginally helpful in predicting motivational patterns. The study's results show that the

intrinsic satisfaction factor affects IndEP and, hence, agrees with Levontin and Bardi (2019), who found that self-direction values relate to mastery goal orientation and security values.

The industrial sector influences employees' values within the organisation derived from the industrial sector's code of practice and benchmarking practices. Thus, organisations should be conscious of their competitors and the industrial codes of conduct. Organisations should continuously benchmark their practices to improve employee motivation and IndEP.

The study's results indicated that various industries have industrial codes of practice that address environmental issues and standardise environmental performance. Government and organisations should define their environmental performance responsibilities and indicators. Organisations should have standard operating procedures and practices to protect the environment and an industrial code of practice that sets the performance standards. Organisations should translate the industrial code of practice into an organisational hierarchy as IndEP indicators that will assist organisations in evaluating employees' environmental performance. These standards set minimum requirements for pollution prevention and resource conservation. Hence, organisations should align these standards with their values if they expect their employees to care about their natural environments. Employees who embrace self-enhancement strive to improve their environmental performance because of the potential offer of significant rewards or promotions. Those who embrace conservation values and protect nature have a high status. Employees who prefer self-transcendence values care about their fellow employees and the natural environment.

The study's findings differ from those of Hatinoğlu and Ergün (2020), who found no significant differences in employees' intrinsic motivation (healthcare workers) based on their working positions. However, the study's findings are consistent with those reported by Prentice et al. (2018), who found that a managerial position relates to prioritising values that reflect a personal focus, for example, self-enhancement and openness to change value types. However, managerial positions are negatively related to social focus, such as self-transcendence and conservation value types.

This study's results agree with those of Nasreen and Shah (2021), who found a significant difference between teachers' extrinsic and intrinsic motivations due to their various professional experiences. These findings also support those of Niles et al. (2020), who found

that older and tenured respondents valued journal prestige and publishing metrics, while this practice was rare in young publishers. However, the findings of this study differed from those of Shukla et al. (2015), who found no significant differences in employee engagement levels for designation. The study's results also disagree with those of Sungmala and Verawat (2021), who found that the employee's position within the company had no significant effect.

The study's findings reveal that self-transcendence positively influences intrinsic satisfaction and, thus, agrees with Yasir et al. (2022) that self-transcendence directly or indirectly interacts with sustainable entrepreneurial intentions. The study's results also support Maciuszek et al. (2019), who found that benevolence values directly and positively predict life satisfaction.

Moreover, the study's findings align with those of Levontin and Bardi (2019), who found that amity goal orientation relates to benevolent values. Thus, organisations should promote self-transcendence values and try to satisfy intrinsically motivated employees. These employees embrace humility, respect nature, and are satisfied with caring and endeavouring to improve their environment while also caring for the welfare of others, especially for future generations.

The study's findings indicate that self-transcendence positively predicts IndEP and is linked with intrinsic satisfaction. Self-transcendence also mediates the relationship between position and intrinsic satisfaction factors. These results are consistent with Szekeres et al. (2019), who found that universalism values correlate with the enterprising work environment. Social work environments correlate with universalism and benevolence but negatively correlate with power and achievement values. Investigative work environments positively correlate with openness to change values. Thus, occupation, organisational structure, rewards, responsibility and authority influence employees' motivation and behaviour.

This study also supported the findings of Primc et al. (2021), who found that self-transcendence and openness to change predict pro-environmental behaviour. However, these results are inconsistent with those of Purc and Laguna (2019), who found no significant relationship between self-transcendence values and innovative behaviour. The study's results are consistent with Cohen (2010) and Berumen et al. (2016), indicating that self-transcendence had a significant relationship with organisational and professional engagement. Furthermore, these results supported Fischer et al. (2019), who found a significantly positive effect on intrinsic motivation and creativity, innovation performance, and work involving service to others. These

researchers also reported that employees with self-transcendent values are intrinsically satisfied and exhibit intrinsic behaviour, for example, curiosity, the pursuit of knowledge and competence, even without offering rewards. Such employees participate in innovation programmes and improve OEP.

This study's results agree with Sungmala and Verawat (2021), who stated that employees' engagement increased during their years of service. This study's outcomes are consistent with those reported by Farhadi et al. (2015), who found differences in deviant workplace behaviour among employees of various tenure levels. These findings corroborate those of Saleh and Nasir (2020), who reported a significantly positive correlation between experience and job performance and those of Kebede and Goyal's (2019) findings that work experience significantly affects employee motivation.

However, the results of this study disagree with those reported by Amegayibor et al. (2015). These researchers found that tenure has no significant relationship with employee performance. Employees with the longest organisational tenure align their values with the organisational culture due to their shared comprehension of policies, procedures and experiences. Pepra-Mensah et al. (2017) found that perceptions of work change as work tenure increases owing to acquired experience and changes in motivational factors as employees develop.

This study's outcomes are consistent with those of Kim et al. (2023), who discovered that mastery goal orientation was positively related to self-directed values, universalism and benevolence. This study's results emulate those of Purc and Laguna (2019), who opine that conservation and self-transcendence values are negatively related to job autonomy, thus confirming that personal values can explain workplace autonomy. Employees with self-transcendence values protect their natural environments and endeavour to improve IndEP and fellow employees' well-being.

This study's findings also reveal that self-enhancement positively predicts extrinsic and intrinsic satisfaction factors and mediates the association between position and extrinsic satisfaction factors. These findings agree with those of Panjaitan and Kustiawan (2022), who found that occupational self-efficacy positively influences intrinsic motivation, job satisfaction and job performance, together with those of Manimegalai and Krishna (2022), who stated that intrinsic rewards positively influence job performance. The study's findings also support those

of Xu et al. (2022), who discovered that job satisfaction and work motivation mediated the relationship between work-related basic needs satisfaction and work engagement.

The study's outcomes also support Heidarian et al. (2015). These researchers found that extrinsic motivation indicators are significantly associated with work motivation. The results of this study were consistent with those reported by Kim et al. (2023), who stated that authentic self-expression has a positive indirect effect on job performance.

The findings of this study align with those of Levontin and Bardi (2019), who found that power values were positively related to performance-approach goal orientation. The results of this study likewise support those Pinar (2022) reported that power and achievement had a significant effect on employees' self-enhancement and self-leadership behaviours. The outcomes of this research also agree with those of Purc and Laguna (2019), who found that self-enhancement values were positively related to innovative behaviour. Thus, such employees are willing to contribute to innovative projects.

The study's results correlate with Heidarian et al. (2015), who found that extrinsic satisfaction motivates self-directed individuals. Employees who value self-enhancement appreciate market-related salaries, guaranteed job security, and comfortable working conditions, which affect HRM policies (Heidarian et al., 2015). Additionally, the study's findings collaborate with Kumari et al. (2021), who found that rewards and motivation significantly and positively affect employees' job performance.

This study's outcomes are also consistent with the Adaptive Ageing Theory, which suggests that self-enhancement is higher among individuals who focus on themselves, their goals and the future (Robinson, 2013). Individuals who value self-enhancement may be more concerned about their success and self-esteem and, thus, engage in independent thoughts such as exploring and enjoying a challenging life. These employees will likely innovate, improving the OEP. Furthermore, self-enhancement valuing employees improves their IndEP and innovation when rewarded. Organisations should link environmental performance, innovation and employee effort and provide appropriate rewards for such actions.

This study provides further evidence of the need to promote self-enhancement values. Specifically, when an organisation seeks to energise employees to improve their IndEP, it

should encourage innovation through a superior reward system. This study highlighted the critical role of extrinsic satisfaction factors that provide an indirect pathway through which self-enhancement values can increase employees' innovation and IndEP. Employees derive greater satisfaction from improving their IndEP when organisations suitably reward them.

The outcomes of this study align with those of El-Hilali and Al-Rashidi (2014), who found that employees expected career development opportunities to satisfy their professional expectations, organisational performance and commitment. Employees develop personal goals and achieve results that exceed expectations and organisational goals.

The study's outcomes show that employees with self-enhancement experience high intrinsic satisfaction. Thus, these results imply that employees who value self-enhancement participate in innovation and are more interested in the natural environment when rewards are associated with improvement initiatives. These findings contradict the findings of some of the reviewed studies. For example, Kumari et al. (2021) indicated an insignificant impact of intrinsic and extrinsic motivations on contextual performance. Othman et al. (2022) found that the lowest correlation exists among rewards, recognition and task performance. The difference in the three sets of results could be due to how each study operationalised self-enhancement and intrinsic satisfaction factors. Moreover, employees with high self-enhancement values experience intrinsic satisfaction because they participate in activities that improve their IndEP and innovation in response to the rewards of improved status, promotion and incentives.

This study's results show that the industrial sector influences IndEP and that intrinsic satisfaction factors mediate the relationship between self-enhancement and IndEP. Therefore, organisations should take cognisance of the industrial sector's code of practice that sets standards for environmental performance. Furthermore, these industrial organisations follow legislative requirements to satisfy regulatory requirements and achieve corporate environmental legitimacy.

The study's results disagree with those of Jobira and Mohammed (2021). They found that extrinsic motivation had a positive influence on organisational performance. Additionally, this study contradicts the findings of Wang et al. (2018). They found that external motivation is positively associated with task performance. Additionally, organisations must consider innovation performance. The results of this study differed from those of Shaikh et al. (2018).

They found that extrinsic factors are positively associated with employee performance. In addition, the outcomes disagreed with those reported by Berumen et al. (2016). They found that extrinsic awards increased employees' performance without intrinsic motivation.

These results were consistent with those reported by Kumari et al. (2021), who found that the relationship between rewards and motivation depends on job satisfaction. Thus, organisations should consider the employee's job performance. These findings differ from those of Manimegalai and Krishna (2022), who found that extrinsic rewards positively influence job performance. Hence, organisations should engage in practices that improve their employees' intrinsic motivation and job performance to achieve higher environmental performance. Therefore, organisations should link rewards and recognition to employees' performance indicators and promote effective IndEP. Many employees are intrinsically motivated by pollution prevention and resource conservation initiatives.

Furthermore, organisations should identify and align employees' values with their motivational factors. They should also consider employees' age, occupation and length of service because these aspects significantly predict motivation. These factors aid organisations in determining suitable values for innovation initiatives because such measures will enable employees to believe in their abilities, commit themselves to excel at their work, and support the OEP initiatives.

5.5 Conclusion

This chapter summarises the key results from this study regarding the research objectives and questions and discusses the study's value and contribution. This chapter analyses the study's results and the implications of the various models, such as CDT, CVF, and SIV. The chapter addressed how this study solved the research problem and met the research objectives. This chapter also examined how this study contributed to filling knowledge gaps in the existing literature. This chapter also highlighted the importance of the theories employed in this study to answer the research problem. This chapter addressed and acknowledged the current study's limitations and suggested areas for future studies.

The following section presents the study’s conclusions and recommendations.

CHAPTER SIX
CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

This study addressed the research question and evaluated its hypotheses. The research question was as follows: To what extent are the cultural dimensions or values of the organisation related to environmental performance and innovation in South African ISO 14001-certified organisations? This study also assessed the relationship between organisational culture and innovation, including OEP, in the organisations mentioned above. This study contributes to the extant literature by developing three theoretical models that it tests within the South African context. Two of these models are at the organisational level, and one is at the individual level.

This study analysed the SIV model at the individual level. However, the literature needs an integrated theoretical framework for South African ISO 14001-certified organisations. The CDT and CVF frameworks are aggregate and consist of organisational culture, HRM policy effectiveness, organisational morale, cohesion and innovation.

The reviewed earlier studies should have evaluated cultural values at the organisational level within the same context as this study. This study analysed values at the individual level in South African ISO 14001-certified organisations and, thus, its theoretical frameworks explained the effects of various relationships in an attempt to enhance OEP.

This study designed these theoretical frameworks for South African ISO 14001-certified organisations to examine innovation and OEP. It developed these frameworks because they can be applied in any country when investigating innovation and OEP. The literature review needed more evidence to explain the relationship between values, innovation and OEP at the organisational level, including the relationship between Schwartz's values and IndEP at the individual level. Furthermore, this study's SIV model tested various interactions, such as the interactions between Schwartz's values and demographics and motivating factors predicting IndEP. Therefore, this model could assist organisations in comprehending the impact of importance at the personal level.

Previous studies reported mixed findings and conflicting results relating to the relationships investigated by this study. Thus, the literature needed more clarity on several issues, especially at the organisational level. The foremost question arising from the situation was how cultural values interrelated with other factors in the models, especially those models derived from the

CDT and CVF. The second question was how innovation within an organisation improves OEP, particularly for the conceptual models employed in this study.

The mediating (transmission) roles of various factors influenced the outcomes of this study, for example, innovation and HRM policy effectiveness as mediators. Therefore, these mediators influenced the relationship between cultural dimensions and OEP. It was also necessary for this study to test the moderating (regulating or controlling) role of labour relations, e.g., how labour relations moderate the relationship between cultural dimensions and OEP and between innovation and OEP.

The following conditions were necessary at the individual level of analysis. Firstly, this study assisted in the understanding of the influence of demographic factors on IndEP. Secondly, this study tested the effects of the mediating role of Schwartz's values on motivation and the relationship between demographic characteristics and IndEP. Therefore, this study purports that achieving good environmental performance requires an integrated model encompassing innovation and its influence on OEP. This study analysed cultural values at the organisational and individual levels and, thus, offers new insights.

Importantly, organisations should interpret the results of the CDT considering that the GLOBE study operationalised the CDT due to the validity and reliability of the GLOBE measurement scale that is particularly suitable at the organisational level. This study retained Hofstede's designation as an easy reference for daily practice and everyday use. Furthermore, the CDT results revealed that collectivism, masculinity, and uncertainty avoidance significantly influence the effectiveness of HRM policy. Uncertainty avoidance also has a positive relationship with innovation. Labour relations positively affect OEP and moderate the relationship between uncertainty avoidance and OEP.

The study's results supported the findings of various previous studies (Ahmed & Shafiq, 2014; Almeida et al., 2020; Alhileen & Mahdawi, 2021; Bahussin & Elgaraihy, 2013; Gallego-Álvarez & Pucheta-Martínez, 2020; Kim et al., 2022; Nyameh, 2013; Obeidat et al., 2016; Rode et al., 2016; Triguero-Sánchez et al., 2018; Yuniawan et al., 2020; Zhang et al., 2020).

The results of this study presented CVF as an alternative model. The developmental and rational cultures predicted the HRM policy effectiveness and significantly and positively

predicted innovation. However, the results revealed insignificant moderating and mediating effects. This study's results supported several other studies' findings (Ferreira, 2014; Jabeen & Isakovic, 2018; Kunert, 2018; Permadi et al., 2019; Quang, 2020; Muneera et al., 2021).

The reviewed studies considered HRM practices as outputs in their models. However, unlike the present study, HRM policy effectiveness is a mediating factor. Future studies must develop and evaluate this idea further as an integrated model. However, this study hypothesised that HRM policy effectiveness mediates the relationship between organisational culture and innovation and between organisational culture and OEP. The reviewed studies also failed to assess the impact of HRM policy effectiveness on innovation, especially in SA ISO 14001-certified organisations.

The study results revealed that HRM policy effectiveness and innovation have an insignificant mediating effect. They also showed an insignificant mediating effect on the relationship between the organisational culture variables and OEP. There needs to be more alignment between organisational culture, HRM policy effectiveness and innovation in future studies' models.

The study's outcomes indicated that HRM policy effectiveness directly predicts OEP. They also revealed that SA ISO 14001-certified organisations have distinct cultures; thus, universal cultures do not necessarily apply to them. Hence, to be competitive and to improve their innovation and OEP, these organisations should increase the strength of their current culture by addressing their weaknesses.

Organisations can improve their morale and motivation in various ways, for example, by reviewing salaries, benefits, working conditions and communications, and employees' participation in decision-making. These organisations should have suitable leadership styles, career development and safety processes, encouraging teamwork, good working relationships, information sharing and creative ideas. By implementing all these measures, organisations will ensure that their employees are happy, satisfied and emotionally attached to the organisation and, thus, presumably will improve their OEP and productivity. These results corroborate the findings of the reviewed studies (Abdullah et al., 2019; Banwo et al., 2015; Harun & Mahmood, 2012; Jabeen et al., 2021; Nwizia & Okachi-Okereke, 2020; Quinteiro et al., 2019; Rodríguez-Sánchez et al., 2016).

In addition, organisations should have effective communication strategies, clear goals, a conducive workplace, well-defined employee expectations, structures and accountability, ongoing coaching, mentoring and training, and participatory decision-making processes. All of these measures will help to empower employees and improve organisational cohesion. Organisations should also provide employees with role clarity and create a supportive work environment that enhances morale and minimises uncertainty. Therefore, a supportive work environment fosters employee motivation.

Conversely, a lack of morale and motivation may hinder productivity and competitiveness, while cooperation and team spirit can enhance the organisational climate and lead to greater motivation, cohesion and morale. An embracing organisational culture leads to an acceptable organisational morale that motivates employees. Optimistic employees may inspire and foster technological changes and innovation, resulting in superior OEP.

This study also examined the impact of individual values on employees' environmental performance and recommends that organisational environmental performance incorporate employee performance because effective operational performance depends on employees' performance. Thus, evaluating the impact of Schwartz's values on IndEP is crucial. Hence, this study addressed various employee demographics to evaluate the SIV model. The SIV model incorporates motivating factors and Schwartz values, revealing various mediating effects in the relationship between demographic factors and IndEP.

The study showed that company tenure relates to various Schwartz values, for example, conservation, openness to change, self-enhancement and self-transcendence. Furthermore, self-enhancement mediates the relationship between organisational tenure and extrinsic satisfaction factors. Employees have various motivating factors for achieving their environmental performance. Consequently, organisations may motivate employees differently and conserve values, whereas younger generations prefer self-enhancement values.

The results also show that age positively relates to openness to change. Therefore, organisations must understand employees' value preferences for the various age groups. Therefore, employees with self-enhancing values desire social status, prestige and control, especially when they engage in environmental activities. By contrast, this study showed that self-

enhancement relates to intrinsic satisfaction. Thus, the status and achievement of goals steer employees toward improving their environmental performance while employees derive internal satisfaction by improving their environmental performance. However, employees with self-transcendence desire protection both for themselves and the welfare of others. This outcome aligns with the findings in the literature review that self-transcendence predicts intrinsic satisfaction factors. Thus, knowledge of these values is essential to aid organisations in motivating employees.

The study's results indicate that self-enhancement mediates the relationship between position and extrinsic satisfaction. Hence, employees may improve their OEP when they expect rewards. However, these rewards should fit their self-enhancement values. The findings also indicate that self-transcendence positively predicts IndEP. Thus, organisations can intrinsically motivate individuals to improve their environmental performance.

The study's findings also reveal that self-enhancement positively predicts extrinsic and intrinsic satisfaction factors, e.g., recognising achievements, allocating structures, responsibilities, work and individual development plans (Manzoor et al., 2021). These findings are consistent with previous studies' findings (Bahir et al., 2020; Koivula, 2008; Nurcahyono & Mardiati, 2019; Setyo et al., 2021; Sorvali et al.; 2021).

The results of this study show that company tenure is positively associated with self-transcendence and that self-enhancement mediates the positive relationship between company tenure and extrinsic satisfaction. Thus, tenure influences employees to achieve the desired environmental performance and variation in environmental performance because it differs according to the length of employment in the organisation.

The study's findings also indicate that organisational tenure relates to various Schwartz values, for example, conservation, openness to change, self-enhancement and self-transcendence. Thus, tenure influences employees' value preferences. The longest-serving employees prefer different values compared to the new employees. The longest-serving employees know the organisational structure, responsibilities, functions, policies and goals. They may have developed diverse networks and relationships, thus improving their sense of belonging, morale, cohesion, work purpose, meaning and sharing of information.

The study's results also show that industry type positively relates to IndEP. The various industries have codes of practice that focus on members' expectations. Industries that prioritise environmental issues perform better than others, and thus, organisations should keep abreast of the industrial codes of practice. Organisations should align these practices with their cultures and strive to balance organisational and individual values. Moreover, organisations should comprehend demographic factors' role in predicting employee values and motivation, particularly when formulating IndEP indicators.

This study reveals that position significantly and positively influences various Schwartz values, for example, conservation, openness to change, self-enhancement and self-transcendence. The findings also show that position positively influences IndEP. Thus, organisations should align employees' values and organisational culture with their vision to continually improve innovation and OEP.

In addition, organisations should improve their cultural values. They should also refine the effectiveness of their HRM policies in the workplace because these practices might assist them in reducing emissions. Organisations should encourage employee participation in decision-making, especially when addressing issues relating to innovation and OEP. Effective HRM policies that build trust between the employees and managers will also help to improve organisations' environmental performance.

This study may assist managers in determining how best to innovate to achieve an improved OEP in a complex business environment. Organisations should be able to predict the implications of organisational culture and, thus, mitigate adverse impacts promptly. Organisations should also encourage employees to creatively react to good leadership and, thus, respond consistently through innovation.

The study also reveals that the industrial sector influences conservation and self-enhancement values. Thus, management should evaluate the external status of the current culture. The organisation should evaluate its culture and competitiveness in the culturally diverse South African population. The study's results also show that the demographic indicators predict Schwartz's values, for example, occupational tenure, position and industry. These values encourage employees' extrinsic and intrinsic motivation, resulting in various desires and drivers.

Employees' values play a role in the comprehension of organisational culture and assist them in achieving compatibility between their values and cultures. The study's findings reveal that culture explains variance in innovation and OEP. Organisations, thus, should develop feedback and environmental performance-tracking systems to ensure correct alignment and measurement of cultural values and OEP. The results of such feedback should aid organisations in developing and evaluating appropriate strategies for understanding cultural variables and, thus, improving their OEP. Cultural change, as well as the values and behaviours of employees, should be consistent with the desired organisational attitudes.

6.2 Recommendations

This study concludes that effective management and innovation decisions depend on employees' preferred values and that these preferred values and organisational culture significantly influence these innovative decisions. Therefore, HRM policy effectiveness relates to collectivism, masculinity and uncertainty avoidance (CDT), and developmental and rational culture (CVF). Labour relations relate to OEP (CDT), moderate the relationship between uncertainty avoidance and environmental performance, and predict innovation (CDT). The CVF model shows insignificant moderating or mediating effects. However, this study needs clarity on whether future studies will arrive at the same conclusion as the present study. The study's results reveal an insignificant mediating role in HRM policy effectiveness and that innovation has an insignificant mediating role in CDT and CVF.

Khan and Cox (2017) found that several studies validate that cultural dimensions are significantly associated with innovation and creativity. However, SA ISO 14001-certified organisations may have various associations. This study suggests that future research should be conducted in various contexts and regions to assess configurations and geographical effects.

This study recommends that future studies consider the differences between the public and private sectors. Thus, comprehensive research should address the integrated models of cultural variables because this practice will increase the scope of the current study. Current measurement scales could be enlarged or refined for a comprehensive understating of the various relationships. Future studies should be more comprehensive than the current variables, for example, HRM policy effectiveness, innovation, morale, cohesion and labour relations, to

validate the current study's measurement scales, methods and findings. Future studies should also consider cross-cultural theories other than those investigated in this study, such as CDT and CVF.

This study recommends longitudinal studies to improve the data collection exercise and increase the number of participants because this process could lead to superior research validity. In addition, future studies could determine differences in OEP over a certain period. This study explored the relationships in an individual model using the SIV. Thus, future qualitative studies could improve the results of this study.

Age groups or cohorts are not part of the findings of this study. However, the results reveal that age is an independent factor significantly and positively predicts openness to change, self-enhancement and self-transcendence. Hence, future studies should clarify value preferences according to age group. Self-enhancement predicts intrinsic and extrinsic satisfaction. Thus, age can predict various motivational factors. Future studies should determine the motivational factors that the specific age groups prefer. They also should examine which intrinsic satisfaction factors motivate employees to improve their environmental performance.

The study's findings revealed that self-enhancement and extrinsic satisfaction mediate the relationship between age and IndEP and implied that individuals expect rewards when they improve their environmental performance. However, future studies should further validate these findings and determine which rewards motivate employees to improve their environmental performance.

The results from the SIV model revealed that age predicts openness to change, while position predicts all high-order Schwartz fundamental values. The industrial sector predicts conservation values and self-enhancement, while the industrial sector, position and tenure predict intrinsic satisfaction factors. Employees' expectation of rewards motivates them to achieve environmental performance goals.

The findings further suggest that employees have various motivational factors due to differences in their levels of knowledge, occupational positions and years of employment. Thus, managers should factor demographics into their decisions, especially regarding IndEP.

These results, however, should be validated in future studies. Researchers should comparatively investigate the OEP of South African ISO 14001-uncertified organisations.

The study results depicted the following facts: company tenure and position predict extrinsic satisfaction factors; company tenure, position and occupational tenure predict self-enhancement and self-transcendence; industrial sector, position and self-transcendence predict IndEP and self-transcendence, and self-enhancement predict intrinsic satisfaction. These outcomes suggest that employees can improve their environmental performance owing to a sense of authority and prestige in undertaking such activities. Thus, managers should match employees' demographics with their motivational factors and values.

Future studies should investigate this study's insignificant results and improve the current understanding of the contradictions between the hypotheses and the study's findings. In addition, future studies could determine reasons for individuals engaging in environmental activities and why they perceive these undertakings as prestigious. Self-transcendent individuals prefer caring for nature and their own and others' well-being. Therefore, managers should balance result-driven goals and self-transcendence values, mainly because SA is a democratic country that promotes the Ubuntu principles.

This study found that self-enhancement predicts extrinsic satisfaction factors, and self-transcendence predicts IndEP. Self-enhancement mediates the relationship between company tenure and extrinsic satisfaction. Thus, a significant relationship exists between position and extrinsic satisfaction. Finally, self-transcendence mediates the relationship between position and intrinsic satisfaction. Thus, these findings suggest that intrinsically motivated employees improve their environmental performance; remarkably, they show satisfaction and fulfilment when protecting the environment. Hence, future studies should explore these contradictions to improve clarity. Managers should also train employees regarding values, their effect on IndEP, and the relationship between their values and organisational culture.

The study's findings revealed a direct relationship between industry type and IndEP. However, they could not clarify which specific industries affect IndEP. Therefore, future studies should elucidate these types of industries and specify the industrial effects on IndEP. Company tenure directly predicts self-transcendence, while self-transcendence intervenes with the relationship

between tenure and intrinsic satisfaction. Thus, employees are comfortable with their work environments.

Most employees are willing to assist and respect their fellow employees. Thus, managers should motivate employees to assist others by promoting empathy and willingness. Most employees prefer self-transcendence values and care about the well-being of others and nature.

The study's results suggest insignificant predictions of CDT and CVF for OEP but highlight the positive association between cultural values, HRM policy effectiveness and innovation, and the direct positive influence of labour relations on OEP. However, these two models reveal the insignificant mediating effects of innovation and HRM policy effectiveness. Thus, the managers of South African ISO 14001-certified organisations should consider the importance of ensuring that innovation and HRM policy effectiveness become mediators for initiating improvements in OEP, not only for legitimacy but also to prevent pollution and conserve resources.

Furthermore, South African ISO 14001-certified organisations should acquire the requisite skills to ensure innovation by employing personnel with tacit knowledge of environmental management. Managers should ensure that employees possess appropriate values and align these with their organisational culture, vision and mission.

Organisations should also cultivate a creative culture, ensure that employees' values match their innovation requirements and encourage them to resolve organisational environmental problems. To understand these challenges, managers should comprehend employees' motivational factors and collaborate with them to resolve environmental challenges.

6.3 Management Implications

Organisations, especially the South African ISO 14001-certified organisations that comprise disparate cultures, should promote cultural dimensions that will improve OEP and innovation. Managers should ensure that culture is part of their HRM policies and promote organisational commitment towards innovation. Likewise, managers should ensure that the prevailing culture or cultural changes enhance OEP. HRM policies should promote employees' active participation in decision-making, training processes, teamwork and knowledge sharing. These policies should emphasise innovation and environmental protection to improve OEP without compromising employees' autonomy, responsibility and creativity.

Managers also should improve their work practices, employee motivation and OEP and assess the ability of current policies and practices to improve organisational environmental behaviour. Managers should also improve employees' innovation competencies by providing opportunities that motivate them to experiment in an innovation process. To achieve this goal, managers should align organisational cultural values and individual values because this practice leads to a highly motivated workforce that understands suitable satisfaction factors. Hence, these measures could inspire employees' willingness to improve OEP. Furthermore, managers should effectively and efficiently manage the prevailing and other suitable values that improve OEP.

In addition, managers should promote new values without causing cultural shock by gradually integrating new values within the organisation to improve OEP. These measures could contribute to the superior utilisation of resources, protect the natural environment, and prevent pollution. Managers also need to incorporate OEP into their business visions and missions.

Moreover, managers should understand fundamental values and align them with cultural values. Managers can improve the utilisation of their human resources and skills to improve OEP and innovation. They should communicate essential values effectively to employees to achieve organisational objectives, especially OEP. Managers should motivate, empower and clarify employee responsibilities to avoid conflict and underperformance, especially regarding innovation and OEP. Managers should comprehend the importance of demographic characteristics because these have an essential influence on employees' values and motivational factors. They also should focus on these demographics in HRM policies when seeking

innovation, for example, industrial sector standards, employees' occupational levels and length of service.

6.4 Limitations

This study has several limitations that should be applied cautiously to other situations and contexts. Firstly, the study uses a limited sample of South African SABS ISO 14001-certified organisations. Secondly, it uses purposive convenience sampling, a nonprobability sampling technique. This technique makes the study vulnerable to researcher bias. This sampling technique could result in low reliability and elevated levels of bias. Thirdly, the literature review guided the formulation of the questions for the questionnaire. The reviewed literature mainly relates to studies conducted in countries other than SA. Qualitative studies could have improved the results of this study. Finally, this study uses data collection methods that could result in low response rates and biases. Therefore, this study uses a questionnaire to collect data rather than other complementary methods to compensate for the limitations of the current data collection method.

This study develops and uses models instead of qualitative methods to answer the research methods. It also uses a cross-sectional sample rather than a longitudinal sample and, thus, measures events at a specific time. Future studies should use a longitudinal design because this method could improve researchers' understanding of the directionality and dynamic cultures of individual differences.

Future studies should also investigate and improve the characteristics of this study's sampling method and subsequent sample because improvements in sampling characteristics are necessary to achieve superior results and enhance their external validity. Future studies could enrich the current study's findings by increasing the sample size and, thus, consider using other ISO 14001-certified organisations accredited by SABS competitors operating outside of South Africa. In addition, future studies should compare the OEP of ISO 14001-certified and non-certified organisations to examine the difference.

6.5 Conclusion

This study investigated the impact of organisational culture and values on innovation and OEP in SA ISO 14001 organisations. The research used quantitative methods to analyse the relationship between culture, values, and innovation in OEP. The study found that culture and values play a crucial role in the success of innovation and OEP. This study provided a theoretical context using related literature and tools to ensure the validity of the results.

This study conducted research using CDF, CVF, and SIV models, and it derived these models from a literature review. This study used purposive convenience sampling to collect empirical data from SABS ISO 14001-certified organisations to test the hypotheses. This study discussed the results, made recommendations for future studies, and acknowledged its limitations.

The study highlights the importance of considering factors like employee demographics, work environment, morale, HRM policy effectiveness, and labour relations in understanding the relationship between organisational culture, innovation OEP, SIV and IndEP.

REFERENCES

Ab Hamid, M. R., Mustafa, Z., Suradi, N. R. M., Idris. F., & Abdullah, M. (2011). Multi-factor of employee values: A confirmatory factor analytics (CFA) validation. *African Journal of Business Management*, 5(32), 12632-12640.

Adeoye, A. O., & Elegunde, A. F. (2014). Compensation management and motivation: cooking utensils for organisational performance. *Mediterranean Journal of Social Sciences*, 5(27), 88-97.

Agras, S., & Ates, H. (2015). Investigating the predictive abilities of Schwartz's ten universal values on five work performance outcome behaviours. *Sciences Research Review*, 3(1), 16-31.

Amegayibor, G. K. (2021). The effect of demographic factors on employees' performance: A case of an ownermanager manufacturing firm. *Annals of Human Resource Management Research (AHRMR)*. 1(2), 127-143.

Arieli, S., Sagiv, L., & Roccas., S. (2019). Values at Work: The Impact of Personal Values in Organisations. *Applied Psychology: An International Review*, 69 (2), 230–275.

Bashir, A., Amir, A., Jawaad, M., Hasan, T., & Wickramaratne, R. (2020). Work conditions and job performance: an indirect conditional effect of motivation. *Cogent Business & Management. Taylor & Francis Journals*, 7(1), 1-16.

Bell, E., & Barkhuizen, N. (2011). The relationship between barriers to change and the work engagement of employees in a South African property management company. *SA Journal of Industrial Psychology/SA Tydskrif vir Bedryfsielkunde*, 37(1), 1-11.

Bertsch, A. M. (2011). Validating GLOBE's Societal Values Scales: A Test in the U.S.A. *International Journal of Business and Social Science*, 3(8). 10-23.

Borg, I. (2018). Age- and gender-related differences in the structure and the meaning of personal values. Running head: Value Circle Over Gender and Age, Personality and Individual Difference, 1 – 32.

Ćalışkan, H., Sapmaz, F., & Uzunkol, E. (2014). Value preferences of university students as predictors of life goals. *Social Indicators Research*, 1-16.

Callaghan, C. W. (2017). Motivational values and gendered research performance. *Acta Commercii*, 17(1).

Cameron, K. S., Quinn, R. E., DeGraff, J., & Thakor, A. V. (2006). *Competing values leadership: creating value in organisations*. MPG Books Ltd. Victoria Square Bodmin, United Kingdom

Cankar, S. T., & Petkovšek, V. (2014). Measuring employee satisfaction in public sector organisations: a case research from Slovenia. The Clute Institute International Academic Conference, 8-12 June 2014. Munich, Germany.

De Dominicis, S., Schultz, P. W., & Bonaiuto, M. (2017). Protecting the Environment for Self-interested Reasons: Altruism Is Not the Only Pathway to Sustainability. *Frontiers in Psychology*, *8*(259800), 1-13.

Dias, N. M. O. C., Vidal, D. G., Sousa, H. F. P., Dinis, M. A. P. & Leite, Â. (2020). Exploring Associations between Attitudes towards Climate Change and Motivational Human Values. *MPDI, Climate*, 8(135), 1 – 20.

Dubow, E. F., Boxer, P., & Huesmann, L. R. (2009). Long-term effects of parents' education on children's educational and occupational success: mediation by family interactions, child aggression, and teenage aspirations. *Merrill Palmer Quarterly: Journal of Developmental Psychology*, 55(3), 224-249.

Dunggio, T. (2021). Work motivation on lecturer achievement: job satisfaction as mediating Variables. *Journal of Management*, XXV(02), 312-327.

Feldman, M. S. (2010). Managing the Organization of the Future. *Public Administration Review*, *70*, s159-s163. https://doi.org/10.1111/j.1540-6210.2010.02262.

Fening, F., & Beyer, H. (2014). Cultural value dimensions and implications for international management. The International Journal of Business & Management, 2(6), 1-6.
Fischer, R., Karl, J.A., & Fischer, M. (2019). Norms Across Cultures: A Cross-Cultural Meta-Analysis of Norms Effects in the Theory of Planned Behavior. *Journal of Cross-Cultural Psychology*, 50(10), 1112 -1126.
Fischer, R., Vauclair, C.-M., Fontaine, J. R. J., & Schwartz, S. H. (2010). Are individual-level and country-level value structures different? Testing Hofstede's legacy with the Schwartz Value Survey. *Journal of Cross-Cultural Psychology*, 41(2), 135-151.
Gagne, M., Forest, J., Vansteenkiste, M (UGent)., Crevier-Braud, L., Van den Broeck, A., Aspeli, A. K., Bellerose, J., Benabou, C., Chemolli, E., Güntert, S. T., et al. (2015) *European Journal Of Work And Organizational Psychology*. 24(2). 178-196.
Garcia, A. S., Da-Silva, W. M., Orsato, R. J. (2017). Sensitive Industries Produce Better ESG Performance: Evidence from Emerging Markets, *Journal of Cleaner Production*,150, 135-147.
Gashi, L. M., Požega, Ž., & Crnković, B. (2017). Employees' individual values as a source of human capital. *Economic Research-Ekonomska Istraživanja*, 30(1), 1057-1072.
Guerci, M., Longoni A., & Luzzini, D. (2016). Translating stakeholder pressures into EP – the mediating role of green HRM practices. *International Journal of Human Resource Management,* 27(2), 262-289.
Hair, J. F., Sarstedt, M., Ringle, C. M., & Mena, J. A. (2012). An assessment of the use of partial least squares structural equation modelling in marketing research. *Journal of the Academy of Marketing Science,* 40(2012), 414-433.
Hartnell, C. A., Ou, A. Y., & Kinicki, A. (2011). Organisational culture and organisational effectiveness: a meta-analytic investigation of the competing values framework's theoretical suppositions. *Journal of Applied Psychology*, 96(4), 677-694.
Hassan, B. & Ogunkoya, O. (2014). Demographic Variables and Job Performance: Any Link? A Case of Insurance Salesmen. *Acta Universitatis Danubius*, Economica, 10 (4), 1-8.
Hatinoğlu, A. & Ergün, D. (2020). The Effects of Socio-Demographic Characteristics and Working Conditions on the Work Motivations of Employees Working in Health Services in Turkey. *Revista Argentina de Clínica Psicológica*, XXIX(5), 1848-1859
Prentice, G., McLaughlin, C., & Brady, J. Education Service Quality, Value and Satisfaction on
Jackalas, M.B., Martins, N., & Ungerer, L.M. (2016). The Impact of Demographic Variables on Organisational Culture and Employee Motivation: Evidence from a Health Insurance Company in Botswana. *Journal of Contemporary Management,* 13(1), 357-384.
Jackalas, M.B., Martins, N., & Ungerer, L.M. (2016). The Impact of Demographic Variables on Organisational Culture and Employee Motivation: Evidence from a Health Insurance Company in Botswana. *Journal of Contemporary Management,* 13(1), 357-384.
Jariya, I. A. M. (2012). Western cultural values and its implications on management practices. *South East Asian Journal of Contemporary Business, Economics and Law*, 1, 61-70.
Jena, R. K. (2015). An assessment of demographic factors affecting organizational commitment among shift workers in India. *Management,* 20(1), 59-77.
Jetmarova, B. (2011). Comparison of best practice benchmarking models. *Problems of Management in the 21st Century*, 2(2011), 76-84.
Kalia, N., & Bhardwa, B. (2019) Contextual and Task Performance: Do Demographic and
Kalia, N., Bhardwaj, B. (2019). Contextual and task performance: role of employee engagement and organizational culture in hospitality industry. *XIMB Journal of Management*, 18(2), 187-201.
Knafo, A., & Sagiv, L. (2004). Values and work environment: Mapping 32 occupations. *European Journal of Psychology of Education*, 19(3):255-273.

Koivula, N. (2008). *Basic human values in the workplace*. Retrieved August, 15, 2020 from https://helda.helsinki.fi/bitstream/handle/10138/23465/basichum.pdf?isAllowed=y&sequence=2.
Lambooij, M., Sanders, K., Koster, F., & Zwiers, M. (2006). Human resource practices and organisational performance: can the HRM-performance linkage be explained by the co-operative behaviours of employees? *Management Review*, 17(3), 223-240.
Levontin, L., & Bardi, A. (2019). Using personal values to understand the motivational basis of amity goal orientation. *Frontiers in Psychology*, 9(2736), 1-19.
Lindquist, E. A., & Marcy, R. T. (2014). The competing values framework: strategic implications for leadership, conflict and change in public organisations. *Proceedings of the 3rd Research Conference of the Canadian Association of Programmes in Public Administration*, 19 May 2014. Ontario, Canada.
Manzoor, Q-A. (2012). Impact of employees' motivation on organisational effectiveness. *European Journal of Business and Management*, 3(3), 36-44.
Met, M., & Ali, I. (2014). Investigating the Moderating Effect of Demographic Factors on the Relationship between Monetary Motivation and Employees' Job Satisfaction at Oil and Gas Offshore Production Facilities in Malaysia. *International Review of Management and Business Research, 3*(2), 788-8.
Meuleman, B., Davidov, E., Schmidt, P., & Billiet, J. (2012). Social location and value priorities. A European-wide comparison of the relation between social-structural variables and human values. In: Gabriel, O., & Keil, S. (Eds.) (pp. 43-67). *Society and democracy in Europe*. Routledge. England, UK.
Miah, M. M. (2018). The impact of employee job satisfaction toward organizational performance: a study of private sector employees in Kuching, East Malaysia. *International Journal of Scientific and Research Publications*, 8(12), 270-278.
Miralam, M. S., & Ali, N. (2020). Employees self-efficacy, optimism, hope, resilience and demographic variables as the determinants of job performance. *International Journal on Emerging Technologies*, 11(3), 336-343.
Mundhe, E. S. (2018). A study of the influence of parents' education and income level on academic performance of the students. *Aayushi International Interdisciplinary Research Journal (AIIRJ)*, V(III), 190-194.
Muñoz-Galiano, I. M., Connor, J. D. Gómez-Ruano,M. A., & Torres-Luque, G. Influence of the Parental Educational Level on Physical Activity in Schoolchildren. *Sustainability*, 12(3920); 1-11.
Mustafa, G., Glavee-Geo, R., & Rice, P. M. (2017). Teamwork orientation and personal learning: the role of individual cultural values and value congruence. *SA Journal of Industrial Psychology*, 43, 1446.
Nieß, C., & Zacher, H. (2015). Openness to Experience as a Predictor and Outcome of Upward Job Changes into Managerial and Professional Positions. *PLOS ONE*, 10(6), e0131115.1-14.
Niles, M. T., Schimanski, L. A., McKiernan, E. C., & Alperin, J. P. (2020). Why we publish where we do: Faculty publishing values and their relationship to review, promotion and tenure expectations. *PLOS ONE*, *15*(3), e0228914. 1-15.
Nurcahyono, H, B., & Mardiati, E. (2019). The effect of demography characteristics, remunerisation, job redesign on employee performance with job satisfaction as mediation. *International Journal of Business, Economics and Law*, 18(5), 265-272.
Omori, A., & Bassey, P. U. (2019). Demographic characteristics and workers' performance in public service in Nigeria. *International Journal of Research and Innovation in Social Science*, 3(2), 141-148.
Organizational variables matter? Rajagiri Management Journal,13(2) , 30-42.

Papaioannou, A. G., & Krommidas, C. (2020). Self-transcendence achievement goals and well-being. *International Journal of Sport and Exercise Psychology, 19*(2), 215–245.
Parks, L., & Guay, R. P. (2009). Personality, values, and motivation. *Personality and Individual Differences,* 47, 675-684.
Parks, L., & Guay, R. P. (2009). Personality, values, and motivation. *Personality and Individual Differences, 47*(7), 675–684. https://doi.org/10.1016/j.paid.2009.06.002
Pinar, B., Emel, İ., Faiza, M., & Sanaz, T. (2022). Analysis of Organizational Culture: A Multiple Case Study. *Journal of Organizational Behavior Research*, 7, 267-279.
Poortinga, W., Whitmarsh, L., Steg, L., Böhm, G., & Fisher, S. (2019). Climate change perceptions and their individual-level determinants: a cross-European analysis. *Global Environmental Change*, 55, 25-35.
Primc, K., Ogorevc, M., Slabe-Erker, R., Bartolj, T., & Murovec., N. (2021). How does Schwartz's theory of human values affect the proenvironmental behavior model? Baltic Journal of Management, 16(2), 276-297.
Purc, E., & Laguna, M. (2019). Personal values and innovative behavior of employees. *Frontiers in Psychology, 10(*865),
Reichenheim, M. E., Hökerberg, Y. H. M., & Moraes, C. L. (2014). Assessing construct structural validity of epidemiological measurement tools: a seven-step roadmap. *Cad. Saúde Pública, Rio de Janeiro*, 30(5), 927-939.
Ros, B. (2021) The Effect of Overseas Educational Experience on Pro-Environmental Practices: Evidence from Cambodian Academic Scholars. *Journal of Environmental Protection,* 12(11), 824-854.
Sagiv, L., & Schwartz, H. S. (2007). Cultural values in organisations: insights for Europe. *European Journal of International Management*, 1(3), 176-190.
Schwartz, S. H. (2012). An overview of the Schwartz theory of basic values. *Online Readings in Psychology and Culture*, 2(1).
Seibert, S. E., Crant, J. M., & Kraimer, M. L. (1999) Proactive personality and career success. *J Appl Psychol*. 1999 Jun;84(3):416-27.
Shaju, M., & Subhashini, D. (2017). A study on the impact of job satisfaction on job performance of employees working in automobile industry, Punjab, India. *Journal of Management Research*, 9(1), 117-130.
Shukla, S., Adhikari, B. & Singh, V. (2015). Employee Engagement - Role of Demographic Variables and Personality Factors. *Amity Global HRM Review*, 65 – 73.
Singaravelloo, K., & Kamiab, Z. (2016). The relationship between human values and service quality with the mediating role of motivation: a quantitative study on Malaysian commercial banks. *International Journal of Economics and Management Engineering,* 10(11), 1-9.
Sorvali, J., Liu, X., & Kaseva, J. (2022). Climate change opportunities reduce farmers' risk perception: Extension of the value-belief-norm theory in the context of Finnish agriculture. *Frontiers in Psychology*, 13, 939201. https://doi.org/10.3389/fpsyg.2022.939201.
Student Customer Intentions and Behaviour. 90-112.
Sungmala, N. & Verawat, A. (2021). The Impact of Employee Engagement on Employee Performance: A Case Study of Multinational Corporations in Thailand. *Journal of Assian Finance, Economics and Business*, 8(5), 1091 – 1097.
Sungmala, N. & Verawat, A. (2021). The Impact of Employee Engagement on Employee Performance: A Case Study of Multinational Corporations in Thailand. *Journal of Assian Finance, Economics and Business*, 8(5), 1091 - 1097
Szekeres, A., Wasnik, P. S., & Snekkenes, E. A. (2019). Using demographic features for the prediction of basic human values underlying stakeholder motivation. Proceedings of the 21st International Conference on Enterprise Information Systems (IINNOVATIONS), 3-5 May 2019. Heraklio, Crete, Greece.

Tabatabaei, S., Ghaneh, S., Mohaddes, H., Khansari, M. M. (2013). Relationship of job satisfaction and demographic variables in pars ceram factory employees in Iran. 3rd World Conference on Psychology, Counselling and Guidance (WCPCG-2012). *Procedia Social and Behavioral Sciences*, 84. 1795 – 1800.
Ugwu, Cyprian & Ugwu, Mercy. (2017). Demographic Variables and Job Performance of Librarians in University Libraries in South East Nigeria. Library Philosophy and Practice. 2017.1-17.
Wahyu, A. D. (2016). Why do I study? The mediating effect of motivation and self-regulation on student performance. *Business, Management and Education*, 14, 153-178.
Waisfisz, B. (2012). *An organisational cultural perspective.* ITIM International. Hague, Netherlands.
Wong, K.-K. (2013). Partial least squares structural equation modelling (PLS-SEM) techniques using SmartPLS. *Marketing Bulletin*, 24(1), 1-32.
Yahyagil, M. Y., & Otken, A. B. (2011). Cultural values from managers' and academicians' perspectives: the case of Turkey. *Management Research Review*, 34(9), 1018-1041.
Yasir, N.; Xie, R.; Zhang, J. (2022). The Impact of Personal Values and Attitude toward Sustainable Entrepreneurship on Entrepreneurial Intention to Enhance Sustainable Development: Empirical Evidence from Pakistan. Sustainability, (6792), 1-20.
Yazdi, M. T., Motallebzadeh, K., Ashraf, H., & Baghaei, P. (2017). A latent variable analysis of continuing professional development constructs using PLS-SEM modeling, *Cogent Education*, 4(1), 1-16.
Zelenski, J. M., & Desrochers, J. E. (2021). Can positive and self-transcendent emotions promote pro-environmental behavior? *Curr Opin Psychol*, 42, 31-35.
Zelenski, John & Desrochers, Jessica. (2021). Can positive and self-transcendent emotions promote pro-environmental behavior? 1-19.

APPENDICES

APPENDIX A: COVER LETTER 1

University of the Witwatersrand
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1 Jan Smuts Avenue
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South Africa
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Email: nokanengnme@gmail.com

Good day.

Currently I am registered for the Doctor of Philosophy in Management degree and am completing a thesis in the School of Business Sciences. I want to invite you to take part in this research. My research investigates the relationship between organisational culture, innovation, and organisational environmental performance in South African ISO 14001-certified organisations. The proposed research will be in the form of a survey. The survey research will entail the distribution of questionnaires to employees.

The research will attempt to contribute to an improved understanding and knowledge in determining the interrelationships between organisational environmental performance and innovation with organisational cultural values to understand better how to attain organisational environmental performance in South African ISO 14001-certified organisations.

The research is for academic publication purposes only. The final thesis will entail research results, which the University of the Witwatersrand will publish. The study will ensure confidentiality at all times and will not require details that might specifically identify an individual provided at any stage. The study will secure and store questionnaires and all the relevant data by the appropriate Information Technology policies and procedures of the University of Witwatersrand in a secure location. The study will also store digital data in such

a manner to avoid accidental damage, and the names of the companies and participating individuals will be anonymised. The study will keep all data, information, and related documentation in a password-secured computer with continuous backup to ensure data integrity and avoid data loss and damage. The study will remove all identifying features from the data.

I undertake to conduct myself and my research in a manner that reflects the professional ethics of the university. Participants can direct any queries regarding the questionnaire or any other aspect of the research to me or my Supervisor, Professor Chris Callaghan, at the email addresses or telephone numbers listed below.

Yours sincerely,

_____

Tshepo Nokaneng
nokanengnme@gmail.com
076 795 9654

Prof Chris Callaghan
Chris.Callaghan@wits.ac.za
011 717 8066

APPENDIX B: CONSENT FORM (QUESTIONNAIRE 1)

Participation Consent Form

The title of research project: Organisational culture, innovation, and environmental performance in South African ISO 14001 certified organisations.

Name of principal researcher: Tshepo Nokaneng

Department/research group address:
The University of the Witwatersrand
School of Business Sciences
1 Jan Smuts Avenue
Braamfontein
Johannesburg
South Africa
Telephone: +27 (0)11 717 1000
Email: nokanengnme@gmail.com

Nature of the research: This study investigates the relationship between organisational culture, innovation, and organisational environmental performance in South African ISO 14001-certified organisations. Managers and employees must complete questionnaires about the relationship between organisational culture, innovation, and environmental performance in South African ISO 14001-certified organisations.

Participant's involvement:

What is involved: To complete proportionally distributed questionnaires on organisational culture, innovation, and environmental performance in South African ISO 14001-certified organisations.

Risks (Low risk): Time spent on filling out the form may be inconvenient.

Benefits: To contribute to a body of knowledge on the relationship between organisational culture, innovation, and environmental performance in South African ISO 14001-certified organisations.

I acknowledge the following:

I agree to participate in this research project.
I have read this consent form and its information and have had the opportunity to ask questions about it.
I agree with my responses being used for education and research on condition that my privacy is respected, subject to the following:
I understand that my details will not/may be included in the research/will be used in aggregate form only so that I will not be personally identifiable (delete as applicable).
I understand that I am not obligated to participate in this project.
I understand I can withdraw from this project at any stage.

You consent to participate in the research project by participating in this survey.

APPENDIX C: QUESTIONNAIRE 1

Instructions: Using the scales provided, mark with an **X** the number most accurately reflects your response to each statement below. There are no right or wrong answers, so offer your immediate impressions. Your confidentiality is guaranteed.

To what extent do you feel the following statements or adjectives describe, are associated with, or represent your organisational culture (1 = To a small extent; 2 = To an extent; 3 = To moderat extent; 4 = To a fair extent; 5 = To a great extent)?

Please mark the appropriate box:

Please indicate your gender.	Male	1	Female	2

Please indicate which age range you fall into.	20–24	25–29	30–34	35–39	40–44	45–49	50 and over
	1	2	3	4	5	6	7

In which industry does your company operate.	Engineering	Mining	Healthcare	Education	Government	Information technology	Retail	Transportation	Manufacturing	Non-profit	Construction	Hospitality	Telecommunications	Other
	1	2	3	4	5	6	7	8	9	10	11	12	13	14

What is your current occupation/position/ designation in the company.	General worker	Operator/ front line employee	Officer or administrator	Supervisor/ team leader or foreman	Mid-level manager	Senior manager	Director/ executive manager	Other
	1	2	3	4	5	6	7	8

How long have you worked (or done work experience) for your current employer or organisation.	<1 year	1 year	2 years	3 years	4 years	5 years	6 or more years
	1	2	3	4	5	6	7

How long have you been employed or working in your current occupation/ position/ designation.	<1 year	1 year	2 years	3 years	4 years	5 years	6 or more years
	1	2	3	4	5	6	7

What is the highest degree or level of education you have completed? If enrolled, indicate or mark the previous or highest degree, grade or level achieved.	<1 Matric	Matric	Degree or diploma	Honours or higher diploma	Masters	Doctorate
	1	2	3	4	5	6

What is the highest degree or level of education your father has completed, or what qualification or degree/level of education do you have? If he is enrolled, indicate the previous or highest degree, grade or level achieved.	<1 Matric	Matric	Degree or diploma	Honours or higher diploma	Masters	Doctorate
	1	2	3	4	5	6

What is the highest degree or level of education your mother has completed, or what qualification or degree/level of education do you have? If she is enrolled, indicate or mark the previous or highest degree, grade or level achieved.	<1 Matric	Matric	Degree or diploma	Honours or higher diploma	Masters	Doctorate
	1	2	3	4	5	6

What is your home language.	Xhosa	English	Afrikaans	Sepedi	Setswana	Tsonga	Venda	Zulu	IsiNdebele	Isiswati	Sesotho
	1	2	3	4	5	6	7	8	9	10	11

To what extent do you feel the following statements or adjectives describe, are associated with, or represent your organisational culture (1 = To a small extent; 2 = To an extent; 3 = To a moderate extent; 4 = To a fair extent; 5 = To a great extent)?

Description of Measure/Variable	1. To a Small Extent	2. To an Extent	3. To a Moderate Extent	4. To a Fairly Extent	5. To a Great Extent
PD11: To what extent do managers use authority and power when dealing with subordinates.					
PD12: To what extent do managers avoid social interaction with their subordinates.					
PD13: To what extent do subordinates obey their leaders without question.					
PD14: To what extent is power concentrated at the top of the organisation.					
PD15: To what extent are managers respected and feared.					
PD16: To what extent are special privileges given to managers.					
UN17: To what extent are the job requirements and instructions explained and spelt out so that employees always know what they are expected to do.					

UN18: To what extent do managers expect employees to follow instructions and procedures closely.					
UN19: To what extent are rules and regularities essential to inform employees of what the organisation expects of them.					
UN20: To what extent are standard operating procedures helpful to employees?					
UN21: To what extent are instructions for operations necessary for the employees' work.					
UN22: To what extent is the organisation comfortable with unfamiliar situations and risk-taking.					
MA23: To what extent does the organisational culture promote passive (obedient, patient, and compliant) rather than forceful (commanding, bullish, authoritative, strong, and dominant) behaviours and values.					
MA24: To what extent does the organisational culture promote self-centredness (self-centred, narcissistic, and self-regarding)					

rather than modest (fair, satisfactory, tolerable, acceptable, humble and moderate) behaviours and values.					
MA25: To what extent does the organisation promote self-confidence (self-assurance, assertiveness, positiveness, and composure) rather than unassured (insecure, lack confidence and boldness) behaviour and values.					
MA26: To what extent does the organisational culture promote bold (courageous, fearless, daring, and brave) rather than timid (fearful, afraid, faint-hearted, and scared) behaviours and values.					
MA27: To what extent is the organisational culture characterised as weak, gentle, meek, and passive.					
MA28: To what extent is the organisational culture characterised as aggressive, strong, active, achievement-oriented, and dominant.					

CO29: To what extent is being accepted by the members of your workgroup important.					
CO30: To what extent do managers encourage group loyalty over individual goals.					
CO31: To what extent are individuals expected to give up their goals to benefit group success.					
CO32: To what extent does the organisation value team spirit more than individualism.					
CO33: To what extent do relationships prevail over work.					
CO34: To what extent is group harmony maintained.					
CL35: To what extent is the development of human resources and concerns about employees valued.					
CL36: To what extent are employees encouraged to collaborate and exchange opinions, experiences, and ideas.					
CL37: To what extent are employees encouraged to openly discuss their opinions and ideas with senior employees.					

CL38: To what extent are employees encouraged to make decisions as a team.					
CL39: To what extent do teamwork, consensus, and participation characterise the management style.					
CL40: To what extent does team spirit characterise the organisational culture.					
HI41: To what extent do formalised procedures generally govern what people do.					
HI42: To what extent is the organisation a controlled and structured place.					
HI43: To what extent do coordination, management, and efficiency exemplify leadership.					
HI44: To what extent do informal rules and policies hold the organisation together.					
HI45: To what extent does the organisation emphasise permanence and stability.					
HI46: To what extent does the organisation define succession on efficiency.					

DE47: To what extent are opportunities for creating new challenges emphasised.					
DE48: To what extent is an effort made to anticipate the potential aspects of new manufacturing practices and technologies.					
DE49: To what extent is the organisation a dynamic, entrepreneurial place which leads people to take risks.					
DE50: To what extent is a management style characterised by individual risk-taking, innovation, freedom, and uniqueness.					
DE51: To what extent do innovation and new products define success.					
DE52: To what extent does the organisation emphasise innovation and creative ideas?					
RA53: To what extent is success defined as winning and leading in the marketplace.					
RA54: To what extent does the reward system encourage employees to reach organisational goals.					
RA55: To what extent is the organisation results- and achievement-oriented, as people are very competitive.					

RA56: To what extent does the organisation have a clear direction, objective setting, and goal clarity.					
RA57: To what extent does the company diagnose the organisational culture and determine whether the existing culture aligns with the competitive environment.					
RA58: To what extent is the future direction of the company communicated to everyone.					
OC59: To what extent is the organisational structure based on team structure.					
OC60: To what extent do employees feel a sense of belonging to the team.					
OC61. To what extent are employees proud to be part of the team.					
OC62: To what extent do employees feel worthwhile working together.					
OC63: To what extent are team members good friends and close to one another.					
OC64: To what extent is social interaction valuable to the team.					
HR65: To what extent does the organisation distribute					

information about external and internal recruitment processes.					
HR66: To what extent does the organisation release information to applicants regarding the steps and criteria of the selection process.					
HR67: To what extent does the organisation help develop skills needed to accomplish duties (e.g., training, conferences).					
HR68: To what extent does the organisation discuss competency-based performance appraisal criteria and results with its employees.					
HR69: To what extent does the organisation invest in development and education, promoting personal and professional growth.					
HR70: To what extent does the organisation provide incentives such as promotions, commissioned functions, awards, and bonuses.					
OM71: To what extent are people enthusiastic about their work.					

OM72: To what extent does the organisation treat its employees with respect and attention.					
OM73: To what extent is the organisation concerned with the safety of its employees.					
OM74: To what extent does the organisation give open and honest feedback.					
OM75: To what extent does the organisation spend time building trust within its workforce?					
OM76: To what extent is the organisation concerned with its employees' health and quality of life.					
LR77: To what extent do trade unions play a vital role in representing employees' interests.					
LR78: To what extent does the organisation implement the relevant disciplinary procedures.					
LR79: To what extent do unions and management respect each other's roles.					
LR80: To what extent do management and unions work according to collective agreements.					

LR81: To what extent do employees abstain from work due to poor relationships with management.					
LR82: To what extent do employees resign and leave the organisation due to poor relations with management.					
INNOV89: To what extent is the organisation continually seeking new opportunities in the marketplace.					
INNOV90: To what extent are new ideas readily accepted.					
INNOV91: To what extent are innovative ideas rewarded.					
INNOV92: To what extent is management quick to spot the need to do things differently.					
INNOV93: To what extent is assistance in developing new ideas readily available.					
INNOV94: To what extent do people always search for new ways of solving problems.					
OEP95: To what extent does the organisation have water conservation measures to save water, reduce cost and increase efficiency.					
OEP96: To what extent does the organisation select and use energy-efficient electrical,					

mechanical and lighting fixtures to save energy.					
OEP97: To what extent do the waste management operations include a recycling or reuse programme(s) for its production operations.					
OEP98: To what extent does the organisation include environmental information on its products, marketing and communication material.					
OEP99: To what extent does the company minimise or reduce hazardous or toxic materials and substances.					
OEP100: To what extent does the organisation try to reduce or eliminate toxic/hazardous air emissions.					

Thank you very much for your cooperation. I value and appreciate your time and input. Please be assured that your response will remain confidential and anonymous. Once completed, please forward to:

T.I.M NOKANENG
P. O Box 12219, Hatfield, 0028
Email:nokanengnme@gmail.com
Cell No: (076) 795 9654

APPENDIX D: COVER LETTER 2

University of the Witwatersrand
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Yours sincerely,

_____

Tshepo Nokaneng
nokanengnme@gmail.com
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APPENDIX E: CONSENT FORM (QUESTIONNAIRE 2)

Participation Consent Form

The title of research project: Organisational culture, innovation, and environmental performance in South African ISO 14001 certified organisations.

Name of principal researcher: Tshepo Nokaneng

Department/research group address:

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Nature of the research: This study investigates the relationship between organisational culture, innovation, and organisational environmental performance in South African ISO 14001-certified organisations. Managers and employees must complete questionnaires about the relationship between organisational culture, innovation, and environmental performance in South African ISO 14001-certified organisations.

Participant's involvement:

What is involved: To complete proportionally distributed questionnaires on organisational culture, innovation, and environmental performance in South African ISO 14001-certified organisations.

Risks (Low risk): Time spent on filling out the form may be inconvenient.

Benefits: To contribute to a body of knowledge on the relationship between organisational culture, innovation, and environmental performance in South African ISO 14001-certified organisations.

I acknowledge the following:

I agree to participate in this research project.
I have read this consent form and its information and have had the opportunity to ask questions about it.
I agree with my responses being used for education and research on condition that my privacy is respected, subject to the following:
I understand that my details will not/may be included in the research/will be used in aggregate form only so that I will not be personally identifiable (delete as applicable).
I understand that I am not obligated to participate in this project.
I understand I can withdraw from this project at any stage.

You consent to participate in the research project by participating in this survey.

APPENDIX F: QUESTIONNAIRE 2

Instructions: Using the scales provided, mark with an **X** the number most accurately reflects your response to each statement below. There are no right or wrong answers, so offer your immediate impressions. Your confidentiality is guaranteed.

To what extent do you feel the following statements or adjectives describe, are associated with, or represent your organisational culture (1 = To a small extent; 2 = To an extent; 3 = To moderat extent; 4 = To a fair extent; 5 = To a great extent)?

Please mark the appropriate box:

Please indicate your gender.	Male	1	Female	2

Please indicate which age range you fall into.	20–24	25–29	30–34	35–39	40–44	45–49	50 and over
	1	2	3	4	5	6	7

In which industry does your company operate.	Engineering	Mining	Healthcare	Education	Government	Information technology	Retail	Transportation	Manufacturing	Non-profit	Construction	Hospitality	Telecommunications	Other
	1	2	3	4	5	6	7	8	9	10	11	12	13	14

What is your current occupation/position/ designation in the company.	General worker	Operator/ front line employee	Officer or administrator	Supervisor/ team leader or foreman	Mid-level manager	Senior manager	Director/ executive manager	Other
	1	2	3	4	5	6	7	8

How long have you worked (or done work experience) for your current employer or organisation.	<1 year	1 year	2 years	3 years	4 years	5 years	6 or more years
	1	2	3	4	5	6	7

How long have you been employed or working in your current occupation/ position/ designation.	<1 year	1 year	2 years	3 years	4 years	5 years	6 or more years
	1	2	3	4	5	6	7

What is the highest degree or level of education you have completed? If enrolled, indicate or mark the previous or highest degree, grade or level achieved.	<1 Matric	Matric	Degree or diploma	Honours or higher diploma	Masters	Doctorate
	1	2	3	4	5	6

What is the highest degree or level of education your father has completed, or what qualification or degree/level of education do you have? If he is enrolled, indicate the previous or highest degree, grade or level achieved.	<1 Matric	Matric	Degree or diploma	Honours or higher diploma	Masters	Doctorate
	1	2	3	4	5	6

What is the highest degree or level of education your mother has completed, or what qualification or degree/level of education do you have? If she is enrolled, indicate or mark the previous or highest degree, grade or level achieved.	<1 Matric	Matric	Degree or diploma	Honours or higher diploma	Masters	Doctorate
	1	2	3	4	5	6

What is your home language.	Xhosa	English	Afrikaans	Sepedi	Setswana	Tsonga	Venda	Zulu	IsiNdebele	Isiswati	Sesotho
	1	2	3	4	5	6	7	8	9	10	11

To what extent do you feel the following statements or adjectives describe or are associated or represent your organisational culture (1 = To a small extent; 2 = To an extent; 3 = To moderate extent; 4 = To a fair extent; 5 = To a great extent)?

Description of Measure/ Variable	Latent construct descriptions	1. To a Small Extent	2. To an Extent	3. To a Moderate Extent	4. To a Fairly Extent	5. To a Great Extent
ISF11: To what extent do you put effort into your job because you want to prove to yourself that you can.	Intrinsic Satisfaction Factors					
ISF12: To what extent do you put effort into your job because it makes you feel proud.	Intrinsic Satisfaction Factors					
ISF13: To what extent do you put effort into your job; otherwise, you will feel ashamed.	Intrinsic Satisfaction Factors					
ISF14: To what extent do you put effort into your job; otherwise, you will feel bad about yourself.	Intrinsic Satisfaction Factors					
ISF15: To what extent do you put effort into your work because it is personally meaningful to put effort into the job.	Intrinsic Satisfaction Factors					
ISF16: To what extent do you put effort into your work because it aligns with your values.	Intrinsic Satisfaction Factors					

ISF17: To what extent do you put effort into your work because it has personal significance.	Intrinsic Satisfaction Factors					
ESF18: To what extent do you do your work to get material rewards.	Extrinsic Satisfaction Factors					
ESF19: To what extent do you do your work because the organisation provide good physical working conditions.	Extrinsic Satisfaction Factors					
ESF20: To what extent do you do your work due to the associated performance bonus and benefits.	Extrinsic Satisfaction Factors					
ESF21: To what extent do you put effort into your job because the organisation will reward you financially.	Extrinsic Satisfaction Factors					
ESF22: To what extent do you put effort into your job because it offers job security.	Extrinsic Satisfaction Factors					
ESF23: To what extent do you put effort into your job to avoid the risk of losing your job.	Extrinsic Satisfaction Factors					
SIV24: To what extent is looking after the environment and caring for nature important to you.	Self-Transcendence *Universalism*					
SIV25: To what extent do you feel the equal treatment and justice for everyone worldwide is essential to you.	Self-Transcendence *Universalism*					

SIV26: To what extent do you help the people nearby and care for their well-being.	Self-Transcendence *Benevolence*					
SIV27: To what extent are you loyal and devoted to people close to you.	Self-Transcendence *Benevolence*					
SIV28: To what extent do you behave properly to avoid doing anything people would say is wrong.	Self-Transcendence *Conformity*					
SIV29: To what extent do you follow the rules even when no one is watching.	Self-Transcendence Conformity					
SIV30: To what extent do you feel that tradition, to follow the customs handed down by one's religion or family, is essential.	Conservation *Tradition*					
SIV31: To what extent do you do things in traditional ways and keep up with learned customers.	Conservation *Tradition*					
SIV32: To what extent do you feel living in secure surroundings to avoid anything dangerous is essential.	Conservation *Security*					
SIV33: To what extent do you feel social order is protected and the country is safe from within and without threats.	Conservation *Security*					
SIV34: To what extent do you feel being rich to have a lot of	Self-enhancement *Power*					

money and expensive things is essential.						
SIV35: To what extent do you feel that being in charge and telling others what to do is essential.	*Power*					
SIV36: To what extent do you feel that being successful is essential to have people recognizing one's achievements.	Self-enhancement *Achievement*					
SIV37: To what extent is showing your abilities and being admired by others essential.	Self-enhancement *Achievement*					
SIV38: To what extent do you feel having an enjoyable time is essential to "spoil" oneself.	Openness to Change *Hedonism*					
SIV39: To what extent do you feel having fun and pleasure is essential.	Openness to Change *Hedonism*					
SIV40: To what extent do you believe adventure and risk-taking are essential to an exciting life.	Openness to Change *Stimulation*					
SIV41: To what extent do you like surprises, doing new things and lots of things differently.	Openness to Change *Stimulation*					
SIV42: To what extent do you contribute to creative and new ways of doing things.	Openness to Change *Self-direction*					
SIV43: To what extent do you feel that in making one's decision, having free time to plan and choose one's activities is essential to you.	Openness to Change *Self-direction*					

IndEP44: To what extent do you contribute to the water conservation measures to reduce cost and increase efficiency.	IndEP					
IndEP45: To what extent do you contribute to selecting and using energy-efficient electrical, mechanical and lighting fixtures.	IndEP					
IndEP46: To what extent do you contribute to waste management operations, including a recycling programme(s).	IndEP					
IndEP47: To what extent do you contribute to products, marketing and communication material with environmentally friendly initiatives.	IndEP					
IndEP48: To what extent do you contribute to minimisation or phasing out the purchase, use, handling and disposal of material and substances that are hazardous or toxic.	IndEP					
IndEP49: To what extent do you try to reduce or eliminate the	IndEP					

toxic/hazardous air emissions.						

Thank you very much in advance for your cooperation. I really value and appreciate the time you have contributed to this project.

Please be assured that your response will remain confidential and anonymous on completion.

Once completed, please forward to:

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Email:nokanengnme@gmail.com
Cell No: (076) 795 9654

APPENDIX G: CDT MODEL

Table 42: EM Means (CDT and CVF)

EM means[a]								
PD11	PD12	PD13	PD14	PD15	PD16	UN17	UN18	UN19
3.45	3.27	3.38	3.52	3.43	3.35	3.06	3.47	3.57
CL37	CL38	CL39	CL40	HI41	HI42	HI43	HI44	HI45
3.25	3.1	3.27	3.51	3.47	3.25	3.14	3.1	3.14
OC63	OC64	HR65	HR66	HR67	HR68	HR69	HR70	OM71
3.28	3.37	3.31	3.33	3.2	3	3.27	3.61	3.49
UN20	UN21	UN22	MA23	MA24	MA25	MA26	MA27	MA28
3.49	3.51	3.51	3.55	3.53	3.78	3.61	2.06	3.6
HI46	DE47	DE48	DE49	DE50	DE51	DE52	RA53	RA54
3.45	3.8	3.88	3.29	3.33	3.82	3.92	3.32	4.24
OM72	OM73	OM74	OM75	OM76	LR77	LR78	LR79	LR80
3.2	3.24	3.33	3.29	3.24	3.1	2.94	2.84	2.92
CO29	CO30	CO31	CO32	CO33	CO34	CL35	CL36	LR81
3.73	3.82	3.32	3.76	3.2	3.61	3.92	3.92	3.12
RA55	RA56	RA57	RA58	OC59	OC60	OC61	OC62	LR82
3.47	3.37	3.18	3.39	3.56	3.63	3.68	3.68	3.22
INNOV89	INNOV90	INNOV91	INNOV92	INNOV93	INNOV94	OEP95	OEP96	OEP97
3.4747	3.3535	3.1818	3.1616	3.1616	3.1616	3.1818	3.0808	3.1212
OEP98	OEP99	OEP100						
3.0404	2.8686	3.0606						

a. Little’s MCAR test: Chi-Square = 25.269, DF = 1.412, Sig. = 1.000

Table 43: Skewness and Kurtosis of Model (CDT)

Descriptive			
		Statistic	Std. Error
PD11	Skewness	0.045	0.333
	Kurtosis	–0.805	0.656
PD12	Skewness	–0.034	0.333
	Kurtosis	–0.853	0.656
PD13	Skewness	0.191	0.333
	Kurtosis	–0.856	0.656
PD14	Skewness	–0.322	0.333
	Kurtosis	0.117	0.656
PD15	Skewness	–0.089	0.333
	Kurtosis	–0.058	0.656
PD16	Skewness	–0.572	0.333
	Kurtosis	0.234	0.656
UN17	Skewness	–0.040	0.333
	Kurtosis	0.681	0.656
UN18	Skewness	0.241	0.333
	Kurtosis	–0.823	0.656
UN19	Skewness	–0.460	0.333
	Kurtosis	–0.275	0.656
UN20	Skewness	–0.042	0.333
	Kurtosis	–0.700	0.656

UN21	Skewness	0.040	0.333
	Kurtosis	–0.916	0.656
UN22	Skewness	0.116	0.333
	Kurtosis	–0.618	0.656
MA23	Skewness	–0.173	0.333
	Kurtosis	–0.198	0.656
MA24	Skewness	–0.236	0.333
	Kurtosis	–0.140	0.656
MA25	Skewness	–0.287	0.333
	Kurtosis	–0.799	0.656
MA26	Skewness	0.177	0.333
	Kurtosis	–0.598	0.656
MA27	Skewness	0.642	0.333
	Kurtosis	–0.708	0.656
MA28	Skewness	–0.125	0.333
	Kurtosis	–0.339	0.656
CO29	Skewness	–0.015	0.333
	Kurtosis	–1.017	0.656
CO30	Skewness	–0.310	0.333
	Kurtosis	–1.107	0.656
CO31	Skewness	–0.064	0.333
	Kurtosis	–0.385	0.656
CO32	Skewness	–0.046	0.333

	Kurtosis	–1.156	0.656
CO33	Skewness	0.467	0.333
	Kurtosis	0.569	0.656
CO34	Skewness	–0.555	0.333
	Kurtosis	–0.268	0.656
CL35	Skewness	–0.372	0.333
	Kurtosis	–0.663	0.656
CL36	Skewness	–0.509	0.333
	Kurtosis	–0.732	0.656
CL37	Skewness	–0.060	0.333
	Kurtosis	–0.740	0.656
CL38	Skewness	0.378	0.333
	Kurtosis	–0.888	0.656
CL39	Skewness	–0.209	0.333
	Kurtosis	–0.654	0.656
CL40	Skewness	–0.163	0.333
	Kurtosis	–0.307	0.656
HI41	Skewness	0.244	0.333
	Kurtosis	–0.641	0.656
HI42	Skewness	0.321	0.333
	Kurtosis	–0.632	0.656
HI43	Skewness	–0.174	0.333
	Kurtosis	–0.524	0.656

HI44	Skewness	0.207	0.333
	Kurtosis	0.214	0.656
HI45	Skewness	0.016	0.333
	Kurtosis	–0.513	0.656
HI46	Skewness	0.045	0.333
	Kurtosis	–0.986	0.656
DE47	Skewness	0.131	0.333
	Kurtosis	–0.933	0.656
DE48	Skewness	–0.324	0.333
	Kurtosis	–1.174	0.656
DE49	Skewness	0.321	0.333
	Kurtosis	–0.632	0.656
DE50	Skewness	0.449	0.333
	Kurtosis	0.247	0.656
DE51	Skewness	–0.230	0.333
	Kurtosis	–1.158	0.656
DE52	Skewness	–0.605	0.333
	Kurtosis	–0.943	0.656
RA53	Skewness	0.061	0.333
	Kurtosis	–0.605	0.656
RA54	Skewness	6.862	0.333
	Kurtosis	48.310	0.656
RA55	Skewness	0.011	0.333

	Kurtosis	–0.475	0.656
RA56	Skewness	0.234	0.333
	Kurtosis	–0.745	0.656
RA57	Skewness	–0.029	0.333
	Kurtosis	–0.618	0.656
RA58	Skewness	0.125	0.333
	Kurtosis	–0.596	0.656
OC59	Skewness	–0.187	0.333
	Kurtosis	–0.629	0.656
OC60	Skewness	–0.109	0.333
	Kurtosis	–1.021	0.656
OC61	Skewness	0.151	0.333
	Kurtosis	–0.879	0.656
OC62	Skewness	–0.213	0.333
	Kurtosis	–0.557	0.656
OC63	Skewness	0.291	0.333
	Kurtosis	0.227	0.656
OC64	Skewness	–0.069	0.333
	Kurtosis	–0.222	0.656
HR65	Skewness	0.108	0.333
	Kurtosis	–0.253	0.656
HR66	Skewness	0.436	0.333
	Kurtosis	–0.118	0.656

HR67	Skewness	0.091	0.333
	Kurtosis	–0.674	0.656
HR68	Skewness	0.236	0.333
	Kurtosis	–0.103	0.656
HR69	Skewness	–0.127	0.333
	Kurtosis	–0.463	0.656
HR70	Skewness	–0.316	0.333
	Kurtosis	–0.722	0.656
OM71	Skewness	–0.244	0.333
	Kurtosis	–0.150	0.656
OM72	Skewness	0.029	0.333
	Kurtosis	–0.441	0.656
OM73	Skewness	0.296	0.333
	Kurtosis	–0.492	0.656
OM74	Skewness	0.275	0.333
	Kurtosis	–0.603	0.656
OM75	Skewness	0.321	0.333
	Kurtosis	–0.632	0.656
OM76	Skewness	–0.005	0.333
	Kurtosis	–0.324	0.656
LR77	Skewness	0.174	0.333
	Kurtosis	–0.523	0.656
LR78	Skewness	0.179	0.333

	Kurtosis	–0.240	0.656
LR79	Skewness	0.346	0.333
	Kurtosis	–0.256	0.656
LR80	Skewness	0.204	0.333
	Kurtosis	–0.518	0.656
LR81	Skewness	0.300	0.333
	Kurtosis	1.573	0.656
LR82	Skewness	0.054	0.333
	Kurtosis	–0.615	0.656
OR83	Skewness	–0.262	0.333
	Kurtosis	0.159	0.656
OR84	Skewness	0.370	0.333
	Kurtosis	-0.800	0.656
OR85	Skewness	–0.054	0.333
	Kurtosis	–0.182	0.656
OR86	Skewness	0.536	0.333
	Kurtosis	0.162	0.656
OR87	Skewness	0.139	0.333
	Kurtosis	–0.116	0.656
OR88	Skewness	0.100	0.333
	Kurtosis	–0.434	0.656
INNOV89	Skewness	–0.104	0.333
	Kurtosis	–0.102	0.656

INNOV90	Skewness	0.068	0.333
	Kurtosis	–0.968	0.656
INNOV91	Skewness	–0.386	0.333
	Kurtosis	–0.258	0.656
INNOV92	Skewness	0.405	0.333
	Kurtosis	–0.624	0.656
INNOV93	Skewness	0.100	0.333
	Kurtosis	0.261	0.656
INNOV94	Skewness	0.264	0.333
	Kurtosis	–0.243	0.656
OEP95	Skewness	0.371	0.333
	Kurtosis	–0.260	0.656
OEP96	Skewness	0.344	0.333
	Kurtosis	–0.243	0.656
OEP97	Skewness	0.116	0.333
	Kurtosis	–0.425	0.656
OEP98	Skewness	0.334	0.333
	Kurtosis	0.400	0.656
OEP99	Skewness	–0.065	0.333
	Kurtosis	–0.779	0.656
OEP100	Mean	3.20	0.128
OEP100	Skewness	–0.408	0.333
	Kurtosis	0.578	0.656

Note. PD: Power distance; UN: Uncertainty avoidance; MA: Masculinity/Femininity; CO: Collectivism/Individualism; CL: Clan culture; HI: Hierarchical culture; OC: Organisational cohesion; OM: Organisational morale; LR: Labour relations; DE: Developmental culture; RA: Rational culture; INNOV: Innovation; OEP: Organisational EP.

Table 44: Missing Values Analysis (CDT)

Univariate statistics							
	N	Mean	Std. deviation	Missing		No. of extreme	
				Count	Percent	Low	High
PD11	51	3.45	1.101	0	0.0	3	0
PD12	51	3.27	1.115	0	0.0	0	0
PD13	51	3.38	1.018	0	0.0	1	0
PD14	51	3.52	0.985	0	0.0	2	0
PD15	51	3.43	0.964	0	0.0	2	0
PD16	51	3.35	0.996	0	0.0	3	0
UN17	51	3.06	0.947	0	0.0	4	0
UN18	51	3.47	1.007	0	0.0	2	0
UN19	51	3.57	0.985	0	0.0	1	0
UN20	51	3.49	0.946	0	0.0	1	0
UN21	51	3.51	0.967	0	0.0	0	0
UN22	51	3.51	0.903	0	0.0	1	0
MA23	51	3.55	0.757	0	0.0	0	0
MA24	51	3.53	0.946	0	0.0	1	0
MA25	51	3.78	0.945	0	0.0	0	0
MA26	51	3.61	0.850	0	0.0	1	0
MA27	51	2.06	1.139	0	0.0	0	0
MA28	51	3.60	0.800	0	0.0	0	0
CO29	51	3.73	0.940	0	0.0	0	0
CO30	51	3.82	1.034	0	0.0	0	0

CO31	51	3.32	0.760	0	0.0	0	0
CO32	51	3.76	0.971	0	0.0	0	0
CO33	51	3.20	0.693	0	0.0	0	0
CO34	51	3.61	0.850	0	0.0	0	0
CL35	51	3.92	0.891	0	0.0	0	0
CL36	51	3.92	0.977	0	0.0	0	0
CL37	51	3.25	0.821	0	0.0	0	0
CL38	51	3.10	0.944	0	0.0	0	0
CL39	51	3.27	0.750	0	0.0	0	0
CL40	51	3.51	0.784	0	0.0	0	0
HI41	51	3.47	0.946	0	0.0	1	0
HI42	51	3.25	0.977	0	0.0	1	0
HI43	51	3.14	1.040	0	0.0	0	0
HI44	51	3.10	0.855	0	0.0	1	0
HI45	51	3.14	1.077	0	0.0	0	0
HI46	51	3.45	1.026	0	0.0	1	0
DE47	51	3.80	0.800	0	0.0	0	0
DE48	51	3.88	1.032	0	0.0	0	0
DE49	51	3.29	0.923	0	0.0	0	0
DE50	51	3.33	0.712	0	0.0	0	0
DE51	51	3.82	1.014	0	0.0	0	0
DE52	51	3.92	1.093	0	0.0	0	0
RA53	51	3.32	1.085	0	0.0	3	0

RA54	51	4.24	5.795	0	0.0	4	1
RA55	51	3.47	0.902	0	0.0	1	0
RA56	51	3.37	0.937	0	0.0	0	0
RA57	51	3.18	1.034	0	0.0	0	0
RA58	51	3.39	0.961	0	0.0	1	0
OC59	51	3.56	0.898	0	0.0	0	0
OC60	51	3.63	0.994	0	0.0	0	0
OC61	51	3.68	0.882	0	0.0	0	0
OC62	51	3.68	0.882	0	0.0	0	0
OC63	51	3.28	0.694	0	0.0	0	0
OC64	51	3.37	0.932	0	0.0	1	0
HR65	51	3.31	0.990	0	0.0	2	0
HR66	51	3.33	0.864	0	0.0	1	0
HR67	51	3.20	1.077	0	0.0	0	0
HR68	51	3.00	1.020	0	0.0	0	0
HR69	51	3.27	1.133	0	0.0	4	0
HR70	51	3.61	1.150	0	0.0	0	0
OM71	51	3.49	1.138	0	0.0	4	0
OM72	51	3.20	1.000	0	0.0	2	0
OM73	51	3.24	0.837	0	0.0	0	0
OM74	51	3.33	0.931	0	0.0	1	0
OM75	51	3.29	0.923	0	0.0	0	0
OM76	51	3.24	0.970	0	0.0	2	0

LR77	51	3.10	1.100	0	0.0	0	0
LR78	51	2.94	1.139	0	0.0	0	0
LR79	51	2.84	1.046	0	0.0	0	4
LR80	51	2.92	1.129	0	0.0	0	0
LR81	51	3.12	0.791	0	0.0	.	.
LR82	51	3.22	0.808	0	0.0	0	0
INNOV89	51	3.47	1.084	0	0.0	4	0
INNOV90	51	3.35	1.016	0	0.0	1	0
INNOV91	51	3.18	0.817	0	0.0	1	0
INNOV92	51	3.16	0.924	0	0.0	0	0
INNOV93	51	3.16	0.902	0	0.0	2	0
INNOV94	51	3.16	0.946	0	0.0	1	0
OEP95	51	3.18	0.841	0	0.0	1	0
OEP96	51	3.08	0.913	0	0.0	2	0
OEP97	51	3.12	1.013	0	0.0	0	0
OEP98	51	3.04	0.848	0	0.0	.	.
OEP99	51	2.86	1.132	0	0.0	0	0
OEP100	51	3.06	1.028	0	0.0	6	0
a. number of cases outside the range (Q1 – 1.5 × IQR, Q3 + 1.5 × IQR)							

Note. PD: Power distance; UN: Uncertainty avoidance; MA: Masculinity/Femininity; CO: Collectivism/Individualism; CL: Clan culture; HI: Hierarchical culture; OC: Organisational cohesion; OM: Organisational morale; LR: Labour relations; DE: Developmental culture; RA: Rational culture; INNOV: Innovation; OEP: Organisational EP.

Table 45: Kolmogorov–Smirnov and Shapiro–Wilk (CDT)

Tests of normality						
	Kolmogorov–Smirnov[a]			Shapiro–Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
PD11	.187	93	.000	.966	93	.015
PD12	.074	93	.200*	.988	93	.544
PD13	.103	93	.017	.974	93	.062
PD14	.093	93	.045	.984	93	.299
PD15	.139	93	.000	.965	93	.014
PD16	.073	93	.200*	.979	93	.145
UN17	.085	93	.097	.979	93	.136
UN18	.103	93	.016	.973	93	.055
UN19	.136	93	.000	.970	93	.033
UN20	.078	93	.200*	.982	93	.217
UN21	.085	93	.095	.986	93	.427
UN22	.126	93	.001	.965	93	.014
MA23	.113	93	.005	.979	93	.137
MA24	.080	93	.189	.988	93	.563
MA25	.117	93	.003	.980	93	.176
MA26	.107	93	.010	.967	93	.020
MA27	.143	93	.000	.969	93	.026
MA28	.093	93	.046	.979	93	.138
CO29	.066	93	.200*	.988	93	.570
CO30	.074	93	.200*	.986	93	.426

CO31	.081	93	.158	.982	93	.242
CO32	.086	93	.088	.978	93	.118
CO33	.128	93	.001	.969	93	.025
CO34	.059	93	.200*	.991	93	.819
OC59	.117	93	.003	.973	93	.051
OC60	.074	93	.200*	.979	93	.129
OC61	.081	93	.165	.983	93	.252
OC62	.078	93	.200*	.986	93	.396
OC63	.083	93	.122	.982	93	.219
OC64	.079	93	.192	.986	93	.427
HR65	.118	93	.003	.981	93	.186
HR66	.128	93	.001	.971	93	.037
HR67	.119	93	.002	.975	93	.069
HR68	.082	93	.151	.989	93	.622
HR69	.062	93	.200*	.992	93	.823
HR70	.078	93	.200*	.984	93	.338
OM71	.084	93	.104	.984	93	.295
OM72	.076	93	.200*	.984	93	.324
OM73	.098	93	.028	.980	93	.165
OM74	.090	93	.063	.983	93	.260
OM75	.122	93	.002	.972	93	.042
OM76	.098	93	.028	.978	93	.115
LR77	.084	93	.110	.979	93	.133

LR78	.064	93	.200*	.982	93	.248
LR79	.076	93	.200*	.982	93	.228
LR80	.062	93	.200*	.983	93	.276
LR81	.128	93	.001	.978	93	.117
LR82	.072	93	.200*	.988	93	.529
INNOV89	.125	93	.001	.975	93	.076
INNOV90	.080	93	.187	.986	93	.407
INNOV91	.099	93	.025	.969	93	.027
INNOV92	.119	93	.003	.970	93	.032
INNOV93	.092	93	.049	.977	93	.105
INNOV94	.159	93	.000	.964	93	.011
OEP95	.103	93	.017	.959	93	.005
OEP96	.155	93	.000	.960	93	.006
OEP97	.093	93	.047	.980	93	.161
OEP98	.102	93	.019	.977	93	.100
OEP99	.077	93	.200*	.980	93	.153
OEP100	.095	93	.039	.982	93	.240
*. A lower bound of true significance						
a. Lilliefors Significance Correction						

Note. PD: Power distance; UN: Uncertainty avoidance; MA: Masculinity/Femininity; CO: Collectivism/Individualism; OC: Organisational cohesion; HR: Human resource policies; OM: Organisational morale; LR: Labour relations; INNOV: Innovation; OEP: Organisational EP.

Table 46: Outliers Detected and Replaced with Average of Closest Neighbours

Variables	Cases with outliers replaced
PD11: To what extent do managers use authority and power when dealing with subordinates?	27
PD15: To what extent are managers respected and feared?	31
PD16: To what extent are special privileges given to managers?	42, 27, & 31
UN17: To what extent are the job requirements and instructions explained and spelled out in detail so that employees always know what they are expected to do?	42 & 48
UN19: To what extent are rules and regularities important to inform employees what the organisation expects of them?	27
MA24: To what extent does the organisational culture promote coninnovationted (self-centred, egoistic, narcissistic, and self-regarding) rather than modest (fair, satisfactory, tolerable, acceptable, humble, and moderate) behaviours and values?	23
HR65: To what extent does the organisation distribute information about both external and internal recruitment processes?	42 & 30
OM72: To what extent does the organisation treat its employees with respect and attention?	30
OM76: To what extent is the organisation concerned with the health and quality of life of its employees?	41
LR78: To what extent does the organisation implement the disciplinary procedure?	21, 28, 29, & 39
LR79: To what extent do union and management have respect for each other's roles?	21, 35, & 45
LR81: To what extent do employees abstain from work due to poor relationships with management?	More than 5% of outliers omitted for further analysis

OR83: To what extent is the organisation flexible to quickly change procedures to meet new external business conditions and solve problems?	28 & 42
OR85: To what extent does the company respond to the needs of the customer?	28 & 29
OR86: To what extent does the organisation focus on relationships with and service of customers?	More than 5% of outliers omitted for further analysis
OR87: To what extent does the organisation garner support from customers for new initiatives, products, and services?	34 & 41
OR88: To what extent does the organisation ensure that all the customers have a voice in it?	27 & 43
INNOV89: To what extent is the organisation continually looking for new opportunities in the marketplace?	31
INNOV91: To what extent are innovative ideas rewarded?	43
INNOV93: To what extent is assistance in developing new ideas readily available?	41
INNOV94: To what extent do people always search for new ways of solving problems?	41
OEP98: To what extent does the organisation include environmental information on its products, marketing, and communication material?	More than 5% of outliers omitted for further analysis
OEP100: To what extent does the organisation try to reduce or eliminate toxic/hazardous air emissions?	30 & 43

Table 47: Correlation Matrix (CDT)

| Correlations | | |

APPENDIX H: CVF MODEL

Table 48: Descriptive Statistics (CVF)

	N	Min.	Max.	Mean	Std. deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. error	Statistic	Std. error
CL35	93	2.17	4.50	3.1869	0.54189	0.300	0.250	–0.407	0.495
CL36	92	1.80	4.60	3.2818	0.59462	–0.066	0.251	–0.388	0.498
CL37	93	1.60	4.25	2.8773	0.55849	0.283	0.250	0.075	0.495
CL38	93	2.00	4.60	3.4082	0.58956	–0.202	0.250	-0.556	0.495
CL39	93	1.80	4.17	3.1061	0.55865	–0.326	0.250	–0.374	0.495
CL40	93	2.17	4.50	3.2902	0.58805	–0.025	0.250	–0.817	0.495
HI41	93	2.25	4.40	3.3022	0.46770	–0.054	0.250	–0.589	0.495
HI42	93	2.50	4.40	3.2827	0.44358	0.490	0.250	–0.562	0.495
HI43	93	2.00	4.25	3.2028	0.48754	0.101	0.250	–0.309	0.495
HI44	93	2.00	4.50	3.3071	0.53031	–0.052	0.250	–0.240	0.495
HI45	93	1.60	4.40	3.1231	0.57687	–0.151	0.250	–0.477	0.495
HI46	93	2.00	4.40	3.2108	0.51087	0.130	0.250	–0.620	0.495
DE47	93	2.20	4.20	3.1683	0.46324	0.163	0.250	–0.623	0.495
DE48	93	2.17	4.40	3.1730	0.54478	0.150	0.250	–0.952	0.495
DE49	93	2.00	4.20	3.1360	0.51987	0.102	0.250	–0.349	0.495
DE50	93	2.25	4.40	3.3400	0.49303	0.153	0.250	–0.698	0.495

DE51	93	1.80	4.40	3.2169	0.52323	–0.020	0.250	–0.248	0.495
DE52	93	2.17	4.25	3.1405	0.52155	0.164	0.250	–0.758	0.495
RA53	93	2.17	4.60	3.2377	0.53146	0.312	0.250	–0.354	0.495
RA54	93	2.17	4.50	3.1922	0.53648	0.366	0.250	–0.623	0.495
RA55	93	2.20	4.50	3.3397	0.49895	–0.044	0.250	–0.070	0.495
RA56	93	2.20	4.50	3.3786	0.53431	–0.325	0.250	–0.219	0.495
RA57	93	1.40	4.25	2.8374	0.64663	0.212	0.250	–0.190	0.495
RA58	93	2.20	4.75	3.4683	0.58559	–0.084	0.250	–0.520	0.495
OC59	93	2.00	4.25	3.0619	0.52700	0.365	0.250	–0.548	0.495
OC60	93	2.20	5.00	3.3824	0.58673	0.073	0.250	–0.474	0.495
OC61	93	2.00	4.40	3.1941	0.51551	0.144	0.250	–0.184	0.495
OC62	93	2.00	4.60	3.3651	0.56209	0.140	0.250	–0.423	0.495
OC63	93	1.80	4.40	3.2494	0.58923	0.096	0.250	–0.560	0.495
OC64	93	2.00	4.75	3.2234	0.58304	0.267	0.250	–0.229	0.495
HR65	93	2.00	4.40	3.1385	0.53677	0.097	0.250	–0.272	0.495
HR66	93	1.67	4.60	3.1367	0.60165	0.062	0.250	–0.002	0.495
HR67	93	1.67	4.40	3.0580	0.56366	0.359	0.250	0.038	0.495
HR68	93	2.20	4.50	3.2705	0.52329	0.097	0.250	–0.412	0.495
HR69	93	1.75	4.80	3.1459	0.62959	0.173	0.250	–0.207	0.495
HR70	93	2.00	4.40	3.1703	0.51613	0.165	0.250	–0.316	0.495
OM71	93	2.00	4.80	3.2119	0.58843	0.135	0.250	–0.463	0.495
OM72	93	2.00	4.60	3.2247	0.56711	–0.028	0.250	–0.156	0.495
OM73	93	2.00	4.33	3.2357	0.54330	–0.099	0.250	–0.744	0.495

OM74	93	2.25	4.50	3.3680	0.52983	0.101	0.250	–0.676	0.495
OM75	93	1.75	4.00	2.7746	0.45979	0.137	0.250	0.135	0.495
OM76	93	2.00	4.60	3.4249	0.58522	–0.336	0.250	–0.484	0.495
LR77	93	2.00	4.40	3.1278	0.56694	0.187	0.250	–0.405	0.495
LR78	93	2.20	4.50	3.4100	0.53675	–0.159	0.250	–0.503	0.495
LR79	93	2.17	4.50	3.2653	0.54602	–0.084	0.250	–0.508	0.495
LR80	93	2.17	4.60	3.3183	0.55610	–0.065	0.250	–0.634	0.495
LR81	93	2.00	4.25	3.1032	0.50078	–0.089	0.250	–0.298	0.495
LR82	93	2.00	4.40	3.1767	0.50808	0.168	0.250	–0.269	0.495
INNOV89	93	1.83	4.67	3.1880	0.59300	0.284	0.250	–0.076	0.495
INNOV90	93	2.17	4.50	3.2456	0.45551	–0.098	0.250	–0.054	0.495
INNOV91	93	2.00	4.17	3.2003	0.52896	–0.099	0.250	–0.826	0.495
INNOV92	93	2.20	4.60	3.2397	0.58063	0.335	0.250	–0.599	0.495
INNOV93	93	2.20	4.50	3.3054	0.53959	–0.121	0.250	–0.549	0.495
INNOV94	93	1.83	4.60	2.9881	0.60525	0.527	0.250	0.007	0.495
OEP95	93	2.00	5.00	3.5057	0.62206	–0.373	0.250	–0.389	0.495
OEP96	93	2.00	4.40	3.1642	0.55190	0.426	0.250	–0.506	0.495
OEP97	93	2.20	4.50	3.3865	0.51460	–0.284	0.250	–0.327	0.495
OEP98	93	2.25	4.20	3.2616	0.42830	0.273	0.250	–0.117	0.495
OEP99	93	2.00	4.60	3.3999	0.50813	–0.374	0.250	–0.090	0.495
OEP100	93	2.00	4.50	3.3568	0.54113	–0.053	0.250	–0.531	0.495
CL	93	2.11	4.33	3.1916	0.40564	0.040	0.250	0.206	0.495
DE	93	2.27	4.13	3.1949	0.36659	0.256	0.250	0.484	0.495

RA	93	2.29	4.42	3.2350	0.41187	0.358	0.250	0.168	0.495
OC	93	2.39	4.23	3.2503	0.41953	0.463	0.250	–0.100	0.495
HRM	93	2.17	4.43	3.1710	0.39902	0.680	0.250	1.227	0.495
OM	93	2.17	4.10	3.2264	0.39958	0.086	0.250	–0.085	0.495
LR	93	2.38	4.23	3.2336	0.36803	0.402	0.250	0.522	0.495
INNOV	93	2.17	4.13	3.1930	0.38259	0.418	0.250	0.116	0.495
OEP	93	2.42	4.13	3.3408	0.36057	–0.198	0.250	–0.356	0.495
HI	93	2.17	4.30	3.2449	0.32777	0.460	0.250	1.644	0.495
Organisational culture values	93	2.39	4.03	3.2166	0.33150	0.540	0.250	0.355	0.495
Valid N (Listwise)	92								

Note. CL: Clan culture; HI: Hierarchical culture; DE: Developmental culture; RA: Rational culture; OC: Organisational cohesion; HRM: Human resource management policies; OM: Organisational morale; LR: Labour relations; INNOV: Innovation; OEP: Organisational EP.

Table 49:Normality Test (CVF)

	Kolmogorov–Smirnov[a]			Shapiro–Wilk		
	Statistic	**df**	**Sig.**	**Statistic**	**df**	**Sig.**
CL35	0.063	92	.200*	0.976	92	0.084
CL36	0.095	92	0.039	0.985	92	0.350
CL37	0.143	92	0.000	0.971	92	**0.039**
CL38	0.085	92	0.097	0.984	92	0.321
CL39	0.092	92	0.051	0.975	92	0.071
CL40	0.089	92	0.068	0.976	92	0.088
HI41	0.094	92	0.042	0.986	92	0.422
HI42	0.147	92	0.000	0.949	92	**0.001**
HI43	0.108	92	0.010	0.984	92	0.325
HI44	0.097	92	0.034	0.982	92	0.249
HI45	0.123	92	0.002	0.983	92	0.298
HI46	0.103	92	0.018	0.983	92	0.280
DE47	0.151	92	0.000	0.972	92	0.048
DE48	0.110	92	0.008	0.968	92	**0.022**
DE49	0.089	92	0.069	0.978	92	0.121
DE50	0.103	92	0.017	0.975	92	0.080
DE51	0.057	92	.200*	0.991	92	0.793
DE52	0.089	92	0.072	0.975	92	0.079
RA53	0.121	92	0.002	0.981	92	0.192
RA54	0.134	92	0.000	0.967	92	**0.020**

RA55	0.064	92	.200*	0.987	92	0.483
RA56	0.085	92	0.101	0.971	92	**0.035**
RA57	0.118	92	0.003	0.975	92	0.079
RA58	0.080	92	0.193	0.986	92	0.438
OC59	0.112	92	0.006	0.973	92	**0.049**
OC60	0.074	92	.200*	0.979	92	0.137
OC61	0.081	92	0.173	0.983	92	0.289
OC62	0.079	92	.200*	0.986	92	0.408
OC63	0.079	92	.200*	0.982	92	0.225
OC64	0.081	92	0.169	0.985	92	0.381
HR65	0.113	92	0.005	0.981	92	0.214
HR66	0.127	92	0.001	0.972	92	**0.046**
HR67	0.120	92	0.002	0.977	92	0.098
HR68	0.074	92	.200*	0.986	92	0.422
HR69	0.065	92	.200*	0.990	92	0.745
HR70	0.077	92	.200*	0.985	92	0.372
OM71	0.085	92	0.096	0.983	92	0.263
OM72	0.078	92	.200*	0.983	92	0.288
OM73	0.101	92	0.021	0.979	92	0.147
OM74	0.091	92	0.060	0.982	92	0.242
OM75	0.111	92	0.007	0.980	92	0.161
OM76	0.097	92	0.032	0.977	92	0.103
LR77	0.088	92	0.073	0.978	92	0.132

LR78	0.073	92	.200*	0.982	92	0.240
LR79	0.073	92	.200*	0.982	92	0.235
LR80	0.063	92	.200*	0.983	92	0.267
LR81	0.135	92	0.000	0.977	92	0.098
LR82	0.077	92	.200*	0.986	92	0.442
INNOV89	0.124	92	0.001	0.976	92	0.081
INNOV90	0.081	92	0.175	0.988	92	0.543
INNOV91	0.100	92	0.025	0.970	92	**0.033**
INNOV92	0.115	92	0.005	0.970	92	**0.032**
INNOV93	0.091	92	0.056	0.977	92	0.100
INNOV94	0.155	92	0.000	0.964	92	**0.012**
OEP95	0.101	92	0.023	0.970	92	**0.032**
OEP96	0.159	92	0.000	0.958	92	**0.005**
OEP97	0.098	92	0.028	0.974	92	0.060
OEP98	0.108	92	0.010	0.973	92	0.057
OEP99	0.082	92	0.167	0.980	92	0.167
OEP100	0.097	92	0.034	0.982	92	0.227
*. A lower bound of true significance						
a. Lilliefors Significance Correction						

Note. CL: Clan culture; HI: Hierarchical culture; DE: Developmental culture; RA: Rational culture; OC: Organisational cohesion; HR: Human resource policies; OM: Organisational morale; LR: Labour relations; INNOV: Innovation ; OEP: Organisational EP.

Table 50: Outliers Detected and Replaced with Average of Closest Neighbours

Variables	Cases with outliers replaced
RA53: To what extent is success defined by winning and leading in the marketplace?	27
RA54: To what extent does the reward system encourage employees to achieve organisational goals?	4

Table 51: Correlation Matrix (CVF)

| Correlations | | |

APPENDIX I: STATISTICAL ANALYSIS (SIV)

Table 52: Univariate Statistics (SIV)

	N	Mean	Std. deviation	Missing		No. of extremes[a]	
				Count	Percent	Low	High
Gender	51	1.47	0.504	0	0.0	0	0
Age	51	3.16	1.713	0	0.0	0	4
Industrial sector	51	5.57	3.119	0	0.0	0	0
Occupation or position	51	3.20	1.960	0	0.0	0	0
Company tenure	51	6.00	1.575	0	0.0	4	0
Occupational tenure	51	5.61	1.801	0	0.0	6	0
Respondents' education	51	3.22	1.447	0	0.0	0	3
Fathers' education	51	2.37	1.385	0	0.0	0	0
Mothers' education	51	2.33	1.409	0	0.0	0	0
Home language	51	4.96	2.154	0	0.0	4	4
ISF11	51	3.75	0.913	0	0.0	1	0
ISF12	51	3.61	1.097	0	0.0	1	0
ISF13	51	3.47	0.966	0	0.0	2	0
ISF14	51	3.55	0.966	0	0.0	0	0
ISF15	51	3.45	0.945	0	0.0	3	0
ISF16	51	3.35	1.055	0	0.0	3	0
ISF17	51	3.37	1.058	0	0.0	4	0

ESF18	51	3.33	0.909	0	0.0	1	0
ESF19	51	3.47	1.065	0	0.0	4	0
ESF20	51	3.59	0.920	0	0.0	1	0
ESF21	51	3.55	0.945	0	0.0	1	0
ESF22	51	3.33	0.909	0	0.0	1	0
ESF23	51	3.55	0.945	0	0.0	2	0
SIV24	51	3.43	1.082	0	0.0	3	0
SIV25	51	3.45	0.832	0	0.0	0	0
SIV26	51	3.20	0.849	0	0.0	2	0
SIV27	51	2.96	0.958	0	0.0	0	4
SIV28	51	3.20	1.020	0	0.0	3	0
SIV29	51	3.27	1.002	0	0.0	3	0
SIV30	51	3.08	0.997	0	0.0	4	0
SIV31	51	3.00	0.980	0	0.0	0	0
SIV32	51	3.04	0.871	0	0.0	2	0
SIV33	51	3.12	1.125	0	0.0	0	0
SIV34	51	2.94	1.139	0	0.0	0	0
SIV35	51	3.12	1.013	0	0.0	3	0
SIV36	51	3.10	0.985	0	0.0	0	0
SIV37	51	3.22	0.901	0	0.0	0	0
SIV38	51	3.25	1.036	0	0.0	4	0
SIV39	51	3.37	0.979	0	0.0	2	0
SIV40	51	3.43	0.944	0	0.0	1	0

SIV41	51	3.12	0.993	0	0.0	0	0
SIV42	51	3.35	0.796	0	0.0	1	0
SIV43	51	3.29	0.901	0	0.0	0	0
Ind-EP44	51	3.18	0.932	0	0.0	2	0
Ind-EP45	51	3.08	1.129	0	0.0	0	0
Ind-EP46	51	2.94	0.968	0	0.0	0	0
Ind-EP47	51	3.12	1.089	0	0.0	0	0
Ind-EP48	51	3.14	1.077	0	0.0	0	0
Ind-EP49	51	3.10	1.005	0	0.0	6	0
a. Number of cases outside the range (Q1 – 1.5 × IQR. Q3 + 1.5 × IQR).							

Note. ISF: Intrinsic satisfaction factors; ESF: Extrinsic satisfaction factors; SIV: Schwartz's individual values; Ind EP: Individual EP.

Table 53: Skewness and Kurtosis Values (SIV)

Descriptive statistics									
	N	Min	Max	Mean	Std. deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std.	Statistic	Std.
ISF11	429	1	5	3.80	0.934	–0.710	0.118	0.386	0.235
ISF12	429	1	5	3.87	0.976	–0.777	0.118	0.190	0.235
ISF13	429	1	5	3.29	1.147	–0.051	0.118	–0.874	0.235
ISF14	429	1	5	3.18	1.154	0.002	0.118	–0.925	0.235
ISF15	427	1	5	3.72	0.926	–0.564	0.118	0.144	0.236
ISF16	429	1	5	3.64	1.017	–0.568	0.118	–0.171	0.235
ISF17	428	1	5	3.76	1.058	–0.603	0.118	–0.349	0.235
ESF18	428	1	5	3.91	1.174	–0.882	0.118	–0.141	0.235
ESF19	426	1	5	3.63	0.969	–0.586	0.118	0.127	0.236
ESF20	428	1	5	3.81	1.094	–0.785	0.118	–0.094	0.235
ESF21	428	1	5	3.85	1.098	–0.634	0.118	–0.481	0.235
ESF22	429	1	5	3.38	1.161	–0.335	0.118	–0.614	0.235
ESF23	429	1	5	3.36	1.237	–0.331	0.118	–0.816	0.235
SIV24	429	1	5	3.45	1.000	–0.250	0.118	–0.213	0.235
SIV25	427	1	5	3.40	0.930	–0.103	0.118	–0.095	0.236
SIV26	429	1	5	3.41	0.993	–0.253	0.118	–0.277	0.235

SIV27	429	1	5	3.52	0.982	–0.277	0.118	–0.374	0.235
SIV28	428	1	5	3.45	1.020	–0.186	0.118	–0.521	0.235
SIV29	427	1	5	3.37	1.073	–0.205	0.118	–0.492	0.236
SIV30	427	1	5	3.15	1.095	0.034	0.118	–0.680	0.236
SIV31	427	1	5	3.09	1.070	0.069	0.118	–0.558	0.236
SIV32	429	1	5	3.58	1.014	–0.442	0.118	–0.331	0.235
SIV33	425	1	5	3.04	0.947	0.179	0.118	–0.078	0.236
SIV34	427	1	5	3.54	1.099	–0.558	0.118	–0.415	0.236
SIV35	429	1	5	2.86	1.202	0.097	0.118	–0.822	0.235
SIV36	429	1	5	3.80	1.007	–0.629	0.118	–0.260	0.235
SIV37	427	1	44	3.70	2.163	15.177	0.118	283.812	0.236
SIV38	427	1	5	3.74	0.969	–0.633	0.118	–0.025	0.236
SIV39	428	1	5	3.82	1.102	–0.621	0.118	–0.434	0.235
SIV40	428	1	5	3.79	1.159	–0.657	0.118	–0.518	0.235
SIV41	428	1	5	3.69	1.083	–0.435	0.118	–0.549	0.235
SIV42	428	1	5	3.34	0.933	0.014	0.118	–0.274	0.235
SIV43	428	1	5	3.20	0.917	0.226	0.118	0.034	0.235
Ind-EP44	428	1	5	3.12	1.077	0.152	0.118	–0.697	0.235
Ind-EP45	428	1	5	3.36	1.216	–0.114	0.118	–1.099	0.235
Ind-EP46	428	1	5	3.18	1.284	–0.090	0.118	–1.017	0.235
Ind-EP47	428	1	5	3.08	1.354	–0.020	0.118	–1.161	0.235
Ind-EP48	427	1	5	3.05	1.424	–-0.009	0.118	–1.290	0.236

IndEP49	428	1	5	3.14	1.394	–0.100	0.118	–1.190	0.235

Note. ISF: Intrinsic satisfaction factors; ESF: Extrinsic satisfaction factors; SIV: Schwartz's values; Ind-EP: Individual EP.

Table 54: Shapiro–Wilk and Kolmogorov–Smirnov Test Results (SIV)

Tests of Normality						
	Kolmogorov–Smirnov[a]			Shapiro–Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
ISF11	0.270	405	0.000	0.857	405	0.000
ISF12	0.273	405	0.000	0.846	405	0.000
ISF13	0.173	405	0.000	0.907	405	0.000
ISF14	0.168	405	0.000	0.909	405	0.000
ISF15	0.253	405	0.000	0.871	405	0.000
ISF16	0.258	405	0.000	0.879	405	0.000
ISF17	0.241	405	0.000	0.869	405	0.000
ESF18	0.245	405	0.000	0.813	405	0.000
ESF19	0.258	405	0.000	0.877	405	0.000
ESF20	0.256	405	0.000	0.849	405	0.000
ESF21	0.218	405	0.000	0.850	405	0.000
ESF22	0.189	405	0.000	0.902	405	0.000
ESF23	0.181	405	0.000	0.899	405	0.000
SIV24	0.217	405	0.000	0.893	405	0.000
SIV25	0.255	405	0.000	0.879	405	0.000
SIV26	0.210	405	0.000	0.895	405	0.000
SIV27	0.213	405	0.000	0.893	405	0.000
SIV28	0.200	405	0.000	0.897	405	0.000

SIV29	0.196	405	0.000	0.904	405	0.000
SIV30	0.197	405	0.000	0.912	405	0.000
SIV31	0.201	405	0.000	0.912	405	0.000
SIV32	0.230	405	0.000	0.890	405	0.000
SIV33	0.255	405	0.000	0.890	405	0.000
SIV34	0.262	405	0.000	0.880	405	0.000
SIV35	0.166	405	0.000	0.913	405	0.000
SIV36	0.259	405	0.000	0.861	405	0.000
SIV37	0.274	405	0.000	0.867	405	0.000
SIV38	0.269	405	0.000	0.865	405	0.000
SIV39	0.210	405	0.000	0.856	405	0.000
SIV40	0.209	405	0.000	0.853	405	0.000
SIV41	0.189	405	0.000	0.878	405	0.000
SIV42	0.245	405	0.000	0.889	405	0.000
SIV43	0.290	405	0.000	0.867	405	0.000
Ind-EP44	0.203	405	0.000	0.906	405	0.000
Ind-EP45	0.167	405	0.000	0.894	405	0.000
Ind-EP46	0.151	405	0.000	0.903	405	0.000
Ind-EP47	0.141	405	0.000	0.898	405	0.000
Ind-EP48	0.150	405	0.000	0.884	405	0.000
Ind-EP49	0.150	405	0.000	0.886	405	0.000
a. Lilliefors Significance Correction						

Note. ISF: Intrinsic satisfaction factors; ESF: Extrinsic satisfaction factors; SIV: Schwartz's values; Ind-EP: Individual EP.

Table 55: Outlier Treatment of Model (SIV)

Variable	Cases with outliers replaced
ISF11: To what extent do you put effort into your job because you want to prove to yourself that you can?	46
ISF12: To what extent do you put effort into your job because it makes you feel proud?	44
ISF13: To what extent do you put effort into your job because otherwise, you would feel ashamed of yourself?	45 & 42
ISF15: To what extent do you put effort into your work because it is personally important to put effort into work?	29 & 38
ISF16: To what extent do you put effort into your work because it aligns with your values?	29 & 41
ISF17: To what extent do you put effort into your work because it has personal significance?	More than 5% of outliers were omitted for further analysis
ESF18: To what extent do you do your work to get material rewards?	44
ESF19: To what extent do you do your work because the organisation provides good physical working conditions?	More than 5% of outliers omitted for further analysis
ESF20: To what extent do you do your work due to the associated performance bonus and benefits?	44
ESF21: To what extent do you put effort into your job because the organisation will reward you financially?	34
ESF22: To what extent do you put effort into your job because it offers job security?	47

ESF23: To what extent do you put effort into your job to avoid the risk of losing your job?	34 & 46
SIV24: To what extent are looking after the environment and caring for nature important to you?	31 & 47
SIV26: To what extent do you help the people around you and care for their well-being?	29 & 37
SIV27: To what extent are you loyal and devoted to people close to you?	More than 5% of outliers omitted for further analysis
SIV28: To what extent do you behave properly to avoid doing anything people would say is wrong?	3, 43, & 51
SIV29: To what extent do you follow the rules, even when no one is watching?	3, 43, & 51
SIV30: To what extent do you feel that following the customs handed down by one's religion or family is essential (traditions)?	More than 5% of outliers omitted for further analysis.
SIV32: To what extent do you feel living in secure surroundings is important to avoid anything that might be dangerous?	50 & 51
SIV35: To what extent do you feel to be in charge and telling others what to do is important?	29 & 46
SIV38: To what extent do you feel having a good time is essential to spoil oneself?	More than 5% of outliers omitted for further analysis
SIV39: To what extent do you feel having fun and doing pleasurable activities is important?	46 & 47
SIV40: To what extent do you believe that adventure and risk-taking are essential for you to have an exciting life?	46
SIV42: To what extent do you contribute to creative and new ways of doing things?	29

Ind-EP44: To what extent do you contribute to water conservation measures to reduce costs and increase efficiency?	38 & 46
Ind-EP49: To what extent do you try to reduce or eliminate toxic/hazardous air emissions?	More than 5% of outliers omitted from further analysis

Note. ISF: Intrinsic satisfaction factors; ESF: Extrinsic satisfaction factors; SIV: Schwartz's values; Ind-EP: Individual EP.

Table 56: Correlation Matrix (SIV)

Correlations																																									
	Ind-EP48	**Ind-EP49**	**SIV33**	**ISF11**	**ISF12**	**ISF13**	**ISF14**	**ISF15**	**ISF16**	**ISF17**	**ESF18**	**ESF19**	**ESF20**	**ESF21**	**ESF22**	**ESF23**	**SIV24**	**SIV25**	**SIV26**	**SIV27**	**SIV28**	**SIV29**	**SIV30**	**SIV31**	**SIV32**	**SIV34**	**SIV35**	**SIV36**	**SIV37**	**SIV38**	**SIV39**	**SIV40**	**SIV41**	**SIV42**	**SIV43**	**IndEP44**	**IndEP45**	**IndEP46**
IndEP49	**0,867**	--																																							
SIV33	0,328	0,320	--																																						
ISF11	0,350	0,254	0,391	--																																					
ISF12	0,342	0,274	0,382	**0,793**	--																																				
ISF13	0,295	0,211	0,380	**0,614**	**0,597**	--																																		
ISF14	0,306	0,246	0,393	**0,566**	0,488	**0,841**	--																																	
ISF15	0,246	0,209	0,346	**0,623**	**0,634**	0,487	0,496	--																																
ISF16	0,314	0,276	0,372	**0,530**	**0,599**	0,335	0,297	**0,623**	--																															
ISF17	0,245	0,203	0,282	**0,506**	**0,630**	0,276	0,176	**0,607**	**0,687**	--																														
ESF18	0,000	-0,076	0,243	0,432	0,468	0,132	0,038	0,389	0,429	**0,519**	--																													
ESF19	0,274	0,249	0,338	**0,557**	**0,593**	0,317	0,297	0,480	0,488	**0,548**	0,438	--																												
ESF20	0,080	0,030	0,284	0,462	0,467	0,160	0,084	0,406	0,381	**0,506**	**0,740**	**0,566**	--																											
ESF21	0,051	0,025	0,196	0,426	0,461	0,113	0,035	0,431	0,413	**0,541**	**0,704**	**0,523**	**0,834**	--																											
ESF22	0,068	0,022	0,316	0,428	0,316	0,356	0,356	0,380	0,271	0,293	0,386	0,345	0,477	**0,507**	--																										
ESF23	0,101	0,050	0,309	0,377	0,282	0,415	0,436	0,347	0,209	0,243	0,287	0,305	0,394	0,380	**0,806**	--																									
SIV24	0,431	0,402	0,396	**0,502**	**0,528**	0,409	0,390	**0,521**	**0,510**	0,463	0,170	0,483	0,227	0,217	0,238	0,311	--																								
SIV25	0,360	0,329	0,367	**0,552**	**0,547**	0,443	0,410	**0,501**	0,480	0,409	0,220	0,457	0,298	0,264	0,257	0,262	**0,592**	--																							

| | | |

Table 57: Direct Effects (SIV)

	Original Sample (O)	**P Values**
Age → Conservation	0.188	0,135
Age → Extrinsic Satisfaction Factors	0.070	0,568
Age → Independent EP	0.018	0,737
Age → intrinsic Satisfaction Factors	0.277	0,862
Age → Openness to Change	0.144	**0,021**
Age → Self Enhancement	0.184	0,323
Age → Self Transcendence	-0,472	0,146
Company tenure → Conservation	-0,456	**0,020**
Company tenure → Extrinsic Satisfaction Factors	0,006	0,062
Company tenure → Independent EP	-0,066	0,976
Company tenure → intrinsic Satisfaction Factors	-0,066	0,708
Company tenure → Openness to Change	-0,675	**0,000**
Company tenure → Self Enhancement	-0,476	**0,011**
Company tenure → Self Transcendence	-0,581	**0,002**
Conservation → Extrinsic Satisfaction Factors	-0,085	0,466
Conservation → Intrinsic Satisfaction Factors	0,234	0,070
Extrinsic Satisfaction Factors → Independent EP	-0,211	0,144
Father's Education → Conservation	-0,005	0,966
Father's Education → Extrinsic Satisfaction Factor	0,005	0,957
Father's Education → Independent EP	-0,163	0,254
Father's Education →Intrinsic Satisfaction Factor	0,038	0,702
Father's Education →Openness to Change	0,044	0,639
Father's Education →Self Enhancement	-0,032	0,715
Gender →Conservation	0,037	0,731
Gender →Extrinsic Satisfaction Factors	0,004	0,951
Gender →Independent EP	-0,043	0,614
Gender →Intrinsic Satisfaction Factors	0,014	0,835
Gender →Openness to Change	-0,102	0,271
Gender →Self Enhancement	-0,154	0,08
Gender →Self Transcendence	-0,173	0,067
Home Language →Conservation	-0,082	0,434
Home Language →Extrinsic Satisfaction Factors	-0,016	0,817

Home Language →Independent EP	-0,139	0,147
Home Language →Intrinsic Satisfaction Factors	0,005	0,955
Home Language →Openness to Change	-0,002	0,989
Home Language →Self Enhancement	-0,024	0,816
Home Language →Self Transcendence	0,030	0,795
Industrial Sector →Conservation	0,240	**0,011**
Industrial Sector →Extrinsic Satisfaction Factors	0,077	0,215
Industrial Sector →Independent EP	0,198	**0,037**
Industrial Sector →Intrinsic Satisfaction Factors	0,151	**0,047**
Industrial Sector →Openness to Change	0,126	0,087
Industrial Sector →Self Enhancement	0,193	**0,034**
Industrial Sector →Self Transcendence	0,143	0,092
Intrinsic Satisfaction Factors → Independent EP	0,508	**0,000**
Mother's Education → Conservation	-0,08	0,523
Mother's Education → Extrinsic Satisfaction Factors	-0,021	0,741
Mother's Education → Independent EP	0,056	0,67
Mother's Education → Intrinsic Satisfaction Factors	-0,032	0,677
Mother's Education → Openness to Change	0,059	0,515
Mother's Education → Self Enhancement	0,079	0,286
Mother's Education → Self Transcendence	-0,029	0,79
Occupational Tenure →Conservation	0,304	0,102
Occupational Tenure →Extrinsic Satisfaction Factors	0,27	0,254
Occupational Tenure →Independent EP	0,12	0,532
Occupational Tenure →Intrinsic Satisfaction Factors	-0,032	0,849
Occupational Tenure →Openness to Change	0,202	0,218
Occupational Tenure → Self Enhancement	0,026	0,896
Occupational Tenure → Self Transcendence	0,197	0,308
Openness to Change → Extrinsic Satisfaction Factors	0,134	0,325
Openness to Change →Intrinsic Satisfaction Factors	0,051	0,711
Position →Conservation	0,374	**0,002**
Position →Extrinsic Satisfaction Factors	0,105	**0,003**
Position →Independent EP	0,161	**0,021**
Position →Intrinsic Satisfaction Factors	0,098	**0,001**
Position →Openness to Change	0,539	**0,000**
Position →Self Enhancement	0,446	**0,002**

Position → Self Transcendence	0,492	**0,000**
Respondent's Education →Conservation	0,0039	0,757
Respondent's Education →Extrinsic Satisfaction Factors	0,154	0,095
Respondent's Education →Independent EP	0,098	0,445
Respondent's Education →Intrinsic Satisfaction Factors	-0,107	0,317
Respondent's Education →Openness to Change	-0,023	0,831
Respondent's Education →Self Enhancement	-0,029	0,793
Respondent's Education → Self-Transcendence	-0,006	0,957
Self Enhancement →Extrinsic Satisfaction Factors	0,589	**0,000**
Self Enhancement →Intrinsic Satisfaction Factors	0,208	**0,042**
Self-Transcendence →Extrinsic Satisfaction Factors	0,069	0,666
Self-Transcendence →Intrinsic Satisfaction Factors	0,33	**0,007**
Age →Openness to Change	0,277	0,021
Age →Self Enhancement	0,144	0,323
Age →Self Transcendence	0,184	0,146
Company Tenure →Conservation	-0,472	**0,020**
Company Tenure →Extrinsic Satisfaction Factors	-0,827	**0,001**
Company Tenure →Independent EP	-0,074	0,711
Company Tenure →Intrinsic Satisfaction Factors	-0,502	**0,008**
Company Tenure →Openness to Change	-0,675	**0,000**
Company Tenure →Self Enhancement	-0,476	**0,011**
Company Tenure → Self Transcendence	-0,581	**0,002**
Conservation →Extrinsic Satisfaction Factors	-0,085	0,466
Self-Transcendence → Independent EP	0,153	**0,024**
Self-Transcendence → Intrinsic Satisfaction Factors	0,33	**0,007**

Table 58: Indirect Effects (SIV)

	Original Sample (O)	P Values
Age → Conservation → Extrinsic Satisfaction Factor	-0,016	0,584
Company Tenure → Conservation → Extrinsic Satisfaction Factor	0,040	0,511
Father's Education → Conservation → Extrinsic Satisfaction Factor	0,000	0,979
Home Language → Conservation → Extrinsic Satisfaction Factor	0,014	0,54
Industrial Sector → Conservation → Extrinsic Satisfaction Factor	0,007	0,689
Mother's Education → Conservation → Extrinsic Satisfaction Factor	-0,020	0,514
Occupational Tenure → Conservation → Extrinsic Satisfaction Factor	0,007	0,731
Position → Conservation → Extrinsic Satisfaction Factor	-0,026	0,533
Respondent's Education → Conservation → Extrinsic Satisfaction Factor	-0,032	0,492
Age → Openness to Change → Extrinsic Satisfaction Factor	-0,003	0,845
Company Tenure → Openness to Change → Extrinsic Satisfaction Factor	0,037	0,458
Father's Education → Openness to Change → Extrinsic Satisfaction Factor	-0,091	0,458
Gender → Openness to Change → Extrinsic Satisfaction Factor	0,006	0,403
Home Language → Openness to Change → Extrinsic Satisfaction Factor	-0,014	0,788
Industrial Sector → Openness to Change → Extrinsic Satisfaction Factor	0,000	0,565
Mother's Education → Openness to Change → Extrinsic Satisfaction Factor	0,017	0,992
Occupational Tenure → Openness to Change → Extrinsic Satisfaction Factor	0,008	0,448
Position → Openness to Change → Extrinsic Satisfaction Factor	0,027	0,693
Respondent's Education → Openness to Change → Extrinsic Satisfaction Factor	0,072	0,569
Age → Self Enhancement → Extrinsic Satisfaction Factor	-0,003	0,344
Company Tenure → Self Enhancement → Extrinsic Satisfaction Factor	-0,28	**0,014**
Father's Education → Self Enhancement → Extrinsic Satisfaction Factor	-0,017	0,715
ender → Self Enhancement → Extrinsic Satisfaction Factor	-0,093	0,094
Home Language → Self Enhancement → Extrinsic Satisfaction Factor	-0,010	0,817
Industrial Sector → Self Enhancement → Extrinsic Satisfaction Factor	0,112	0,053
Mother's Education → Self Enhancement → Extrinsic Satisfaction Factor	0,051	0,307
Occupational Tenure → Self Enhancement → Extrinsic Satisfaction Factor	0,021	0,898
Position → Self Enhancement → Extrinsic Satisfaction Factor	0,263	**0,007**
Respondents' Education → Self Enhancement → Extrinsic Satisfaction Factor	-0,023	0,797
Age → Self Transcendence → Extrinsic Satisfaction Factor	0,007	0,722
Company Tenure → Self Transcendence → Extrinsic Satisfaction Factor	-0,040	0,675
Father's Education → Self Transcendence → Extrinsic Satisfaction Factor	0,003	0,899
Gender → Self Transcendence → Extrinsic Satisfaction Factor	-0,012	0,722
Home Language → Self Transcendence → Extrinsic Satisfaction Factor	0,002	0,919

Industrial Sector → Self Transcendence → Extrinsic Satisfaction Factor	0,010	0,702
Mother's Education → Self Transcendence → Extrinsic Satisfaction Factor	-0,002	0,922
Occupational Tenure → Self Transcendence → Extrinsic Satisfaction Factor	0,014	0,751
Position → Self Transcendence → Extrinsic Satisfaction Factor	0,034	0,678
Respondents' Education → Self Transcendence → Extrinsic Satisfaction Factor	0,000	0,983
Age → Conservation → Extrinsic Satisfaction Factor→ Individual EP	0,015	0,642
Company Tenure → Conservation → Extrinsic Satisfaction Factor→ Individual EP	0,096	0,214
Father's Education → Conservation → Extrinsic Satisfaction Factor→ Individual EP	0,003	0,666
Home Language → Conservation → Extrinsic Satisfaction Factor→ Individual EP	-0,008	0,622
Industrial Sector → Conservation → Extrinsic Satisfaction Factor→ Individual EP	0,000	0,981
Mother's Education → Conservation → Extrinsic Satisfaction Factor→ Individual EP	-0,003	0,609
Occupational Tenure → Conservation → Extrinsic Satisfaction Factor→ Individual EP	-0,001	0,731
Position → Conservation → Extrinsic Satisfaction Factor→ Individual EP	0,004	0,594
Conservation → Extrinsic Satisfaction Factor→ Individual EP	-0,001	0,764
Respondents' Education → Conservation → Extrinsic Satisfaction Factor→ Individual EP	0,005	0,638
Age → Openness to Change → Extrinsic Satisfaction Factor→ Individual EP	0,007	0,572
Father's Education → Openness to Change → Extrinsic Satisfaction Factor→ Individual EP	0,018	0,56
Gender → Openness to Change → Extrinsic Satisfaction Factor→ Individual EP	0,001	0,873
Home Language → Openness to Change → Extrinsic Satisfaction Factor→ Individual EP	-0,001	0,963
Industrial Sector → Openness to Change → Extrinsic Satisfaction Factor→ Individual EP	-0,001	0,958
Mother's Education → Openness to Change → Extrinsic Satisfaction Factor→ Individual EP	0,003	0,845
Occupational Tenure → Openness to Change → Extrinsic Satisfaction Factor→ Individual EP	-0,016	0,36
Position→ Openness to Change → Extrinsic Satisfaction Factor→ Individual EP	0,004	0,792
Openness to Change → Extrinsic Satisfaction Factor→ Individual EP	-0,057	0,389
Age → Self Enhancement → Extrinsic Satisfaction Factor→ Individual EP	-0,008	0,59
Company Tenure → Self Enhancement → Extrinsic Satisfaction Factor→ Individual EP	0,019	0,547
Father's Education → Self Enhancement → Extrinsic Satisfaction Factor→ Individual EP	-0,001	0,824

Home Language → Self Enhancement → Extrinsic Satisfaction Factor→ Individual EP	0,003	0,646
Industrial Sector → Self Enhancement → Extrinsic Satisfaction Factor→ Individual EP	0,000	0,994
Mother's Education → Self Enhancement → Extrinsic Satisfaction Factor→ Individual EP	-0,004	0,596
Occupational Tenure → Self Enhancement → Extrinsic Satisfaction Factor→ Individual EP	-0,002	0,757
Position → Self Enhancement → Extrinsic Satisfaction Factor→ Individual EP	-0,008	0,672
Self Enhancement → Extrinsic Satisfaction Factor→ Individual EP	-0,017	0,482
Respondent's Education → Self Enhancement → Extrinsic Satisfaction Factor→ Individual EP	-0,033	0,487
Age → Self Transcendence → Extrinsic Satisfaction Factor→ Individual EP	0,001	0,91
Company Tenure → Self Transcendence → Extrinsic Satisfaction Factor→ Individual EP	-0,023	0,550
Father's Education → Self Transcendence → Extrinsic Satisfaction Factor→ Individual EP	-0,033	0,255
Gender → Self Transcendence → Extrinsic Satisfaction Factor→ Individual EP	-0,018	0,498
Home Language → Self Transcendence → Extrinsic Satisfaction Factor→ Individual EP	0,059	0,264
Industrial Sector → Self Transcendence → Extrinsic Satisfaction Factor→ Individual EP	0,004	0,772
Mother's Education → Self Transcendence → Extrinsic Satisfaction Factor→ Individual EP	0,019	0,320
Occupational Tenure → Self Transcendence → Extrinsic Satisfaction Factor→ Individual EP	0,003	0,854
Position → Self Transcendence → Extrinsic Satisfaction Factor→ Individual EP	-0,024	0,317
Self-Transcendence → Extrinsic Satisfaction Factor→ Individual EP	-0,01	0,527
Respondent's Education → Self Transcendence → Extrinsic Satisfaction Factor→ Individual EP	-0,003	0,919
Age → Conservation→ intrinsic Satisfaction Factor→ Individual EP	-0,055	0,193
Company Tenure → Conservation→ intrinsic Satisfaction Factor→ Individual EP	-0,124	0,178
Father's Education → Conservation→ intrinsic Satisfaction Factor→ Individual EP	0,004	0,854
Home Language → Conservation→ intrinsic Satisfaction Factor→ Individual EP	-0,003	0,773
Industrial Sector → Conservation→ intrinsic Satisfaction Factor→ Individual EP	0,008	0,732
Mother's Education → Conservation→ intrinsic Satisfaction Factor→ Individual EP	-0,001	0,909
Occupational Tenure → Conservation→ intrinsic Satisfaction Factor→ Individual EP	0,003	0,761

Position → Conservation → intrinsic Satisfaction Factor→ Individual EP	0,000	0,932
Conservation→ intrinsic Satisfaction Factor→ Individual EP	-0,002	0,744
Respondents' Education → Conservation→ intrinsic Satisfaction Factor→ Individual EP	0,000	0,929
Father's Education → intrinsic Satisfaction Factor→ Individual EP	-0,003	0,794
Gender → intrinsic Satisfaction Factor→ Individual EP	-0,007	0,732
Home Language → intrinsic Satisfaction Factor→ Individual EP	-0,015	0,717
Industrial Sector → intrinsic Satisfaction Factor→ Individual EP	0,000	0,985
Mother's Education → intrinsic Satisfaction Factor→ Individual EP	0,009	0,867
Occupational Tenure → intrinsic Satisfaction Factor→ Individual EP	-0,034	0,723
Age → Openness to Change → intrinsic Satisfaction Factor→ Individual EP	0,022	0,353
Company Tenure → Openness to Change → intrinsic Satisfaction Factor→ Individual EP	-0,056	0,306
Father's Education → Openness to Change → intrinsic Satisfaction Factor→ Individual EP	-0,001	0,971
Gender → Openness to Change → intrinsic Satisfaction Factor→ Individual EP	-0,019	0,318
Home Language → Openness to Change → intrinsic Satisfaction Factor→ Individual EP	-0,01	0,544
Industrial Sector → Openness to Change → intrinsic Satisfaction Factor→ Individual EP	0,028	0,264
Mother's Education → Openness to Change → intrinsic Satisfaction Factor→ Individual EP	-0,009	0,622
Occupational Tenure → Openness to Change → intrinsic Satisfaction Factor→ Individual EP	0,036	0,385
Position → Openness to Change → intrinsic Satisfaction Factor→ Individual EP	0,044	0,180
Openness to Change → intrinsic Satisfaction Factor→ Individual EP	0,119	0,135
Respondent's Education → Openness to Change → intrinsic Satisfaction Factor→ Individual EP	0,005	0,816
Position → Openness to Change → intrinsic Satisfaction Factor→ Individual EP	0,019	0,720
Respondent's Education → intrinsic Satisfaction Factor→ Individual EP	0,007	0,839
Age → Self Enhancement → intrinsic Satisfaction Factor→ Individual EP	0,003	0,957
Company Tenure → Self Enhancement → intrinsic Satisfaction Factor→ Individual EP	0,077	0,057
Father's Education → Self Enhancement → intrinsic Satisfaction Factor→ Individual EP	0,006	0,753
Gender → Self Enhancement → intrinsic Satisfaction Factor→ Individual EP	-0,029	0,193
Home Language → Self Enhancement → intrinsic Satisfaction Factor→ Individual EP	0,005	0,813

Industrial Sector → Self Enhancement → intrinsic Satisfaction Factor→ Individual EP	0,024	0,187
Mother's Education → Self Enhancement → intrinsic Satisfaction Factor→ Individual EP	-0,005	0,807
Occupational Tenure → Self Enhancement → intrinsic Satisfaction Factor→ Individual EP	0,033	0,407
Position → Self Enhancement → intrinsic Satisfaction Factor→ Individual EP	0,082	0,079
Self Enhancement → intrinsic Satisfaction Factor→ Individual EP	0,168	**0,029**
Respondent's Education→ Self Transcendence → intrinsic Satisfaction Factor→ Individual EP	-0,038	0,253
Age → Conservation→ intrinsic Satisfaction Factor	0,019	0,504
Company Tenure → Conservation→ intrinsic Satisfaction Factor	0,056	0,177
Father's Education → Conservation→ intrinsic Satisfaction Factor	0,019	0,598
Gender → Conservation→ intrinsic Satisfaction Factor	0,071	0,291
Home Language → Conservation→ intrinsic Satisfaction Factor	0,087	0,132
Industrial Sector → Conservation→ intrinsic Satisfaction Factor	0,009	0,797
Mother's Education → Conservation→ intrinsic Satisfaction Factor	0,014	0,744
Occupational Tenure → Conservation→ intrinsic Satisfaction Factor	-0,035	0,740
Position → Conservation→ intrinsic Satisfaction Factor	0,002	0,879
Respondent's Education → Conservation→ intrinsic Satisfaction Factor	-0,005	0,803
Age → Openness to Change → intrinsic Satisfaction Factor	0,003	0,803
Company Tenure → Openness to Change → intrinsic Satisfaction Factor	0,009	0,751
Father's Education → Openness to Change → intrinsic Satisfaction Factor	0,004	0,855
Gender → Openness to Change → intrinsic Satisfaction Factor	0,017	0,803
Home Language → Openness to Change → intrinsic Satisfaction Factor	0,037	0,729
Industrial Sector → Openness to Change → intrinsic Satisfaction Factor	-0,002	0,949
Mother's Education → Openness to Change → intrinsic Satisfaction Factor	0,030	0,405
Occupational Tenure → Openness to Change → intrinsic Satisfaction Factor	-0,099	0,114
Position → Openness to Change → intrinsic Satisfaction Factor	-0,007	0,743
Respondent's Education → Openness to Change → intrinsic Satisfaction Factor	-0,032	0,176
Age → Self Enhancement → intrinsic Satisfaction Factor	-0,032	0,176
Company Tenure → Self Enhancement → intrinsic Satisfaction Factor	-0,005	0,837
Father's Education → Self Enhancement → intrinsic Satisfaction Factor	0,040	0,166
Gender → Self Enhancement → intrinsic Satisfaction Factor	0,017	0,407
Home Language → Self Enhancement → intrinsic Satisfaction Factor	0,005	0,909
Industrial Sector → Self Enhancement → intrinsic Satisfaction Factor	0,093	0,109
Mother's Education → Self Enhancement → intrinsic Satisfaction Factor	-0,006	0,815
Occupational Tenure → Self Enhancement → intrinsic Satisfaction Factor	0,061	0,219
Position → Self Enhancement → intrinsic Satisfaction Factor	-0,192	0,058

Respondent's Education → Self Enhancement → intrinsic Satisfaction Factor	0,012	0,743
Age → Self Transcendence → intrinsic Satisfaction Factor	-0,057	0,151
Company Tenure → Self Transcendence → intrinsic Satisfaction Factor	-0,189	0,058
Father's Education → Self Transcendence → intrinsic Satisfaction Factor	0,012	0,743
Gender→ Self Transcendence → intrinsic Satisfaction Factor	-0,057	0,151
Home Language → Self Transcendence → intrinsic Satisfaction Factor	0,01	0,804
Industrial Sector → Self Transcendence → intrinsic Satisfaction Factor	0,047	0,144
Mother's Education → Self Transcendence → intrinsic Satisfaction Factor	-0,01	0,798
Occupational Tenure → Self Transcendence → intrinsic Satisfaction Factor	0,065	0,371
Position → Self Transcendence → intrinsic Satisfaction Factor	0,162	**0,039**
Respondent's Education → Self Transcendence → intrinsic Satisfaction Factor	-0,002	0,956

APPENDIX J: ETHIC CLEARANCE CERTIFICATE

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

Research Office

HUMAN RESEARCH ETHICS COMMITTEE (NON-MEDICAL)
R14/49 Nokaneng

CLEARANCE CERTIFICATE	**PROTOCOL NUMBER: H16/06/28**
PROJECT TITLE	Improvement and environmental performance in South African ISO 14001 certified organisations
INVESTIGATOR(S)	Mr T Nokaneng
SCHOOL/DEPARTMENT	Economics and Business Science/
DATE CONSIDERED	24 June 2016
DECISION OF THE COMMITTEE	Approved Two year extension only
EXPIRY DATE	17 July 2021
DATE 18 July 2016	**CHAIRPERSON** pp. J. Watermeyer (Professor J Watermeyer)

cc: Supervisor : Professor C Callaghan

DECLARATION OF INVESTIGATOR(S)

To be completed in duplicate and **ONE COPY** returned to the Secretary at Room 10004, 10th Floor, Senate House, University. Unreported changes to the application may invalidate the clearance given by the HREC (Non-Medical)

I/We fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to submit an amendment of the protocol to the Committee. **I agree to completion of a regular progress report. For Minimal and Low studies, this is due annually on 31 December. For Medium and High Risk studies, this is due twice annually on 30 June and 31 December.**

_____ _____/_____/_____
Signature **Date**

PLEASE QUOTE THE PROTOCOL NUMBER ON ALL ENQUIRIES