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THE RELATIONSHIP BETWEEN ORGANISATIONAL CULTURE, EMPLOYEE ENGAGEMENT AND ORGANISATIONAL PERFORMANCE IN THE PUBLIC SECTOR IN SOUTH AFRICA: A STRUCTURAL EQUATION MODELLING APPROACH

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Abstract

This study critically examines the interrelationships between organisational culture, employee engagement, and organisational performance within the South African public sector. A quantitative approach employing Structural Equation Modelling (SEM) through Smart PLS was used to test a multidimensional conceptual framework comprising 21 hypotheses. A stratified random sample of 408 employees across three government departments was surveyed using pre-validated instruments that measured nine latent constructs, including inspiring leadership, open and transparent communication, a challenging and engaging environment, organisational commitment, job involvement, employee satisfaction, motivation, retention, and organisational results. The measurement model demonstrated excellent reliability and construct validity, with all constructs exceeding the minimum thresholds for Cronbach's alpha, composite reliability, and average variance extracted (AVE).

The results confirmed strong and statistically significant relationships between organisational culture and employee engagement, and between employee engagement and organisational performance. Mediation analysis revealed that employee engagement partially mediates the culture-performance relationship, suggesting that a positive organisational culture influences performance directly and indirectly via enhanced engagement. Key cultural drivers such as inspiring leadership and a challenging work environment exhibited substantial predictive relevance, whereas open and transparent communication demonstrated limited statistical significance in some paths. The study makes a novel contribution to the limited body of empirical research on public sector management in emerging economies, offering actionable insights for leadership, policy reform, and human resource development in the South African public administration landscape.

Keywords

Organisational Culture, Employee Engagement, Organisational Performance, Public Sector

1. Introduction

Organisational culture, employee engagement, and organisational performance have emerged as critical factors in enhancing institutional effectiveness, particularly within the public sector. As global demands for transparency, efficiency, and accountability in government intensify, public institutions are under increasing pressure to reform internal practices and optimise performance (OECD, 2017). In this context, the interplay between organisational culture and employee engagement has garnered significant academic

and policy interest (Albrecht et al., 2015). While the private sector has been the primary focus of such research, there is a notable gap in the literature concerning the public sector, especially within the South African context (Pepra-Mensah & Kyeremeh, 2018; Slack & Singh, 2017).

Organisational culture shapes the behavioural norms, values, and expectations within institutions, acting as a key determinant of employee attitudes and performance outcomes (Schein, 2010). Public sector institutions often face distinct challenges, including rigid bureaucratic structures, resource constraints, and political oversight, which may influence these relationships differently than their private sector counterparts (Triguero-Sanchez et al., 2018). In South Africa, the public sector plays a pivotal role in socio-economic transformation, yet concerns persist regarding inefficiencies, poor service delivery, and low employee morale (National Development Plan, 2030; DPSA, 2022). As such, it is essential to understand the mechanisms that drive or hinder performance within this setting.

Empirical studies in developing countries have highlighted the importance of leadership, communication, and work environment as elements of organisational culture that influence engagement and performance (Widyaningrum & Amalia, 2023; Yanto, 2021). Nevertheless, the South African public sector remains under-researched in this regard, particularly through multivariate modelling techniques such as Structural Equation Modelling (SEM) (Purwanto et al., 2021). Thus, this study seeks to fill this gap by critically examining the relationships between organisational culture, employee engagement, and organisational performance in South Africa's public sector.

2. Literature Review and Conceptual Framework

Brenyan and Obuobisa-Darko (2017) studied the relationship between organisational culture and employee engagement within the Ghanaian public sector by surveying 267 employees. The findings demonstrated that employee engagement is significantly and favourably impacted by achievement culture, and employees who exercise discretion at work display higher levels of zeal, a sign of an engaged worker. Pepra-Mensah and Kyeremeh (2018:24) argued that "comparing engagement levels in the public sector is scant and looking into this gap could give a better picture of the issues of employee engagement in the public sector."

Mohapatra and Sharma (2010) highlighted the relationship between employee engagement and its predictors in the Indian public sector by focusing on a sample of 84 managerial employees. According to the study, an organisation's management style affects how well its employees are engaged at work.

Nikpour (2016) studied the relationship between organisational culture and organisational performance among a random sample of 190 employees from the public sector in Iran's Kerman Province. The results indicated that the organisational culture has a direct positive impact on organisational performance and indirectly affects organisational performance. Furthermore, Nikpour (2016) also concluded that organisational culture positively and significantly impacts employee organisational commitment in the public sector.

Al-Matari and Bin Omira (2017) explored the relationship between organisational culture and organisational performance using a sample of 384 employees randomly selected from 16 Saudi Arabian public service ministries. The study findings also revealed a positive and significant relationship between organisational culture and performance, and a partial mediating impact was revealed to have originated from organisational commitment to the organisational culture-organisational performance relationship. The researchers recommended that future researchers include variables such as leadership styles, job satisfaction and organisational commitment, culture, and an Islamic perspective that can potentially improve organisational performance in the public sector (Al-Matari and Bin Omira, 2017).

Triguero-Sanchez, Pena-Vinces, and Guillen (2018) focused on the relationship between organisational performance, employee diversity, and organisational culture using a sample of 102 public sector employees in Spain. These researchers reported a positive correlation between employee diversity and human resources practices, where such practices encourage employee commitment rather than control. These researchers also recommended conducting more studies in other geographical areas and among diverse cultures.

Jin and McDonald (2017) investigated the mediating role of perceived organisational support in the link between supervisor support and employee engagement. They found that employee engagement increases when employees perceive that their supervisor supports them. The researchers acknowledge that they did not use the well-known Utrecht Work Engagement Scale, which has been demonstrated to have

excellent psychometric properties regarding the three underlying dimensions of employee engagement (vigour, dedication, and absorption), of work engagement (Jin & McDonald, 2017).

In summary, if the concept of organisational culture is understood correctly, it can have a direct impact on organisational performance, as well as an indirect influence through employee engagement. To this end, the primary purpose of this study is to critically examine the relationship between organisational culture, employee engagement and organisational performance in the public sector in South Africa. Although considerable research has been conducted in this field, there is a need for further research on the relationship between organisational culture, employee engagement, and organisational performance within the South African public sector context.

Considering the above and to further examine the relationship between organisational culture, employee engagement and organisational performance in the public sector in South Africa, the following hypotheses were postulated:

H1: Organisational culture has a significant positive effect on employee engagement in South Africa's public sector

H2: Organisational culture has a significant positive effect on employee engagement in South Africa's public sector

H3: Employee engagement mediates the relationship between organisational culture and organisational performance in South Africa's public sector.

The literature reveals that the organisational culture comprises three crucial fundamental factors: inspiring leadership, open and transparent communication, and an engaging and challenging environment. These elements are regarded as significant factors that can promote and accelerate organisational culture in the public sector (Yanto & Aulia, 2021; Japura, Torres, Medina, Rocha, Zela & Fredez, 2023; Thahn & Quang, 2022; Dash & Roy, 2020).

Inspiring leadership is influencing people so that their efforts are oriented towards achieving the organisation's goals (Muzondiwa, Swarts & Schultz, 2022). Bagga, Gera and Haque (2022) defined "leadership as a process of social influence whereby a leader seeks to clarify organisational goals through the relationship resting on leader-follower action. Therefore, in an organisation, the team and employees must have a professional who is aligned with the organisation's values, vision, and mission and who manages or leads these teams (Cantermi & Lizite, 2022).

According to Yanto (2021), inspirational leadership and organisational culture significantly influence employee performance through mediating variables, namely work motivation and engagement. Hendrawan and Pogo (2021) emphasised that "there are some reasons for employees to leave the job, amongst others include organisational components, values, culture, strategies and opportunities, well-managed and results-oriented, continuity and job security.

In conclusion, leaders must have the ability to understand the characteristics of employees, and a leadership style that is per the characteristics of employees will improve the level of engagement and organisational performance (Hendrawan & Pogo, 2021). In addition, inspiring leadership in organisations provides employees with direction and purpose towards achieving competitive advantage and organisational performance (Singh & See, 2022).

Communication is the organisation's heartbeat, consisting of two internal subsystems (group and individual relationships). Organisational culture and internal communication are interrelated concepts (Aras & Yazgan, 2022). Walker (2021:147) states that open and transparent communication "is critical in creating organisational culture and identification". According to Mikkelson and Hesse (2023:290), open and transparent communication patterns "fits within the organisational context as it plays a central role in knowledge sharing, skills acquisition, developmental feedback, problem-solving, role negotiation, and even managing work relationships".

Ramirez-Lozano, Penaflor-Guerra and Sanagustin-Fons (2023:1) concluded that leadership styles, effective communication and job satisfaction were key factors in retaining employees, which can enhance organisational culture, employee engagement and organisational performance. Open and transparent communication is the key driver of organisational culture, employee engagement and organisational performance (Ramirez-Lozano, Penaflor-Guerra and Sanagustin-Fons, 2023). According to Rezaei, Mardani, Senin, Wong, Sadeghi, Najmi and Shaharoun (2018:99), an engaging and challenging environment presents various employee challenges. Organisations are witnessing an unprecedented change in the global nature of work and the diversity of workplace environments, and organisations are moving

forward into a boundary-less environment (John, 2022). Organisational culture is also influenced by the environment in which it triumphed (Razaei et al., 2018). The engaging and challenging work environment has been identified as an important driver of culture, work engagement and organisational results (Cai, Sun & Ma, 2018). To further explore the aforementioned conceptual relationships, the following hypotheses are postulated:

H4: There is a positive relationship between inspiring leadership and organisational commitment in South Africa's public sector.
H5: There is a positive relationship between inspiring leadership and job involvement in South Africa's public sector.
H6: A positive relationship exists between inspiring leadership and South Africa's public sector employee satisfaction.
H7: There is a positive relationship between open and transparent communication and organisational commitment in South Africa's public sector.
H8: There is a positive relationship between open and transparent communication and job involvement in South Africa's public sector.
H9: A positive relationship exists between open and transparent communication and South Africa's public sector employee satisfaction.
H10: A positive relationship exists between an engaging and challenging environment and organisational commitment in South Africa's public sector.
H11: A positive relationship exists between an engaging and challenging environment and job involvement in South Africa's public sector.
H12: A positive relationship exists between an engaging and challenging environment and South Africa's public sector employee satisfaction.

The literature reports that employee engagement comprises three crucial contributing factors: organisational commitment, job involvement and employee satisfaction, which mediate the relationship between employee engagement and organisational performance (Dash & Roy, 2020; Thahn & Quang, 2022). Ngirade (2021:3) states that "organisational commitment can be viewed as the psychological attachment that employees have with the organisation and its goals and the desire to stay with that particular organisation". The researcher further stated that organisational commitment is characterised by three dimensions: continuance, normative and affective commitment.

Employee organisational commitment is influenced by work environment, leadership, communication, motivation, satisfaction, engagement, occupational stress, job security and uncertainty (Ngirande, 2021). Organisational commitment can be viewed as an indicator of individual and organisational performance. Tarmizi and Anggiani (2022:70) concluded that "organisation should pay great attention to efforts to increase organisational commitment and employee engagement in their human resources management programmes, which in turn is expected to improve employee performance and overall organisational performance".

In conclusion, "organisational commitment and employee engagement are distinct. The former refers to the psychological linkages that employees establish with their organisation. In contrast, the latter denotes the linkages that employees create with their work" (Gomes, Marques & Cabral, 2021:93). The Social Exchange Theory explains that when both parties have complied with the exchange rules, the social relations are built based on trust and commitment will be well established (Sayuti, Setiawan, Alhadi and Herawati, 2021:2).

Job involvement is a type of commitment individuals exhibit to their respective jobs in their workplace (Saraf, Saha & Anand, 2022). According to Singh, Sinha and Yadav (2021), job involvement refers to the participation of organisational employees in achieving their objectives and helping the organisation accomplish its vision and mission through their involvement in their effort, ideas and expertise. Thus, variables such as organisational commitment, organisational performance, employee engagement, absenteeism, turnover, motivation, satisfaction, and characteristics are related to job involvement (Suparna & Noor, 2021). It is against this backdrop that "the level of employees' job satisfaction is a subjective reflection of what they perceive and feel regarding their job and company, and influencing factors which include salary, working hours, schedule, benefits, level of stress and flexibility" (Varshney, 2020:51).

Henriquez and Valerio (2023) highlighted that employee satisfaction is a complex and multidimensional concept studied from various perspectives. The researchers defined employee satisfaction as "the positive emotional state derived from job appraisal and work experiences and is influenced by factors such as leadership, employee engagement, the work done, relationships with co-workers, and salary" (Henriquez & Valerio, 2023:1). Hassan, Hassan and Hassan (2023:11) stated that "employee satisfaction refers to an employee's feelings about their job and is frequently studied with organisational culture and other variables such as job commitment, organisational performance and organisational commitment". The researchers further stated that "employee satisfaction leads to higher productivity through greater motivation and the enhancement of the working capabilities of employees. According to the "principles of reciprocity in the Social Exchange Theory, if organisations provide a positive behaviour, the employees will behave similarly and commit to positive behaviours by staying longer and demonstrating a high commitment and satisfaction" (Zamanan et al., 2020:1889). Thi et al. (2021) stated that organisational commitment can be an extension of employee satisfaction as it relates to the employee's positive attitude and loyalty.

Further to the above theoretical and empirical studies, and to explore the relationships further, it is postulated that:

H13: There is a positive relationship between organisational commitment and employee motivation in South Africa's public sector.
H14: There is a positive relationship between organisational commitment and employee retention in South Africa's public sector.
H15: A positive relationship exists between organisational commitment and organisational results in South Africa's public sector.
H16: There is a positive relationship between job involvement and employee motivation in South Africa's public sector.
H17: There is a positive relationship between job involvement and employee retention in South Africa's public sector.
H18: There is a positive relationship between job involvement and organisational results in South Africa's public sector.

The literature also revealed that employee motivation, employee retention and organisational results are the major contributing factors to organisational performance (Yanto & Aulia, 2021; Abdullahi, Raman & Solarin, 2021; Japura et al., 2023; Thahn & Quang, 2022). Organisational culture's impact on employee motivation and satisfaction is an exciting topic (Japura et al., 2023).

Motivation is considered the key factor in achieving organisational goals; it is a significant part of human resources and is a foremost issue in behavioural science (Makhamreh et al., 2022). Employee motivation has been studied over time, and there is a consensus that it is a critical work factor that significantly influences employee productivity and performance (Sousa, Santos and Oliveira, 2023). One of the most prominent motivational theories is Maslow's hierarchy of needs, which suggests that individuals are motivated by a hierarchy of needs ranging from basic physiological needs to higher-level needs such as self-actualisation (Gechbaia, Bozhinova, Goletiani & Abashidze, 2023). Thus, motivation represents the relationship between needs, drives, and goals (Noviantoro et al., 2022).

Bhakuni and Saxena (2023:226) state that employee motivation is "enthusiasm, creativity and commitment provided by an employee towards an organisation". Furthermore, the researchers highlighted that motivation is vital in improving an employee's performance, which can eventually enhance the organisation's performance and employee engagement (Bhakuni & Saxena, 2023). Motivation also plays an increasingly important role in various markets, as it can be a management tool and a competitive differentiator in organisations (Sousa, Santos and Oliveira, 2023). Achieving high performance is often the result of well-motivated individuals willing to exert discretionary effort and even exceed predetermined job expectations (Grigoras et al., 2023).

In conclusion, "higher satisfaction levels, commitment, and motivation are often achieved by promoting positive organisational cultures that foster open and transparent communication, collaboration, and employee empowerment" (Japura et al., 2023:352). In addition, a supportive and positive organisational culture can promote a feeling of belonging, intrinsic motivation, and job satisfaction among employees (Japura et al., 2023). Fletcher et al. (2018) concluded that perceived training and development positively affect employee retention. This relationship is fully mediated by three different forms of work

attitude: employee satisfaction, employee engagement, organisational culture, performance and change-related anxiety. Sepahvand and Khodashahri (2021:439) explained that "the objective of employee retention is to retain the qualified employees of the organisation as long as possible because qualified employees are invaluable intangible assets of the organisation". The researchers defined employee retention as "a process whereby an organisation can retain its potential employees to remain loyal to the organisation for a longer time" (Sepahvand & Khodashahri, 2021:439).

Anitha and Farida (2016:18) stated that "employee retention involves taking measures to encourage employees to remain in the organisation for the maximum time". Employee retention may be achieved by implementing four broad areas: emphasising good communication, employing a diverse team, recruiting employees with necessary skills and providing employees with training and development opportunities (Krishna & Garg, 2022). However, Anita and Farida (2016) believe that implementing organisational culture, affective commitment, continuance commitment, and normative commitment can achieve employee retention. Organisations ought to develop and implement constructive employee retention strategies encompassing mentorship programmes, recognition and rewards systems, communication and feedback and performing exit interviews (Amushila & Bussin, 2021). In addition, employee retention may be achieved by implementing employee satisfaction factors such as salary, leadership, colleagues, promotions and nature of work (Steil et al., 2022).

Tadesse and Diribe (2023) indicated that talent development and succession planning strategies are critical to realising employee retention objectives. The benefits of retaining essential employees include reaching their strategic business objectives and obtaining a competitive advantage (Sepahvand et al., 2020). Organisational results refer to the outcomes of the organisation's operations or the achievement of the organisation's goals (Uluskan et al., 2017). Organisational results that culminate in the overall organisational performance can be measured by financial, customer, process/operation, internal aspects, and innovation/learning growth (Uluskan et al., 2017). Organisational results involve actual productivity or outcomes compared with the desired outcomes or objectives (Olawale & Salman, 2021). Organisational outcomes may impact organisational outcomes, namely, culture, organisational commitment, employee satisfaction, evaluation of authority, performance, adverse reactions, communication, leadership, withdrawal and organisational citizenship behaviours (Fearne & Lazzarin, 2009). Furthermore, organisational strategy, structure, customer and supplier management, managers, and managing tangible resources or organisational culture can help improve organisational results and performance (Perianez-Cristobal, Calvo-Mora, Rey-Moreno & Suarez, 2021). Factors of social and technical character also drive organisational results. The social factors include organisational culture, leadership and top management commitment, human resources, customer focus, employee involvement, workforce commitment, shared vision, employee training, empowerment, and teamwork. Technical factors include practices and tools related to the quality management system's design, implementation and improvement (Calvo-Mora, Picon-Berjoyo, Ruiz-Moreno & Cauzo-Bottala, 2015). According to Rezaei et al.(2018), organisational results are characterised by inspiring leadership, open and transparent communication, a high degree of motivation, clear vision and strategy, a highly empowered team, excellent training and education, mutual trust, seamless collaboration, strong commitment, engaging and challenging environment

In conclusion, organisational results involve comparing performance against the set strategic priorities, goals and objectives. The organisational results can be enhanced by creating an organisational culture of high performance. Variables such as organisational culture, employee engagement, and performance are fundamental to achieving organisational results.

In an attempt to address the aforementioned relationships in a different organisational context, this study proposes the following hypotheses:

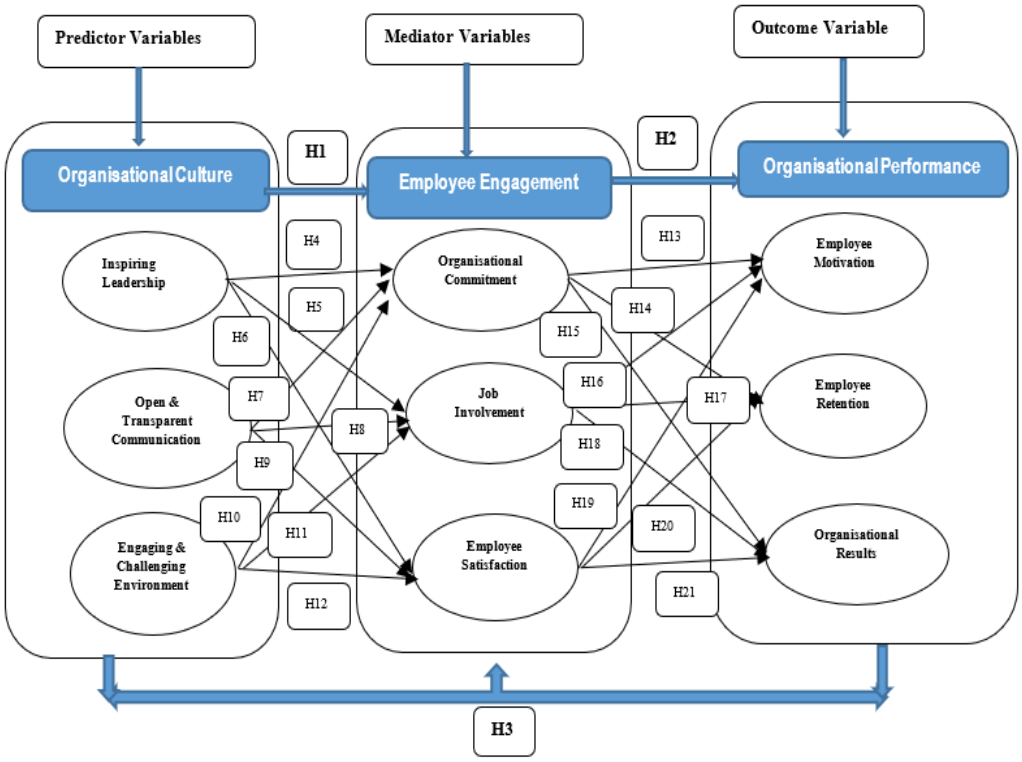
H19: There is a positive relationship between employee satisfaction and employee motivation in South Africa's public sector.

H20: There is a positive relationship between employee satisfaction and retention in South Africa's public sector.

H21: There is a positive relationship between employee satisfaction and organisational results in South Africa's public sector.

The 21 hypotheses are depicted in Figure 1 as the proposed conceptual framework, which was tested using Confirmatory Factor Analysis through Structural Equation Modelling.

Figure 1: Proposed Conceptual Framework



Source: Developed by the Researcher

3. Research Methodology

Correlational research, which is a non-experimental research design and a key component of the descriptive research design, was used in this study, since it allows the uses of correlational statistics to measure and describe the degree of association among variables or sets of scores. Furthermore, correlational research attempts to find relationships between the characteristics of the respondents and their reported behaviours and opinions" (Asenahabi,2019:4-6).

Simple random sampling which is a probability sampling strategy was used (Beins and McCarthy, 2018). The target population included three (3) government Departments in South Africa: Department A, Department B and Department C. Thus, the estimated study target population was 1100 employees (200 employees from Department A, 500 employees from Department B and 400 employees from Department C). The human resources payroll in the three identified public sector institutions served as the sampling frame for this study. The target population was 1100, and the sample size was 285 employees, calculated using Cochran's formula, with an acceptance of error of 5% and a confidence interval of 95% (Nikpour, 2017). According to Bin Ahmad and Binti Halim (2017), Cochran's formula requires three factors to specify sample size (heterogeneity of the population, the magnitude of acceptance of error (+ or – of some amounts say 3% or 5% or the level of precision) and confidence intervals (for example 90%, 95%, 99%). The sample size is reflected in Table 1.

Table 1: Sample Size

Institution	Target Population	Sample Size
Organisation A	200	58
Organisation B	500	117
Organisation C	400	110
TOTAL	**1100**	**285**

A closed-ended questionnaire was used to collect data from the respondents through a survey. The researcher approached executives from the selected government departments for permission to administer

the research instrument. Followed by the distribution of the online questionnaire on the date agreed with the HR manager. The questionnaires were directed at managers and non-managers. The questionnaire comprised items developed from previous studies as reflected in Table 2. The five-point Likert scale was used to answer questions, with a rating of 1 to 5, where 1= strongly disagree and 5 = strongly agree.

Table 2: Questionnaire Development

Variable	Source
Organisational Culture	Brenyan and Obuobisa-Darko (2017)
Leadership, communication, and challenging environment.	Nikpour (2016)
Employee engagement	Jha and Kumar (2016); Kuo (2018)
Organisational performance	Dash and Roy (2020)

The IBM Statistical Package for Social Sciences (SPSS) and SmartPLS were used for quantitative data analysis. SPSS is "probably the most widely used computer software for analysing quantitative data for social scientists" (Bryman et al., 2017).

4. Research Findings

This study employed Smart PLS software to conduct statistical analysis of both the measurement and structural models using the Structural Equation Modelling (SEM) approach. Recognised for its robustness, Smart PLS is particularly effective in evaluating complex causal models involving multiple constructs and indicators (Purwanto et al., 2021). The study utilised bootstrapping resampling procedures to assess the statistical significance of the model relationships.

Cronbach's alpha and composite reliability were utilized to evaluate reliability. Reliability is most commonly assessed using Cronbach's Alpha and Composite Reliability (CR). Composite Reliability statistics varied from 0.967 to 0.982, whereas Cronbach's Alpha statistics ranged from 0.958 to 0.978. Each indicator's statistical reliability exceeds the 0.70 threshold (Esthi, 2022; Hussey, Alsalti, Bosco, Elson & Arslan, 2023). Accordingly, the reliability of the constructs has been confirmed as reflected in Table 3.

Table 3: Reliability Analysis Statistics

	Cronbach's alpha	Composite reliability (rho_c)
CE	0.978	0.982
EM	0.974	0.978
ER	0.964	0.971
IL	0.976	0.981
JI	0.966	0.973
ES	0.963	0.970
ORR	0.958	0.967
ORC	0.972	0.977
TC	0.978	0.982

Note: CE= Challenging Environment; EM = Employee Motivation; ER = Employee Retention; IL= Inspiring leadership; JI = Job Involvement; ES = Employee Satisfaction; ORC = Organisational Commitment; ORR = Organisational Results; TC = Open and transparent communication

According to Rönkkö and Cho (2022), a low correlation between variables in a conceptual model indicates discriminant validity, whereas a high item loading on their familiar construct indicates convergent validity. The discriminant and convergent validity of the AVE were also evaluated, as suggested by Crego et al. (2015). In PLS-SEM, construct validity is statistically established when both convergent and discriminant validity are demonstrated. Factor loadings, Average Variance Extracted (AVE), the Fornell and Larcker Criterion, and the Inter-Construct Correlation Matrix were employed to assess the validity of the measurement instruments. The subsequent sections present and interpret the results obtained from each of these validation measures.

Convergent validity was assessed in this analysis by examining outer loadings and Average Variance Extracted (AVE). The outer loadings and extracted average variance (AVE) are shown in Table 3. Melkamu, Gelaye, Matebe, Lindgren, and Erlandsson (2022) predict that exterior loadings will be

greater than 0.5, indicating that instruments will measure at least 50% of what they were designed to measure". As shown in Table 4, all outer loadings are above 0.877, confirming discriminant validity.

Table 4: Convergent Validity

Research construct		AVE	Factor Loadings
EC	CE1	0.9	0.948
	CE2		0.959
	CE3		0.952
	CE4		0.958
	CE5		0.937
	CE6		0.936
EM	EM1	0.88	0.952
	EM2		0.939
	EM3		0.946
	EM4		0.942
	EM5		0.943
	EM6		0.917
ER	ER1	0.85	0.941
	ER2		0.918
	ER3		0.922
	ER4		0.953
	ER5		0.916
	ER6		0.877
IL	IL1	0.9	0.955
	IL2		0.952
	IL3		0.935
	IL4		0.943
	IL5		0.951
	IL6		0.94
JI	JI1	0.86	0.935
	JI2		0.916
	JI3		0.921
	JI4		0.916
	JI5		0.931
	JI6		0.931
ES	ES1	0.84	0.929
	ES2		0.908
	ES3		0.944
	ES4		0.909
	ES5		0.937
	ES6		0.882
ORR	ORR1	0.83	0.895
	ORR2		0.921
	ORR3		0.88
	ORR4		0.929
	ORR5		0.926
	ORR6		0.908
ORC	ORC1	0.88	0.922
	ORC2		0.955
	ORC3		0.936
	ORC4		0.92
	ORC5		0.944
	ORC6		0.938

TC	TC1	0.9	0.956
	TC2		0.965
	TC3		0.957
	TC4		0.94
	TC5		0.946
	TC6		0.927

Note: CE= Challenging Environment; EM = Employee Motivation; ER = Employee Retention; IL= Inspiring leadership; JI = Job Involvement; ES = Employee Satisfaction; ORC = Organisational Commitment; ORR = Organisational Results; TC = Open and transparent communication

All constructs in the current study met the recommended convergent validity threshold of 0.50 based on AVE statistics. In the current study, the lowest AVE is 0.828, while the highest AVE is 0.900 (Rani, Rao & Ramarao, 2023).

According to the criteria established by Rasoolimanesh (2022), discriminant validity is established when the square root of AVE for a construct exceeds its correlation with all other constructs. The analysis revealed that the square root of the AVE for each construct exceeded its correlations with all other constructs, as shown in Table 5. This finding provides strong evidence in support of discriminant validity.

Table 5: Discriminant Validity - Fornell and Larcker Criterion

	CE	**EM**	**ER**	**IL**	**JI**	**ES**	**ORR**	**ORC**	**TC**
CE	***0.949***								
EM	0.793	***0.940***							
ER	0.805	0.841	***0.922***						
IL	0.837	0.806	0.793	***0.946***					
JI	0.772	0.894	0.832	0.797	***0.925***				
ES	0.796	0.845	0.818	0.785	0.845	***0.918***			
ORR	0.693	0.688	0.657	0.692	0.687	0.672	***0.910***		
ORC	0.818	0.893	0.872	0.846	0.878	0.882	0.678	0.936	
TC	0.873	0.788	0.787	0.898	0.765	0.780	0.690	0.819	***0.949***

Note: CE= Challenging Environment; EM = Employee Motivation; ER = Employee Retention; IL= Inspiring leadership; JI = Job Involvement; ES = Employee Satisfaction; ORC = Organisational Commitment; ORR = Organisational Results; TC = Open and transparent communication

Hair, Hult, Ringle, and Sarstedt (2014) explain that establishing discriminant validity requires confirming that each observed variable loads more strongly on its associated construct than on any other construct within the structural model. Olanipekun, Ahmed, Opoku, and Sutrisna (2022) suggest that to evaluate discriminant validity, one must ascertain whether the correlation between the research constructs is less than 1. As presented in Table 6, the intercorrelations among all pairs of latent variables are below 1, supporting the presence of discriminant validity. Furthermore, the values exceed the 0.8 threshold recommended by O'Rourke and Hatcher (2013), indicating a high level of discriminant validity.

Table 6: Hetero Trait-Mono Trait (Htmt) Ratio

	CE	**EM**	**ER**	**IL**	**JI**	**ES**	**ORR**	**ORC**	**TC**
CE	1.000								
EM	0.813	1.000							
ER	0.827	0.864	1.000						
IL	0.856	0.826	0.815	1.000					
JI	0.793	0.922	0.858	0.819	1.000				
ES	0.820	0.870	0.846	0.808	0.874	1.000			
ORR	0.715	0.711	0.679	0.713	0.712	0.696	1.000		
ORC	0.839	0.919	0.899	0.868	0.906	0.910	0.700	1.000	
TC	0.893	0.807	0.809	0.919	0.786	0.803	0.711	0.840	1.000

Note: CE= Challenging Environment; EM = Employee Motivation; ER = Employee Retention; IL= Inspiring leadership; JI = Job Involvement; ES = Employee Satisfaction; ORC = Organisational Commitment; ORR = Organisational Results; TC = Open and transparent communication

4.1 Model Fit Assessment

Model Fit Assessment evaluates the degree to which the observed data align with the proposed conceptual model. This study assessed model fit using Smart PLS indicators, including the Normed Fit Index (NFI) and the Standardised Root Mean Residual (SRMR) and the results are reflected in Table 7.

Table 7: Model Fit Indices

	Saturated Model	Estimated Model
SRMR	0.042	0.082
NFI	0.791	0.778

In addition, the Global Fit Index for the research model was assessed to determine the adequacy of the model's fit. The global goodness-of-fit (GOF) statistic was computed using the formulas proposed by Hang and Wu (2022), which build upon the approach established by Tenenhaus, Vinzi, Chatelain, and Lauro (2005):

$$GoF = \sqrt{\overline{AVE} * \overline{R^2}}$$

The Global Goodness-of-Fit (GOF) index for the research model was calculated at 0.661, surpassing the threshold of 0.36 recommended by Khojasteh and Lo (2015). This finding suggests a strong overall model fit and supports the robustness of the relationships among the latent variables, as noted by Zhang et al. (2022).

4.2 Structural Model Assessment

Since the evaluation of the measurement model met the criterion, the structural model was then evaluated. To accomplish this, a path analysis was conducted. For each proposed hypothesis, path coefficients were calculated, and bootstrapping provided t-statistics and p-values for significance level evaluation. Organisational culture, Employee engagement and Organisational performance were the higher-order constructs in the study, each based on three lower-order dimensions for Organisational culture (challenging environment; inspiring leadership & open and transparent communication), Employee engagement (employee satisfaction; job involvement & organisational commitment) and Organisational performance (employee motivation; employee retention & organisational results). The Outer Weights, Outer Loadings and Variance Inflation Factor (VIF) were assessed to establish the highest-order construct validity. The outer weights were statistically significant (Hair et al., 2016). Additionally, all outer loadings exceeded the threshold of 0.50 for each lower-order construct, confirming indicator reliability (Sarstedt et al., 2016). Variance Inflation Factor (VIF) values were also examined to assess potential collinearity, with all values falling below the recommended threshold of 5 (Hair et al., 2016). As reflected in Table 8, since all evaluation criteria were satisfied, the validity of the higher-order construct (HOC) was confirmed.

Table 8: Higher Order Construct Validity

HOC	LOCs	Outer Weights	T Statistics	P Values	Outer Loadings	VIF
OC	**CE**	0.348	61.491	0.000	0.945	4.489
	IL	0.354	73.049	0.000	0.955	4.499
	TC	0.345	70.956	0.000	0.966	3.636
EE	**ES**	0.342	70.775	0.000	0.951	4.995
	JI	0.346	73.756	0.000	0.950	4.837
	ORC	0.359	72.412	0.000	0.964	4.244
OP	**EM**	0.403	41.143	0.000	0.941	3.831
	ER	0.386	42.694	0.000	0.929	3.550
	ORR	0.312	34.641	0.000	0.842	1.978

Note: OC= Organisational culture; EE= Employee engagement; OP= Organisational performance; CE= Challenging Environment; EM = Employee Motivation; ER = Employee Retention; IL= Inspiring

leadership; JI = Job Involvement; ES = Employee Satisfaction; ORC = Organisational Commitment; ORR = Organisational Results; TC = Open and transparent communication

Path analysis comprised the next phase of SEM-based data analysis (Stein et al. 2012). Path modelling describes the associations between observed or measured variables and theoretical constructs (Roche, Duffield, & White, 2011) and evaluates the structural paths of the conceptualised research model (Anderson et al. 1988). This SEM procedure aimed to demonstrate and evaluate the theoretical foundations of the study and the significance of the relationships between model constructs (Jenatabadi et al., 2014). The structural model of the study was evaluated by examining p-values and standardized regression coefficients (Keith, 2019). In path modelling, it is essential to explain both the standardisation of regression coefficients and the predictive power (Banner & Higgs, 2017).

4.2.1 Model Prediction Assessment

In general, model prediction assessment encompasses both the explanatory and predictive power of the model. In this study, explanatory power is evaluated using the coefficient of determination (R^2) and effect size (F^2), while predictive power is assessed through the cross-validated redundancy measure (Q^2). F-squared (F^2) serves as a quantitative indicator of effect size, reflecting the change in R^2 that occurs when an exogenous variable is excluded from the model. This measure provides valuable insights into the significance of the variable in question and its contribution to the overall explanatory power of the model. This approach aids in evaluating the importance of predictor variables in elucidating the variability observed in independent variables. Hair et al. (2021) delineate the thresholds for effect size, indicating that an F^2 value of 0.02 or greater is classified as small, an F^2 value of 0.15 or greater is deemed medium, and a F^2 value of 0.35 or greater is recognised as large. In the present investigation's framework, examining the F^2 values and considering their broader implications is essential.

The model's explanatory power is evaluated using the R-squared (R^2) and F-squared (F^2) statistics. The R^2 value represents the proportion of variance in the endogenous variable that can be attributed to the exogenous variable(s). In other words, it reflects the extent to which changes in the dependent variable are explained by variations in one or more independent variables. In the context of this study, employee engagement (EE) is predicted by organisational culture (OC), yielding an R^2 value of 0.764. This indicates that OC explains 76.4% of the variance in EE. Additionally, organisational performance (OP) is influenced by EE, with an R^2 value of 0.868, suggesting that EE accounts for 86.8% of the variance in OP.

Hair et al. (2013) suggest that R^2 values of 0.75, 0.50, and 0.25 can be interpreted as a general guideline indicating substantial, moderate, and weak explanatory power, respectively, for endogenous latent variables. Given that the R^2 value for employee engagement (EE) is 0.764 and for organisational performance (OP) is 0.868, both values exceed the threshold for substantial explanatory power. This indicates that the model demonstrates strong explanatory capacity for these constructs.

F-Squared (F^2) represents the change in R^2 when a specific exogenous variable is excluded from the model, thereby indicating the variable's effect size. As per the guidelines provided by Cohen (1988) and Hair et al. (2021), an F^2 value of ≥ 0.02 indicates a small effect, ≥ 0.15 is a medium effect, and ≥ 0.35 is a large effect. In this study, organisational culture (OC) demonstrated an effect size of 3.243, which is well above the threshold for a large effect, suggesting that its removal would significantly reduce the explanatory power for employee engagement (EE). Similarly, EE exhibited an even larger effect size of 6.558, indicating its critical role in influencing organisational performance (OP). Therefore, eliminating EE from the model would substantially diminish the model's ability to explain variations in OP.

4.2.3 Model Predictive Relevance

This study employed the Q-squared (Q^2) statistic to assess the model's predictive relevance. A model is considered to exhibit predictive relevance when Q^2 values exceed zero, with $Q^2 > 0$ indicating satisfactory predictive capability. Additionally, Q^2 serves as an indicator of the predictive relevance of the endogenous constructs within the model. Q^2 values above zero indicate that your values are well reconstructed and the model has predictive relevance.

Table 10 reveals that the Q^2 for the latent and endogenous variables EE and OP are 0.764 and 0.772, respectively. These values are substantially above zero; therefore, it can be concluded that the current study model has strong predictive power and relevance. Table 9 presents a summary of the model's predictive relevance, based on the results obtained from the PLS Predict procedure conducted using Smart

PLS Version 4.

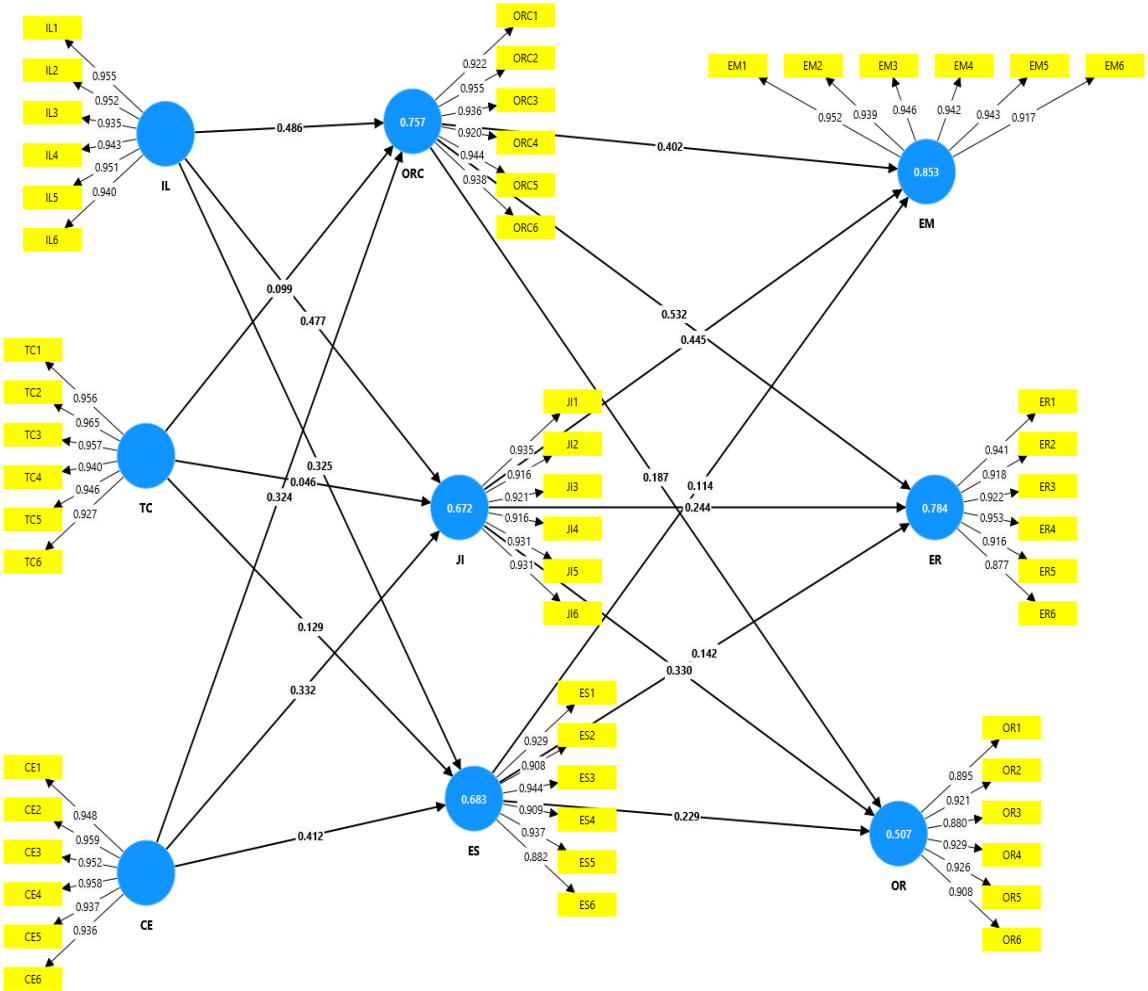
Table 9: Predictive Relevance Assessment

Predictor Variables	Outcome Variables	R-Squares (R^2)	F-Squared (F^2)	Q-Squared (Q^2)
OC	EE	0.764	3.243	0.764
EE	OP	0.868	6.558	0.772

4.2.4 Path modelling

Path analysis was the subsequent step in SEM-based data analysis (Memon, Ramayah, Cheah, Ting, Chuah & Cham, 2021). This SEM procedure was designed to demonstrate and evaluate the theoretical foundations of the study and the significance of the relationship between model constructs (Deng & Yuan, 2023). The structural model of the study was evaluated by investigating p-values and regression coefficients" (Bowen & Guo, 2012; Held & Ott, 2018). The standardized regression coefficients and the ability to predict in path modelling must be explained" (Deng & Yuan, 2023). Figure 2 depicts the outcome of the structural model for the proposed hypothesis.

Figure 2: Structural Model



Note: CE= Challenging Environment; EM = Employee Motivation; ER = Employee Retention; IL= Inspiring leadership; JI = Job Involvement; ES = Employee Satisfaction; ORC = Organisational Commitment; ORR = Organisational Results; TC = Open and transparent communication

Table 10 reflects the proposed hypotheses, corresponding path coefficients, t-statistics, and the outcomes indicating whether each hypothesis was supported or rejected. According to Zhang (2022), a t-value greater than 1.96 signifies a statistically significant relationship, while path coefficients exceeding one reflect a strong association between latent variables.

Table 10: Hypothesis Testing Results

Hypothesised relationship	Hypothesis	Path Coefficient (β)	T-Statistics (t)	P- Value	Rejected/ Supported
IL-> ORC	H_4	0.486	5.340	0.000	Significant and supported
IL-> JI	H_5	0.477	5.032	0.000	Significant and supported
IL -> ES	H_6	0.325	3.477	0.001	Significant and supported
TC -> ORC	H_7	0.099	0.850	0.395	Supported but insignificant
TC-> JI	H_8	0.046	0.322	0.747	Supported but insignificant
TC-> ES	H_9	0.129	1.098	0.272	Supported but insignificant
CE -> ORC	H_{10}	0.403	9.730	0.000	Significant and supported
CE-> JI	H_{11}	0.833	38.107	0.000	Significant and supported
CE-> ES	H_{12}	0.486	5.340	0.000	Significant and supported
ORC-> EM	H_{13}	0.402	5.454	0.000	Significant and supported
ORC-> ER	H_{14}	0.532	5.394	0.000	Significant and supported
ORC-> ORR	H_{15}	0.187	1.718	0.086	Supported but insignificant
JI-> EM	H_{16}	0.445	6.2172	0.000	Significant and supported
JI-> ER	H_{17}	0.244	2.578	0.010	Significant and supported
JI -> ORR	H_{18}	0.330	3.265	0.001	Significant and supported
ES-> EM	H_{19}	0.114	1.696	0.090	Supported but insignificant
ES-> ER	H_{20}	0.142	1.609	0.108	Supported but insignificant
ES-> ORR	H_{21}	0.229	5.032	0.013	Significant and supported

Note: CE= Challenging Environment; EM = Employee Motivation; ER = Employee Retention; IL= Inspiring leadership; JI = Job Involvement; ES = Employee Satisfaction; ORC = Organisational Commitment; ORR = Organisational Results; TC = Open and transparent communication

Based on the findings presented in Table 10, it may be concluded that all hypotheses were statistically supported, as the relationships demonstrated either positive or negative effects and met the significance thresholds ($p < 0.05$, $t > 1.96$).

4.2.5 Model Prediction Assessment

By and large, model prediction assessment focuses on the model's explanatory power and model predictive power. In this study, the model explanatory power is assessed using R^2 and F^2, while the model predictive power is assessed using Q^2. F-squared (F^2) functions as a quantitative measure of effect size, indicating the extent of change in the R^2 value when a specific exogenous variable is removed from the model. This metric offers important insights into the relevance of the variable and its contribution to the model's overall explanatory capacity. This approach aids in evaluating the importance of predictor variables in elucidating the variability observed in independent variables. According to Cohen (1988) and Hair et al. (2021), effect size thresholds for F^2 are defined as follows: a value of 0.02 or above indicates a small effect, 0.15 or above reflects a medium effect, and 0.35 or above signifies a large effect.

The findings indicate that the F^2 values for various predictor variables, such as Transparent Communication (TC), fall from 0.001 to 0.019. This suggests that these variables exhibit a small effect size. In particular, the TC exhibits an F^2 value of 0.006 for ORC and 0.008 for ES, which are situated

within the small range of effect sizes. The implication is that eliminating these variables would likely result in only a negligible impact on the dependent variables, which include Organisational Commitment (ORC) and Employee Satisfaction (ES). The modest effect sizes indicate that these predictors have a limited role in elucidating the variance in the outcomes they are intended to impact. Conversely, Individual Leadership (IL) demonstrates F^2 values of 0.177 for Organisational Role Clarity (ORC) and 0.126 for Job Involvement (JI), indicating that it occupies a position within the medium effect size range. The data demonstrates that IL moderately impacts both Organisational Commitment and Job Involvement, highlighting its significance in shaping these critical workplace dynamics. Eliminating IL from the model would result in a discernible yet not drastic decrease in R^2, suggesting that IL plays a significant role in elucidating these outcomes. Variables such as CE (Challenging Environment), which exhibit F^2 values of 0.097 for ORC and 0.075 for JI, demonstrate small-to-medium effect sizes. This suggests that these variables moderately influence their corresponding dependent variables, though this influence is not particularly strong or dominant. The elimination of CE is likely to exert a moderate influence on these outcomes; however, it is important to note that such a removal would not significantly diminish the overall explanatory capacity of the model. The R^2 values indicate that certain variables, including Job Involvement (JI), which has an F^2 value of 0.279 about Employee Motivation (EM), are categorised within the medium to large effect size range. This suggests that these variables substantially impact the outcome being studied. The exclusion of JI from the model would significantly decrease the variance in Employee Motivation. In summary, the F^2 values presented in this study indicate that Individual Leadership (IL), Challenging Environment (CE), and Job Involvement (JI) have a medium to moderate effect size on their associated outcomes. This implies that the removal of these variables would likely result in a moderate to substantial reduction in the explanatory power of the model to the dependent variables. On the other hand, variables such as Transparent Communication (TC) exhibit relatively minor effects, suggesting that their removal from the model would result in a negligible impact. The significance of this information lies in its capacity to elucidate the relative importance of each predictor, thereby guiding decisions regarding the potential simplification or refinement of the model.

4.2.6 Model Predictive Relevance

In this study, the Q-squared (Q^2) statistic was employed to evaluate the predictive relevance of the model. A model is considered to possess predictive relevance when Q^2 exceeds zero, with $Q^2 > 0$ indicating that the model accurately reproduces the observed values. Moreover, Q^2 specifically assesses the predictive accuracy of endogenous constructs. As shown in Table 5.20, the Q^2 values for the latent and endogenous variables, Employee Motivation (EM), Employee Retention (ER), Employee Satisfaction (ES), Job Involvement (JI), Organisational Results (OR), and Organisational Commitment (ORC) are 0.692, 0.686, 0.659, 0.675, 0.510, and 0.749, respectively. Since all values are well above zero, it can be concluded that the model demonstrates strong predictive power and relevance.

Table 11 summarises the model's predictive relevance, derived from the PLS Predict analysis conducted using Smart PLS Version 4.

Table 11: Predictive Relevance Assessment

Predictor Variables	Outcome Variables	R-Squares (R^2)	F-Squared (F^2)	Q-Squared (Q^2)
IL	ORC	0.757	0.177	0.749
TC			0.006	
CE			0.097	
IL	JI	0.672	0.126	0.659
TC			0.001	
CE			0.075	
IL	ES	0.683	0.06	0.675
TC			0.008	
CE			0.119	
ORC	EM	0.853	0.177	0.692
JI			0.279	
ES			0.018	

ORC	ER	0.784	0.21	0.686
JI			0.057	
ES			0.019	
ORC	ORR	0.507	0.011	0.51
JI			0.046	
ES			0.021	

4 Discussion

The primary objective of this study was to examine the relationship between organisational culture, employee engagement, and organisational performance within the South African public sector using Structural Equation Modelling (SEM). The results provide strong empirical support for the hypothesised model and offer valuable theoretical, practical, and contextual insights.

The findings confirm a significant and strong positive relationship between organisational culture and employee engagement ($\beta = 0.874$, $p < 0.001$). This is consistent with previous research, which posits that an enabling organisational culture fosters conditions that encourage employee psychological investment and discretionary effort (Brenyan & Obuobisa-Darko, 2017; Albrecht et al., 2017). Specifically, the study identified inspiring leadership and a challenging, engaging work environment as key cultural drivers of engagement, while open and transparent communication, although positively correlated, had a statistically insignificant impact.

These results resonate with Social Exchange Theory (Blau, 1964), which posits that employees reciprocate favourable organisational conditions such as strong leadership and meaningful work with higher engagement. The data suggest that in the South African public sector, employees are especially responsive to leadership that provides direction, motivation, and intellectual stimulation (Yanto, 2021; Widyaningrum & Amalia, 2023). This also aligns with Herzberg's two-factor theory (1959), which classifies achievement, recognition, and the nature of work as intrinsic motivators attributes closely tied to the organisational culture dimensions explored.

The study also found a significant and substantial relationship between employee engagement and organisational performance ($\beta = 0.931$, $p < 0.001$). This supports extensive prior literature highlighting the impact of engaged employees on key performance outcomes such as productivity, service quality, innovation, and customer satisfaction (Mohapatra & Sharma, 2010; Nikpour, 2016). The structural model showed that engaged employees contribute meaningfully to both employee retention and organisational results, with job involvement and organisational commitment being particularly influential dimensions. Interestingly, employee satisfaction demonstrated a weaker, though still positive, effect on performance outcomes. While satisfaction is an important precursor to engagement, these results suggest that commitment and involvement are more actionable predictors of performance in public institutions where employees may derive meaning and identity from their roles, beyond mere satisfaction with work conditions (Saraf et al., 2022; Ju et al., 2020).

Employee engagement was found to partially mediate the relationship between organisational culture and organisational performance. This supports the conceptual framework that posits culture influences performance both directly and indirectly through its impact on engagement (Al-Matari & Bin Omira, 2017). Specifically, the mediating effects were complementary—indicating that culture not only creates an environment conducive to performance but also strengthens employee engagement as a mechanism to sustain it. The strongest mediation pathways involved inspiring leadership and a challenging work environment leading to higher organisational commitment and job involvement, which in turn enhanced employee motivation and retention. In contrast, open communication, while positively associated with satisfaction, had an overall weaker mediating effect. This suggests that communication alone, without supportive leadership or meaningful work, is insufficient to sustain engagement or performance outcomes in the South African public sector.

5. Conclusions and Contributions

The findings extend Social Exchange Theory and Resource-Based View Theory by empirically confirming that intangible assets such as leadership style, work climate, and engagement can be critical levers for performance, particularly in under-researched public sector settings. The study also affirms the

multidimensional nature of engagement and performance and validates the use of SEM for modelling such complex interrelations in organisational research.

From a policy and management perspective, the results suggest that public sector departments in South Africa should prioritise leadership development programmes that focus on idealised influence, motivational inspiration, and individual consideration. Job redesign initiatives that provide employees with autonomy, challenge, and purpose are equally important. Retention strategies should be focused on strengthening commitment and involvement, rather than relying solely on satisfaction metrics or communication tools. Organisations must also recognise that engagement cannot be "manufactured" through communication campaigns alone but requires alignment between leadership, culture, and meaningful work.

This study makes a significant contribution by situating its findings within the South African public sector, a context characterised by bureaucratic rigidity, service delivery challenges, and human resource constraints. The robust relationships between culture, engagement, and performance observed here suggest that, even in resource-limited environments, strategic attention to internal organisational dynamics can yield performance gains.

This study explored the intricate relationships between organisational culture, employee engagement, and organisational performance within the South African public sector using a Structural Equation Modelling (SEM) approach. The empirical findings provide strong evidence that organisational culture is a critical antecedent of employee engagement, which in turn significantly predicts organisational performance. The results also confirm the mediating role of employee engagement in the culture-performance nexus, indicating that a supportive organisational environment indirectly enhances performance outcomes through its influence on employee behaviour and attitudes.

Organisational culture, particularly in the form of inspiring leadership and a challenging and engaging environment, emerged as a powerful determinant of employee engagement dimensions namely, organisational commitment, job involvement, and employee satisfaction. These engagement drivers, especially commitment and involvement, were further shown to impact employee motivation, retention, and broader organisational outcomes. However, while open and transparent communication was positively associated with engagement and satisfaction, its effects were statistically insignificant in predicting deeper engagement or performance, suggesting that it functions more as a supporting condition than a primary driver.

Employee engagement was found to partially mediate the relationship between organisational culture and organisational performance, suggesting that engaged employees act as the transmission channel through which culture translates into improved outcomes. The high explanatory power of the model (R^2 = 0.764 for engagement and R^2 = 0.868 for performance) affirms that internal organisational dynamics play a pivotal role in shaping employee behaviour and institutional effectiveness even within the resource-constrained and often bureaucratically rigid context of the public sector.

These findings have several theoretical implications. They reinforce the relevance of Social Exchange Theory and the Resource-Based View in explaining organisational effectiveness through intangible assets such as leadership and engagement. Additionally, the multidimensional conceptualisation of employee engagement and organisational performance provides a more nuanced understanding of how these constructs operate in public institutions.

From a practical perspective, the results highlight the urgent need for South African public sector organisations to invest in leadership development, organisational design, and employee engagement strategies. Leadership styles that embody idealised influence, inspirational motivation, and individual consideration should be cultivated across all managerial levels. Institutions should redesign jobs to promote autonomy, meaning, and challenge conditions that enhance motivation and foster long-term commitment. Furthermore, although communication alone may not drive engagement when integrated with strong leadership and meaningful work, it can reinforce trust and alignment.

References

Albrecht, S.L., Breidahl, E. and Marty, A., 2017. Organisational resources, organisational engagement climate, and employee engagement. Career Development International, 23(1), pp.67–85.

Al-Matari, E.M. and Bin Omira, M.A., 2017. The mediating effect of organisational commitment on the relationship between organisational culture and performance in public sector. *International Journal of Business and Management,* 12(5), pp. 69–84.

Anderson, J.C., Gerbing, D.W. and Hunter, J.E., 1988. Structural equation modeling in practice: A review and recommended two-step approach. Psychological Bulletin, 103(3), pp.411–423.

Anitha, J. and Farida, S., 2016. A study on employee retention in private sector banks. *International Journal of Multidisciplinary Research and Development,* 3(5), pp. 17–20.

Aras, M. and Yazgan, H.R., 2022. Investigating the role of internal communication and organisational culture on employee behaviour. *International Journal of Organisational Analysis,* 30(1), pp. 113–128.

Asenahabi, B.M., 2019. Basics of research design: A guide to selecting appropriate research design. *International Journal of Contemporary Applied Researches,* 6(5), pp. 76–89.

Bagga, T., Gera, M. and Haque, A., 2022. Leadership and organisational performance: The mediating role of culture. *Journal of Organisational Change Management,* 35(3), pp. 418–435.

Baird, K. and Harrison, G., 2015. The association between organisational culture and the use of management initiatives in the public sector. *Financial Accountability & Management,* 31(3), pp.323–350.

Bakotić, D., 2016. Relationship between job satisfaction and organisational performance. *Economic Research-Ekonomska Istraživanja*, 29(1), pp. 118–130.

Barney, J., 1991. Firm resources and sustained competitive advantage. *Journal of Management,* 17(1), pp.99–120.

Baron, R.M. and Kenny, D.A., 1986. The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology,* 51(6), pp.1173–1182.

Basyir, M., Rani, R.A., Syah, T.Y.R. and Ibrahim, R.A., 2020. The effect of employee engagement and job involvement on organisational performance. *International Journal of Scientific and Technology Research,* 9(3), pp. 1622–1627.

Beins, B. and McCarthy, M., 2018. Research methods and statistics. 6th ed. Boston: Pearson.

Beran, T.N., Violato, C. and Le, L., 2010. Structural equation modeling in medical research: A primer. *BMC Research Notes,* 3, p.267.

Bhakuni, P. and Saxena, R., 2023. Exploring employee motivation and its impact on organisational performance. *International Journal of Human Resource Studies,* 13(1), pp. 224–238.

Bin Ahmad, A. and Binti Halim, H.A., 2017. Determining sample size using Cochran's formula. *International Journal of Management Research & Review,* 7(10), pp. 1028–1032.

Brenyan, J. and Obuobisa-Darko, T., 2017. Organisational culture and employee engagement in the Ghanaian public sector. *African Journal of Public Administration,* 9(2), pp. 34–50.

Brown, T.A. and Moore, M.T., 2012. Confirmatory factor analysis. In: R.H. Hoyle, ed. Handbook of structural equation modeling. New York: Guilford Press, pp.361–379.

Byrne, B.M., 2001. Structural equation modeling with AMOS: Basic concepts, applications, and programming. Mahwah, NJ: Lawrence Erlbaum.

Cai, W., Sun, Y. and Ma, J., 2018. The relationship between work environment and employee performance: A study in China. *International Journal of Business and Management*, 13(10), pp. 45–58.

Canivez, G.L., 2016. Construct validity of the WISC-V: Exploratory and confirmatory factor analyses of the 16 primary and secondary subtests. *Psychological Assessment*, 28(8), pp.971–986.

Cantermi, T. and Lizite, M., 2022. Leadership alignment and organisational goals in high-performance teams. *Leadership and Organisation Development Journal*, 43(2), pp. 186–199.

Carlson, K.D. and Herdman, A.O., 2012. Understanding the impact of convergent validity on research results. *Organizational Research Methods*, 15(1), pp.17–32.

Chinomona, R., 2011. Non-mediating and mediating influences of store satisfaction and customer trust on the relationship between exclusive dealing and customer loyalty in the fast moving consumer goods (FMCG) sector in Zimbabwe. *African Journal of Business Management*, 5(20), pp.8564–8576.

Cohen, J., 1988. Statistical power analysis for the behavioral sciences. 2nd ed. Hillsdale, NJ: Lawrence Erlbaum.

Curilla, S., Morales, A., Poma, R. and Vicente-Ramos, W., 2023. Internal communication and organisational climate in public institutions. *Journal of Public Administration and Policy Research*, 15(1), pp. 112–124.

Dash, S. and Roy, A., 2020. Evaluating the impact of organisational culture on employee performance: Evidence from India. *International Journal of Human Resource Studies*, 10(2), pp. 210–225.

Demir, M., 2020. The effect of job involvement on employee performance and job satisfaction. *Business and Economics Research Journal*, 11(3), pp. 207–223.

Deng, X. and Yuan, H., 2023. Exploring the mediating role of work engagement in linking leadership and performance outcomes: A PLS-SEM approach. *Journal of Organisational Effectiveness: People and Performance*, 10(1), pp.45–65.

DPSA (Department of Public Service and Administration), 2022. Public Service Annual Report 2021/2022. Pretoria: Republic of South Africa.

Eresia-Eke, C., Gwatidzo, S., Chinomona, R. and Chuchu, T., 2023. Leadership style, communication and employee engagement in public sector institutions. *African Journal of Business and Economic Research*, 18(1), pp. 56–72.

Esthi, R.B., 2022. Reliability and validity of instruments: An evaluation in SEM-PLS. *Journal of Educational Research and Practice*, 12(3), pp.112–120.

Farooqi, M.Y., Malik, F., Rizwan, M. and Waqar, S., 2023. Investigating organisational commitment and its effect on performance: Evidence from Pakistan. *Journal of Management Research*, 15(1), pp. 45–58.

Fornell, C. and Larcker, D.F., 1981. Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), pp.39–50.

Gomes, J.F.S., Marques, C.S. and Cabral, S.C., 2021. Organisational commitment and employee engagement: A systematic literature review. *Management Review Quarterly*, 71(1), pp. 91–117.

Grigoras, V., Ivascu, L., Mocan, M., Cirjaliu, B. and Marin, D., 2023. Enhancing organisational performance through motivation. *Sustainability*, 15(1), pp. 111–130.

Guner, H., Kibaroglu, E. and Basim, N.H., 2023. The effect of organisational commitment on performance and sustainability. *Journal of Management Development*, 42(2), pp. 134–152.

Hair, J.F., Hult, G.T.M., Ringle, C.M. and Sarstedt, M., 2014. A primer on partial least squares structural equation modeling (PLS-SEM). 2nd ed. Thousand Oaks, CA: Sage.

Hair, J.F., Risher, J.J., Sarstedt, M. and Ringle, C.M., 2021. When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), pp.2–24.

Hakro, A.N., Siddiqui, M.A. and Lal, M., 2023. Job satisfaction and employee performance: Evidence from public and private sector. *Journal of Business and Social Review in Emerging Economies*, 9(1), pp. 101–118.

Hamari, J., Sjöklint, M. and Ukkonen, A., 2016. The sharing economy: Why people participate in collaborative consumption. *Journal of the Association for Information Science and Technology*, 67(9), pp.2047–2059.

Harrison, R., 1972. Understanding your organisation's character. *Harvard Business Review*, 50(3), pp. 119–128.

Hasani, T.M., Azis, M. and Idris, S., 2020. Job involvement and its relationship with performance: The mediating role of motivation. *Journal of Asian Finance, Economics and Business*, 7(12), pp. 101–108.

Hassan, A., Hassan, H. and Hassan, S., 2023. Organisational culture and employee satisfaction in higher education institutions. *Journal of Educational Administration*, 61(1), pp. 9–22.

Held, M. and Ott, J.S., 2018. Testing competing models of values in public administration: Confirmatory factor analysis of a multiple values framework. *Public Integrity*, 20(3), pp.302–320.

Henriquez, C. and Valerio, C., 2023. Employee satisfaction and productivity in the digital age. *International Journal of Human Capital and Information Technology Professionals*, 14(2), pp. 1–15.

Hult, G.T.M., Hair Jr, J.F., Proksch, D., Sarstedt, M., Pinkwart, A. and Ringle, C.M., 2018. Addressing endogeneity in international marketing applications of partial least squares structural equation modeling. *Journal of International Marketing*, 26(3), pp.1–21.

Hussey, K., Alsalti, S., Bosco, S., Elson, C. and Arslan, M., 2023. Evaluating measurement reliability using Cronbach's alpha and composite reliability in SmartPLS. *Journal of Management Research and Analysis*, 10(1), pp.23–35.

Jahan, S., Huynh, T. and Mass, R., 2022. Revisiting organisational commitment models in public administration. *Public Policy and Administration Research*, 12(3), pp. 55–68.

Jenatabadi, H.S., Ismail, N.A., Khiesi, M.A. and Rahman, R.A., 2014. Impact of organizational culture on organizational performance: An empirical analysis. *International Journal of Emerging Markets*, 9(4), pp.460–475.

Jha, S. and Kumar, P., 2016. Development of a scale to measure employee engagement. *Indian Journal of Industrial Relations*, 52(1), pp. 114–127.

Jin, M. and McDonald, B., 2017. Understanding employee engagement in the public sector: The role of perceived organisational support. *Public Personnel Management,* 46(4), pp. 422–437.

Kahn, W.A., 1990. Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*, 33(4), pp.692–724.

Keith, T.Z., 2019. Multiple regression and beyond: An introduction to multiple regression and structural equation modeling. 3rd ed. New York: Routledge.

Khan, M.A. and Naeem, H., 2018. Leadership and performance: A study of public organisations. *Pakistan Journal of Commerce and Social Sciences,* 12(1), pp. 123–142.

Kuo, Y.F., 2011. The relationship between organisational commitment and employee engagement: An empirical study in Taiwan. *International Journal of Human Resource Management,* 22(14), pp. 3023–3043.

Kuo, Y.F., 2018. Measuring job involvement and satisfaction: An empirical analysis. *Journal of Organisational Behaviour Research*, 3(2), pp. 75–88.

Lee, K.Y., Kim, J.H., Park, J.Y. and Han, S.H., 2023. The role of communication and trust in employee satisfaction: A Korean perspective. *Asia Pacific Journal of Human Resources*, 61(2), pp. 221–240.

LoBiondo-Wood, G. and Haber, J., 2021. Nursing research: Methods and critical appraisal for evidence-based practice. 10th ed. St. Louis: Elsevier.

Makhamreh, H., Abu-Shanab, E., Obeidat, B. and Shammout, R., 2022. Employee motivation and digital transformation. *Journal of Enterprise Information Management,* 35(6), pp. 1249–1271.

Melkamu, M., Gelaye, H., Matebe, Y., Lindgren, P. and Erlandsson, K., 2022. Validating instruments using CFA and AVE in SmartPLS: A case study. *African Journal of Health Sciences,* 35(1), pp.123–135.

Memon, M.A., Ramayah, T., Cheah, J.H., Ting, H., Chuah, F. and Cham, T.H., 2021. PLS-SEM statistical programs: A review. *Journal of Applied Structural Equation Modeling*, 5(1), pp.i–xiv.

Mohapatra, M. and Sharma, B., 2010. Drivers of employee engagement in Indian public sector. *International Journal of Indian Culture and Business Management,* 3(3), pp. 288–302.

Morched, R. and Jarboui, A., 2020. Organisational performance and employee motivation: Mediating role of culture. International *Journal of Productivity and Performance Management*, 69(3), pp. 526–544.

Mueller, R.O. and Hancock, G.R., 2018. Structural equation modeling. In: T.D. Little, ed. The Oxford handbook of quantitative methods in psychology. Vol. 2. New York: Oxford University Press, pp.517–553.

National Planning Commission, 2012. National Development Plan 2030: Our future – make it work. Pretoria: The Presidency.

Nikpour, A., 2016. The impact of organisational culture on organisational performance: The mediating role of employee's organisational commitment. *International Journal of Organisational Leadership*, 5(2), pp. 65–72.

Nitzl, C., Roldan, J.L. and Cepeda, G., 2016. Mediation analysis in PLS-SEM: An introduction and illustration. In Partial Least Squares Path Modeling, pp. 211–234. Springer, Cham.

OECD, 2017. Government at a Glance 2017. Paris: OECD Publishing.

Olivier, A., 2018. The use of quantitative research instruments in public administration. *Journal of Public Administration*, 53(2), pp. 232–245.

Pepra-Mensah, J. and Kyeremeh, D., 2018. Exploring the levels of employee engagement in the public sector. *Journal of Public Administration and Policy Research*, 10(2), pp.20–28.

Petko, D., Prasse, D. and Cantieni, A., 2018. Confirmatory factor analysis for assessing validity in educational research. *Educational Assessment, Evaluation and Accountability*, 30(2), pp.117–139.

Purwanto, A., Asbari, M., Fahlevi, M., Mufid, A., Agistiawan, M.R., Cahyono, Y. and Suryani, P., 2021. Validity and reliability of the research instrument. *Journal of Industrial Engineering & Management Research*, 2(4), pp.76–83.

Purwanto, A., Fahlevi, M., Suryadi, B. and Sijabat, R., 2021. Assessing structural model in PLS-SEM: A review on guidelines and criteria. *Management Science Letters*, 11(12), pp.2719–2732.

Rani, R., Rao, P.S. and Ramarao, S., 2023. Convergent and discriminant validity in SEM: A comparative study using AMOS and PLS. *International Journal of Management Research and Reviews*, 13(1), pp.38–55.

Razaei, M., Mardani, A., Senin, A., Wong, K.Y., Sadeghi, M., Najmi, M. and Shaharoun, A.M., 2018. The relationship between organisational culture, communication and performance. *International Journal of Production Research*, 56(1), pp. 95–109.

Razaei, M., Mardani, A., Senin, A., Wong, K.Y., Sadeghi, M., Najmi, M. and Shaharoun, A.M., 2015. Aligning organisational performance with internal culture and communication. *Total Quality Management & Business Excellence*, 26(3-4), pp. 108–125.

Rönkkö, M. and Cho, E., 2022. An updated guideline for assessing discriminant validity in PLS-SEM. *Organisational Research Methods*, 25(1), pp.6–14.

Saks, A.M., 2006. Antecedents and consequences of employee engagement. *Journal of Managerial Psychology*, 21(7), pp.600–619.

Sarstedt, M., Hair, J.F., Cheah, J.H., Becker, J.M. and Ringle, C.M., 2016. How to specify, estimate, and validate higher-order constructs in PLS-SEM. *Australasian Marketing Journal*, 24(3), pp.219–229.

Schein, E.H., 2010. Organizational culture and leadership. 4th ed. San Francisco: Jossey-Bass.

Schumacker, R.E. and Lomax, R.G., 2010. A beginner's guide to structural equation modeling. 3rd ed. New York: Routledge.

Shrestha, N., 2021. Validating survey instruments in research: A review of best practice. *Journal of Public Health Research*, 10(1), pp.1744–1751.

Slack, A. and Singh, S., 2017. Organisational culture and change in public enterprises: The case of Fiji. *Asia Pacific Journal of Public Administration*, 39(4), pp.373–385.

Sousa, M.J., Santos, C. and Oliveira, P., 2023. Motivation in modern organisations: Implications for digital transformation. *Journal of Innovation & Knowledge*, 8(1), pp. 45–59.

Stein, J.H., Morris, M.L. and Shin, Y., 2012. Are you a transformational leader*? Leadership Quarterly*, 23(6), pp.1023–1044.

Triguero-Sanchez, R., Peña-Vinces, J. and Guillen, J., 2018. How does organisational culture influence organisational performance? The mediating role of human resource practices. *Journal of Organisational Change Management*, 31(3), pp.385–409.

Triguero-Sanchez, R., Pena-Vinces, J.C. and Guillen, J., 2018. How human resource management practices affect organisational performance. *European Research on Management and Business Economics*, 24(3), pp. 139–148.

Tsai, C.J., Edwards, P. and Sengupta, S., 2010. The influence of organisational performance on employee attitudes. *Industrial Relations Journal*, 41(1), pp. 17–34.

Widyaningrum, M.E. and Amalia, R.A., 2023. Organisational culture and leadership in driving performance. *Journal of Organisational Behaviour Research*, 8(1), pp. 112–130.

Willoughby, M., Holochwost, S., Blanton, Z. and Blair, C., 2017. Reliability and validity of a new executive function battery for use in early childhood. *Developmental Psychology*, 53(4), pp.707–722.

Yanto, H. and Aulia, R., 2021. The influence of organisational culture and inspirational leadership on performance. *International Journal of Business and Social Science Research*, 2(1), pp. 10–21.

Yanto, H. and Aulia, S., 2021. Organisational culture and performance: The role of work motivation and engagement. *Journal of Management and Entrepreneurship*, 23(1), pp.52–66.

Yu, Y., 2018. Measurement of convergent validity: Approaches and interpretations in SEM. *Quantitative Social Research*, 6(1), pp.56–70.

Zhang, B., 2022. Partial least squares structural equation modeling (PLS-SEM) techniques in social sciences. *Journal of Applied Research and Technology*, 20(1), pp.1–10.

Zhao, X., Lynch, J.G. and Chen, Q., 2010. Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of Consumer Research*, 37(2), pp.197–206.