

# DEVELOPMENT AND VALIDATION OF AN ORGANISATIONAL JUSTICE MEASUREMENT INSTRUMENT FOR A SOUTH AFRICAN CONTEXT

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## Abstract

Measuring organisational justice in a South African context is a concern as the concept is multi-dimensional and there is no comprehensive definition; therefore, an integrative and well-developed measure of organisational justice can advance the measurement and analysis of this concept. This study investigates the development and validity of an organisational justice measuring instrument (OJMI), and determines the relationships between the different dimensions of the concept organisational justice. Data was gathered from 289 participants, employed in a public service organisation. To analyse the data the descriptive and inferential statistics used are Cronbach alpha coefficient, means, the explanatory factor analysis (EFA) and the confirmatory factor analysis (CFA). It was found that the model fitted the data well and the measurement of each dimension, namely strategic direction; distributive, procedural, interactional, informational, diversity management; customer relations; service delivery innovation as well as ethical leadership and management justice were confirmed to be statistically significant and positive. These results indicate that OJMI is a reliable and valid measure that organisations need in order to measure perceptions of fairness, and to monitor trends of fair practices. The validated measuring instrument for organisational justice and the conducted analysis of the interrelationships between the different dimensions of the concept will enable organisations to initiate proactive and reactive interventions to facilitate justice and fair practices.

**Keywords:** Organisational Justice, Fairness, Measurement Instrument, South African Context/Environment

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## 1. Introduction

In the field of Industrial and Organisational Psychology, organisational justice has recently been considered to be a critical construct to understand employee and organisational behaviour in the literature. Organisational justice is essential in organisations as it leads to high performance, diversity management and talent retention. Most studies recently conducted on the construct organisational justice indicate that it has an impact on organisational outcomes such as employee motivation, commitment, satisfaction, talent attraction and retention, employee and organisational performance, leadership, diversity management and ethical behaviour (Cropanzano, Bowen & Gilliland, 2007). Shibaoka, Takade, Watanabe, Kojima, Kakinuma, Tanaka and Kawakami (2010) also highlighted that organisational justice has recently

attracted attention as a predictor of employee mental and physical health.

The construct organisational justice is considered to be a complex and multi-dimensional concept (McShane & Glinow, 2005). Although there is a common description of the construct organisational justice as fair practices within the organisation, it is argued that the construct itself and its measurement are not well developed within the South African context. There are several measuring instruments that are available internationally to measure organisational justice though the validity of these measures in South African organisations is in question. The challenge with these existing measures is that the content of the measuring instruments cannot be applied to other countries, without adaptation (Gregory, 2007).

The underdevelopment of organisational justice measured locally perpetuates the use of ad hoc measures, which implies researchers and human

resources practitioners tend to select measures that may appear relevant to their organisational setting. The use of various or ad hoc measures to study organisational justice in a South African context is evident in the literature (Beugre, 2002; Van der Bank, Engelbrecht & Stumpher, 2010; Esterhuizen, 2008; Pilvinyte, 2013). South African studies on organisational justice are also still based on international measures. Most studies used Colquitt's (2001) questionnaire based on a four-subscale model of organisational justice and the restorative justice scale developed by Ramsay (2009) to measure perceptions of restorative organisational justice.

Greenberg (2001) highlighted the need for a valid standardised measure of the construct relevant to the context, which organisational justice is being assessed. Shibaoka et al. (2010) also emphasise the importance of research into organisational justice and the adoption of suitable measures derived. Therefore, an integrative and well-developed measure of

organisational justice can advance the measurement and analysis of this concept. This implies that research is needed to develop an instrument that is reliable and able to measure the different components of organisational justice relevant for organisations in a South African context. Hence, the purpose of this study is to develop a valid and standardised measure of organisational justice, reflecting perceptions of justice at both the employee and organisational levels for a South African environment. This measure will enable organisations to use it as a compass for initiating and implementing fair organisational practices.

## 2. Operational definition of the construct organisational justice

The following theoretical model in Figure 1 presents the operationalisation of the construct organisational justice based on the literature review:

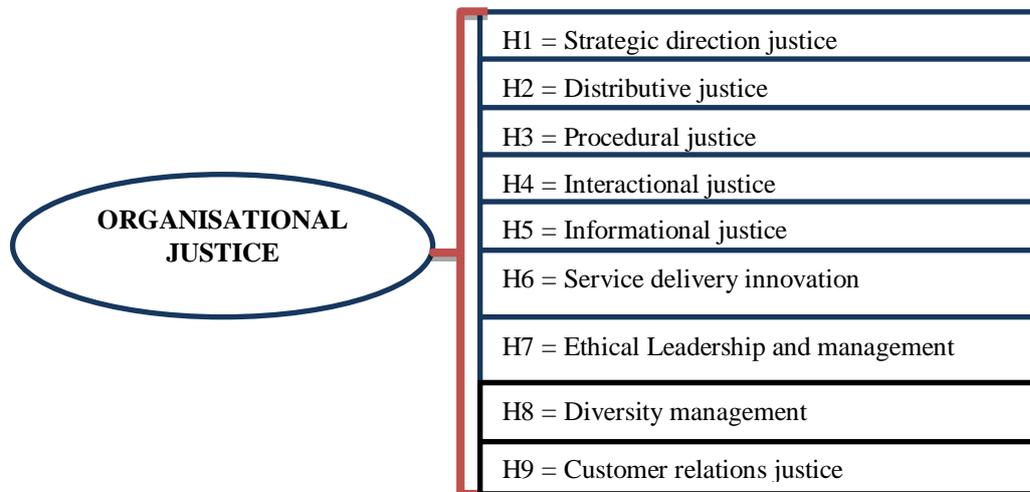


Figure 1. Conceptual model of organisational justice

Cropanzano et al. (2007) defined organisational justice as the just and ethical treatment of individuals within an organisation. Justice as a construct is considered to be a sense of obligation to the common good, and the ability to treat others equally and fairly (Johnson, 2009). Researchers of the construct organisational justice mostly adopt a descriptive perspective in order to understand why people view certain events as just, as well as the consequences that follow from these evaluations (Greenberg, 2001; Pilvinyte, 2013). Organisational justice permeates all activities, processes and programmes in an organisation; hence, justice is a subjective and descriptive concept in that it captures what individuals believe to be right, rather than an objective reality or a prescriptive moral code.

The description of organisational justice is mostly divided into four dimensions, namely distributive, procedural, interactional and

informational justices (Moorman, 1991; Colquitt, 2001). The use of these four dimensions to explain organisational justice has excluded other organisational factors that are relevant and critical to understanding organisation justice. Hence, the following comprehensive and integrated definition of organisational justice for this study was developed to incorporate additional organisational factors:

Organisational justice refers to employee perceptions of fairness in the development and execution of the strategic direction; the distribution of resources within the organisation; the development and application of human resource policies, interventions and procedures; the nature of relationships amongst all organisational members; the management of a diverse workforce; the ethical conduct of leaders and managers, the information management processes; the nature of customer

relations as well as service delivery innovation in the organisation.

The above definition includes nine aspects which are considered as the dimensions that describe the construct organisational justice in this study. These dimensions are discussed below as follows:

### **Strategic direction justice**

Firstly, strategic direction justice refers to perceptions of fairness in terms of the formulation, communication and execution of the organisation's vision and mission statement; goals and objectives; values and operational plans. Strategic direction is described and defined as the underlying purpose of the organisation, based on its vision and mission, business goals and objectives, operational plans as well as its organisational values (McShane & Von Glinow, 2005; Mullins & Christy, 2010).

According to Van Tonder (2004), strategy refers to the moves and approaches devised by management to produce successful organisational performance. Creating a justice-oriented strategic direction for the organisation is one of the means in which the organisation is able to indicate its concern for fair development and ethical execution of its purpose. Fair development of the strategic direction focuses on consultation with the relevant stakeholders during the decision-making process. The aim of a consultative approach is to establish clear, achievable and common organisational goals. Mullins and Christy (2010, p 507) argue that clearly-stated and good objectives help provide unity of direction, and they provide guidelines for the operation and management of the organisation. Ethical execution of the strategic direction is embedded in the existing values and allocation of resources within the organisation to achieve the set goals. All organisations require adequate human, financial and material resources to be able to implement its strategy (Brown, 2006; Werner, 2007). Lack of adequate resources makes the strategic direction unjust because it becomes challenging and unfair for organisational members to work towards its fulfilment.

It is, therefore, hypothesised that:

*H1: Organisational justice is positively associated with strategic direction.*

### **Distributive justice**

Secondly, the distributive dimension as a type of justice focuses on the outcome of the exchange and distribution of resources in the organisation (Moorman, 1991). This type of justice is based on the principle of equity. Adams (1963) initiated the concept of distributive justice, using the equity theory to highlight that employees evaluate fairness based on the equity between inputs and outcomes. It is employees' subjective perception of the fairness of outcome distribution and allocation of organisational resources (Esterhuizen & Martins, 2008; Ramsay 2009). Cropanzano et al. (2007) also distinguished the

three allocation rules that can lead to distributive justice if they are applied appropriately, namely equality (to each the same), equity (to each in accordance with contributions) and need (to each in accordance with the most urgency). In this study, distributive justice is not limited to inputs and outcomes, but incorporates the organisation's ability to empower its employees with resources in order to achieve organisational goals. It is therefore described in this context as the employees' perceptions of fairness regarding the allocation of resources such as office space, budgets, computers, telephones or company cars to enable employees to achieve organisational goals and the allocation of resources such as salaries, bonuses, profits and employee benefits to reward performance (allocation between different job levels, departments or business units).

Based on the above discussion, it is, therefore, hypothesised that:

*H2: Organisational justice is positively associated with distributive justice.*

### **Procedural justice**

Thirdly, procedural justice means that a process is considered fair when it is applied consistently to all, free of bias, accurate, representative of relevant stakeholders, correctable and consistent with ethical norms (Brown, 2006; Cropanzano et al., 2007). Consistency in the application of organisational policies, procedures and interventions is an important aspect of organisational justice. It implies that the organisation has integrity and is honest in its practices (Johnson, 2009). Research on procedural justice was initially conducted in the context of legal procedures or dispute resolution focusing on perceptions of fairness, not only on the outcomes but also the process that were followed in determining the outcomes (Nowakowski & Conlon, 2005; Chalmers, 2006). This description of procedural justice is generic in nature as it does not indicate the relevant processes and procedures in an organisation. In this study, procedural justice refers to perceptions of fairness regarding the development and application of human resource policies, intervention and procedures, such as employment equity, change management, training and development, remuneration and employee benefits policy, employee wellness programme, employee relations and discipline as well as the performance management system within the organisation.

In terms of the literature review, it is hypothesised that:

*H3: Organisational justice is positively associated with procedural justice.*

### **Interactional justice**

Fourthly, interactional justice refers to the thoroughness of the information provided as well as the amount of dignity and respect demonstrated when presenting an undesirable outcome to employees

(Van der Bank et al., 2010). This type of justice refers to the perceived fairness of the interpersonal treatment used to determine outcomes (Magoshi & Chang, 2009; Colquitt, 2001; Johnson, 2009). According to Pilvinyte (2013), interactional justice is characterised by the sensitivity, politeness and respect employees receive from their superiors during procedures; this serves primarily to alter reactions to outcomes because sensitivity can make employees feel better even if the outcome is unfavourable. This implies that justice and fairness based on interactional justice are primarily related to how one person treats another in the work context. This may be relationships between employees and their managers or among themselves as colleagues. Within the context of this study, interactional justice implies perceptions of fairness regarding interpersonal relationships amongst all organisational members (employees, managers and leaders), focusing on teamwork and interdepartmental relations.

The above literature review leads to the hypothesis that:

*H4: Organisational justice is positively associated with interactional justice.*

### **Informational justice**

Fifthly, informational justice refers to the explanation, justification or information provided by decision-makers as to why outcomes have been distributed in a certain way (Pilvinyte, 2013). In terms of this type of justice, it is required that the information that is shared or communicated within the organisation should be comprehensive, reasonable, truthful, timely and candid. Informational justice, therefore, refers to whether one is truthful and provides adequate justifications to all the recipients of the information (Niehoff & Moorman, 1993; Injazz & Karen, 2004; Cropanzano et al., 2007). Colquitt et al., (2001) argued that informational justice is able to assist employees in evaluating the structural aspects of the process in organisations. In terms of this study, informational justice refers to the fairness in terms of information dissemination and management with specific reference to internal and external communication, information management systems or knowledge management systems of the organisation.

It is, therefore, hypothesised that:

*H5: Organisational justice is positively associated with informational justice.*

### **Service delivery innovation justice**

The sixth dimension is service delivery innovation justice. Employees are responsible to deliver organisational service to clients or customers who have a preconceived notion of what a service is, even if they have not experienced it previously (Johnston & Clark, 2001). Goldstein, Johnston, Duffy and Rao (2002) argued that, regardless of how the service organisation defines their service and how customers or clients perceive the service, a delivered service

should function seamlessly for customers to perceive it correctly (fair and just). In other words, employees and managers have the responsibility to ensure that they create a just and fair image of the organisation during the development and execution of service delivery initiatives to its clients and customers. Yet, a major challenge for service-oriented organisations is ensuring that decisions and actions made to design and deliver a service at several levels in the organisation (from the strategic level to the operational and service encounter levels) are made consistently, focusing on delivering the correct and fair service to targeted customers or clients (Goldstein et al., 2002; McFarlin & Sweeney, 1992). Hence, service delivery innovation justice in this study is described as employee perceptions of fairness in service delivery innovation, focusing on the nature of development, planning and implementation of change initiatives. This also includes stakeholder engagement and turnaround time on service delivery innovation.

Based on the above discussion, it is, therefore, hypothesised that:

*H6: Organisational justice is positively associated with service delivery innovation justice.*

### **Ethical leadership and management**

Organisations are not ethical or unethical in nature; it is its people who can either behave ethically or unethically (Werner, 2007; King & Burgess, 2008). Leaders and managers have the moral obligation to consider the needs and interests of the organisation and its members when fulfilling their roles and responsibilities (Van Tonder, 2004; Johnson, 2009). Justice is a significant virtue for leaders and managers as it prevents leaders from putting the organisation and employees at risk. Leaders and managers can be able to achieve justice by being ethical in their conduct. Werner (2007) argued that the actions of the leaders in the organisation to a large extent determine whether an ethical culture will be established and maintained in the organisation. It is the responsibility of leaders and managers to ensure that they set aside their personal biases in order to make decisions regarding the organisation in an objective manner and reflecting respect for the rights of others in their roles (McShane & Von Glinow, 2005; Esterhuizen, 2008; Johnson, 2009). Employees are able to determine whether their leaders are acting morally and exerting moral influence because ethics are the standards of right and wrong that influence behaviour. Therefore, ethical leadership and management in this study refers to the conduct of leaders and managers that is fair, protects the rights of others and is beneficial to all stakeholders in the organisation.

Based on the above discussion, it is, therefore, hypothesised that:

*H7: Organisational justice is positively associated with ethical leadership and management.*

### **Diversity management**

Diversity management is regarded as an important aspect of organisational justice. Currently, an increasing number of organisations are attempting to enhance inclusiveness of underrepresented individuals through proactive efforts to manage their diversity (Gilbert, Stead & Invancevich, 1999). According to Magoshi and Chang (2009), diversity management is regarded as a reflection of commitment philosophy because it fundamentally implies to the organisation's commitment to the diverse composition of the workforce as well as its diverse needs. It is a complete organisational cultural change designed to foster appreciation of demographic, ethnic and individual differences, and to accomplish a cultural change designed to value diversity involving modification of existing procedures and practices (Gilbert et al., 1999; Mullins & Christy, 2010). Diversity management is important in organisations because of its positive effects which are increased productivity, competitiveness and workplace harmony (Invancevich & Gilbert, 2000). Therefore, diversity management is related to organisational justice because the eradication of bias and prejudice is one of the goals of diversity management programmes in organisations.

It is, therefore, hypothesised that:

*H8: Organisational justice is positively associated with diversity management.*

### **Customer relations**

Organisations in both the public and private sector exist to provide services to their clients and customers. Justice in customer relations is crucial because it focuses on employee perceptions of fairness towards clients and customers with regard to their relationship, satisfaction, complaints handling and care. Customer relations is about customer interaction and about learning about customers' needs and preferences in order to provide more appropriate products and services to customers in the future (King & Burgess, 2008). A lot of customer complaints and dissatisfaction are due to unfair practices in customer care and relations during service delivery innovation. Injazz and Karen (2004) describe customer relations as a coherent and complete set of processes and technologies for managing relationships with current and potential customers in order to capture and retain customers. Hence, customer relations are the core of the organisation's business because it leads to greater customer satisfaction; it increases the number of customers and secures greater loyalty (Chalmeta, 2006). An effective customer relations system should enable an organisation to gain greater insight into

customer behaviour and preferences. An assessment of employees' perceptions of justice in customer relations can enable the organisation to be able to improve the effectiveness and efficiency of the processes involved in customer relationships.

Based on the above discussion, it is, therefore, hypothesised that:

*H9: Organisational justice is positively associated with customer relations.*

## **3. Research design and methodology**

This section describes the research design, participants and sampling, measuring instrument and procedure as well as the statistical analysis of data.

### **Research design**

In order to achieve the objective of the empirical study, a quantitative design, using a cross-sectional survey, was adopted because it enabled the researcher to collect data from a large population (Wellman, Kruger & Mitchell, 2009).

### **Participants and sampling strategy**

The participants of this study were 289 employees of a South African government department. A simple random sampling approach was used with a view to making the sample representative of the population because it ensured that there was an unbiased random selection of participants (Terreblanche, Durrheim & Painter, 2006). In terms of the sample size for this study, the researcher used the parameter that 200 to 500 participants are adequate for multivariate statistical use, such as factor analysis (Avikaran, 1994).

Table 1 presents the profile of the participants in this study. In terms of gender, 59.5% (n=172) were females and 40.5% (n=117) were males. With regard to the different race groups of the participants, 78.9% (n=228) were African, 9.7% (n=28) were white, 8% (n=23) were coloured and 3.5% (n=10) were Indian. Among the participants, approximately 22.1% (n=64) were born between 1946 and 1964, 38.1% (n=110) were born between 1965 and 1977 while 39.8% (n=115) were born between 1978 and 2000. In terms of the participants' current position, 17% (n=49) are in management positions, 46.3% (n=134) occupy professional and specialist positions while 36.7% (n=106) were employed as general workers. In addition, 56.8% (n=164) of the participants have had between one to five years of service with the organisation.

**Table 1.** Demographic profile of participants

Parameter	Frequency	Percentage (%)
<b>Gender</b>		
Male	117	40.5
Female	172	59.5
<b>Race</b>		
African	228	78.9
Coloured	23	8.0
Indian	10	3.5
White	28	9.7
<b>Age group</b>		
Born between 1978 and 2000	115	39.8
Born between 1965 and 1977	110	38.1
Born between 1946 and 1964	64	22.1
<b>Years of service</b>		
1 - 5 years	164	56.8
6 – 10 years	63	21.8
11 – 15 years	41	14.2
More than 16 years	21	7.2
<b>Current position</b>		
Management	49	17
Professional and specialist	134	46.3
General workers	106	36.7

**Measuring instrument and procedure**

This section focuses on the development of an organisational justice measurement instrument (OJMI) as well as the procedure.

The questionnaire consisted of two sections. Section A measured the participants’ biographical details which included race, age, gender, tenure and job level. Section B consisted of the organisational justice measurement instrument (OJMI), which is a virtually self-administering survey and consists of 59 statements measuring the nine factors of justice as strategic direction, distributive, procedural, interactional, informational, service delivery innovation, customer relations, diversity management, ethical leadership and management. The statements of the questionnaire were configured using the five-point Likert scale ranging from 1 as strongly disagree and 5 as strongly agree. To develop the measuring instrument, the researcher asked a panel of five experts in organisational behaviour and governance to review the survey items compiled from focus groups sessions in order to determine whether their content was suitable for measuring the intended constructs. In addition, a pilot study was conducted with a convenience sample of 30 participants as a pre-test of the instrument. The feedback from the panel of experts and pilot study was used to make changes to the instrument items, which included rewording and rephrasing items as well as deleting and adding items.

In terms of the procedure, the ethical clearance to conduct the research in the organisation was granted by the management and the Ethics Committee of the department and research institution. The invitation to participate voluntarily in the study was

sent to the employees. The questionnaire was completed during a group administration process facilitated by the researcher and it included a covering letter. The covering letter explained the purpose of the study and it also explained ethical concerns such as anonymity, confidentiality, feedback and freedom of choice to participate in the study. Completed questionnaires were collected immediately by the researcher and were kept in a secure place.

**Statistical analysis of data**

Descriptive and inferential statistics data analyses were conducted in this study, using the Statistical Package for Social Sciences (SPSS, version 21.0). The descriptive statistics were used to analyse the biographic variables of the sample and the reliability of the questionnaire. Firstly, the exploratory factor analysis as inferential statistics was used to identify the factors that determine organisational justice perceptions of government employees. Secondly, the AMOS structural equation modelling package was used to conduct a confirmatory factor analysis (CFA). In addition, the mean score ranking technique was conducted to compare the importance of the extracted factors relative to one another.

**4. Results and discussion**

The findings of this study are presented firstly, focusing on the reliability and descriptive statistics of the measuring instrument. Lastly, the inferential statistical analysis, using the exploratory factor analysis, confirmatory factor analysis, internal

consistencies and mean scores of the factors is presented.

Validity and reliability of the organisational justice measuring instrument

In order to determine the content and face validity of the instrument, the researcher asked a panel of five experts in organisational behaviour and governance to review the survey items in order to determine whether their content was suitable for measuring the intended constructs. In addition, a pilot study was conducted with a convenience sample of 30 participants as a pre-test of the instrument. The feedback from the panel of experts and pilot study was used to make changes to the instrument items, which included rewording and rephrasing items as well as deleting and adding items. With regard to the construct validity, the reliabilities of the factors were used to assess the construct validity and it was

measured, using the Cronbach's alpha coefficient. The Cronbach's alpha coefficient for the nine organisational justice dimensions is presented in Table 2 below. The results of the coefficients are considered to be satisfactory because they were significantly greater than the recommended 0.70 (Terreblanche et al., 2006). They vary from 0.946 (distributive), 0.942 (ethical leadership and management), 0.909 (service delivery innovation), 0.884 (strategic direction), 0.862 (interactional), 0.887 (informational), 0.863 (procedural), 0.815 (diversity management) and 0.799 (customer relations). The construct validity was also measured, using the exploratory factor analysis (EFA). The results indicated that there were no cross-loadings within constructs of the nine organisational justice dimensions.

**Table 2.** Number of items, reliabilities, means and standard deviations for the organisational justice subscales

Factor	Number of items	Reliability	Mean score	Standard deviation	Position in rank order
Distributive justice	12	0.946	3.31	0.978	9
Ethical leadership and management	11	0.942	3.39	0.935	8
Service delivery innovation	6	0.909	3.58	0.836	5
Strategic direction justice	5	0.884	3.62	0.933	4
Interactional justice	5	0.862	3.83	0.862	1
Informational justice	7	0.887	3.71	0.840	3
Procedural justice	5	0.863	3.41	0.929	7
Diversity management justice	4	0.815	3.54	0.946	6
Customer relations justice	4	0.799	3.73	0.824	2

**Exploratory factor analysis of the organisational justice measuring instrument**

Factor analysis is a statistical multivariate procedure of which the main purpose is to determine the number and nature of latent factors that account for the variation and co-variation among a set of observed variables (Brown, 2006). An exploratory factor analysis was conducted in this study, using the principal components analysis (PCA) method and Varimax rotation in order to identify organisational justice dimensions (Hair, Black, Babin, Anderson, Tatham & Black, 2005). By performing the EFA, the underlying factor structure is identified, and the number of dimensions that exist in a set of variables and the degree to which the variables are related to the dimensions are determined (Kahn, 2006). To enhance the interpretation of the factor structure, scale purification was used in this study to eliminate low factor loadings, cross-loadings and low communalities (Brown, 2006). Based on Hair et al. (2005)'s recommendation, the minimum cut-off point 0.50 was applied for the variable loadings. A Bartlett's test of sphericity and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy were

conducted to determine whether the sample data were suitable for explanatory factor analysis (Tabachnik & Fidell, 2001; Johnson & Wichern, 2002). The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was calculated at 0.950 (> 0.50) and a Bartlett's test of sphericity; supported by an approximately Chi-square of 14697.602 at 2080 degrees of freedom (df) indicating a significant level of equals to = 0.000.

Table 3 presents the results of the rotated factor loading matrix indicating the percentage of variance explained by each factor, cumulative percentage of variance and Eigen value criterion used for assessment. As a result, a nine-component solution was developed as the items were logically associated with the underlying factors. An analysis of the responses of the government department employees led to the identification of nine organisational justice factors, namely distributive, procedural, strategic direction, interactional, informational, service delivery innovation, diversity management, customer relations, ethical leadership and management. The nine dimensions accounted for approximately 63.6% of the variance, complying with Hair et al. (2005) that the cumulative percentage of variance of extracted by the factors should be at least 60%. The explained total

variance of 63.6% indicates that 36.4% of the organisational justice perception of government employees is accounted by extraneous variables that do not form part of this study. In addition, all nine

identified factors showed acceptable levels of internal consistency or reliabilities; based on the levels of Terreblanche et al. (2006) above the 0.70 threshold are recommended.

**Table 3.** Rotated component matrix for organisational justice factors

Item code	Factors and variable description	Factor loadings	Eigen value	% of variance explained	Cumulative percentage of variance explained	Reliability (Cronbach's alpha)
<b>Factor 1 Distributive justice</b>						
16	The mission and vision statement of the organisation is clearly communicated to all employees.	.774	9.111	14.01	14.01	0.946
17	Employees are encouraged to act ethically during the implementation of the organisational strategy.	.770				
18	Financial resources are distributed fairly to the different business units/departments in my organisation.	.758				
19	Employees in my organisation have equal access to company resources to do their work, such as office space, computers, telephones and cars.	.756				
20	In my organisation, bonuses are rewarded to high performing employees irrespective of their position, department or job level.	.755				
21	Employees doing the same work receive similar rewards.	.692				
22	Managers and employees salaries are fair, based on their jobs.	.688				
23	In my organisation, all employees are involved in the decision-making processes that are relevant to their work.	.641				
24	Employees are consulted during the development of organisational policies and procedures.	.589				
25	The performance management policy is applied consistently to all employees.	.587				
26	Employees are promoted fairly, based on their skills and abilities.	.572				
27	In our organisation, the recruitment and selection processes are fair for all applicants.	.557				
<b>Factor 2 Ethical leadership and management</b>						
34	Employees are consulted before changes are implemented in my organisation.	.753	6.800	7.223	24.47	0.946
51	My leaders are able to act morally.	.753				
52	Leaders in my organisation are able to exert moral influence.	.719				
53	My leaders take responsibility for their mistakes.	.652				
54	My leaders are able to put aside their personal concerns to make objective decisions.	.610				
55	My manager treats all employees equally.	.590				
56	My manager uses the performance evaluation discussion fairly to deal with performance issues.	.584				
57	My manager adheres to organisational policies and procedures.	.548				
58	My manager is able to resolve conflict among employees in a fair manner.	.519				
59	My leaders are actively involved in creating a fair working environment.	.503				
60	My manager supports fair practices in the department unconditionally.	.501				

<b>Factor 3 Service delivery innovation</b>						
69	In my organisation, the information provided to employees on service delivery and innovation changes is clear and consistent.	.757	4.695	10.46	31.70	0.942
70	I think we are sufficiently informed on the progress of service delivery and innovation changes.	.731				
71	In my organisation, the departments are consulted about the reasons for service delivery and innovation changes.	.717				
72	My manager treats customers/clients as more important than things.	.655				
73	In my department, we always follow customer/client service policies and practices.	.637				
74	My organisation uses competent employees to render services and products to clients/customers.	.559				
<b>Factor 4 Strategic direction justice</b>						
10	Our organisational values show concern for the rights of others.	.728	4.279	6.584	38.28	0.909
11	Our organisational values encourage all employees to act with integrity in their roles.	.707				
12	Our organisational values encourage us to take responsibility for our actions.	.681				
13	The values of the organisation encourage employees to do the right thing no matter what the consequences.	.657				
14	The organisation gives employees adequate resources to achieve organisational goals and objectives.	.644				
<b>Factor 5 Interactional justice</b>						
64	There is a strong collaboration between colleagues in my department.	.777	4.244	6.530	44.81	0.884
65	I have confidence in my colleagues relating to one another in a fair manner.	.743				
66	My department is fair and honest in its relationship with other departments in the organisation.	.722				
67	My colleagues see me as someone who relates fairly to them.	.722				
68	I am proud of the positive relationship I have with my team.	.676				
<b>Factor 6 Informational justice</b>						
39	Departments in my organisation are encouraged to build supportive relationships with one another.	.731	4.016	6.179	50.99	0.862
40	In my organisation, we report accurate information in our records and files.	.678				
41	In our organisation, we communicate information in an honest manner to all employees.	.673				
42	In my organisation, we share information about our products and services to clients/customers in an honest and consistent manner.	.637				
43	In my team, we encourage all members to be truthful when reporting information to one another.	.535				
44	My organisation encourages open and honest communication to all our stakeholders.	.509				
45	I have a moral obligation to act ethically when serving my clients/customers.	.508				
<b>Factor 7 Procedural justice</b>						
29	The organisation has a fair employment equity policy.	.637	2.911	4.479	55.47	0.887
30	My organisation ensures employees have equal access to the employee wellness programme.	.555				
31	My organisation applies the disciplinary policy and procedures consistently to all employees.	.535				
32	In our organisation, our salary packages are fair for employees in similar jobs and positions.	.529				
33	The policy on employee benefits is applied consistently to all employees.	.506				

Factor 8 Diversity management justice						
35	In my organisation, employees are able to work together irrespective of their race, gender, sexual orientation, religion or age.	.726	2.803	4.312	59.78	0.863
36	In my organisation, we value diversity.	.601				
37	Teams in my organisation have honest working relationships.	.586				
38	Our leaders interact consistently with all employees in the organisation.	.513				
Factor 9 Customer relations justice						
47	I have an ethical obligation to my profession when dealing with clients/customers.	.625	2.525	3.885	63.67	0.815
48	In my organisation, we deliver our products and services in an honest and fair manner to clients/customers.	.570				
49	Our clients/ customers see my organisation as having high moral standards.	.513				
50	In my organisation, we are encouraged to protect the rights of clients/customers.	.503				
Extraction method: Principal component analysis Rotation method: Varimax with Kaiser normalisation a. 9 components extracted						

**Confirmatory factor analysis of the organisational justice measuring instrument**

The organisational justice measuring instrument was developed to measure the nine dimensions. Hence, the confirmatory factory analysis was conducted to verify the validity of the measuring instrument for the nine latent variables of the model, namely distributive, procedural, strategic direction, interactional, informational, service delivery innovation, diversity management, customer relations, ethical leadership and management.

The results are reported in Table 4, indicating the fit results of the nine factor basic model (M0). Table 4 also presents the test statistics used to evaluate the fit of the model to the data which are based on the those most often statistics used , namely the Satorra-Bentler chi-square test, Goodness-of-fit index (GFI), Normed fit index (NFI), Comparative fit index (CFI), P-value and Roots mean squared error of approximation (RMSEA) (Hair et al., 2005). The 59-item, nine-factor model indicated an acceptable model fit. Overall, the nine-factor model shows a good fit to the data with Chi-square = 3477.688; p < .000; GFI = .714; NNFI = .758; CFI =.853 and RMSEA = .063.

**Table 4.** Confirmatory factor analysis

Model	CMIN	DF	Model Comparison	CMIN/DF	GFI	NNFI	CFI	RMSEA
M0 = 9-factor basic model	3477.688	1616	-	-	.714	.758	.853	.063
M1 = Combining interactional and informational justice	3823,895	1624	M1 vs. M0	2,355	,678	,734	,826	,069
M2 = Combining service delivery innovation and customer relations justice	3791,796	1625	M2 vs. M0	2,333	,688	,736	,829	,068
M3 = Combining diversity management, ethical leadership and management justice	3726,276	1624	M3 vs. M0	2,295	,689	,741	,834	,067
M4 = Combining procedural and distributive justice	3718,801	1624	M4 vs. M0	2,290	,689	,741	,834	,067
N = 289; CMIN = model chi-square; DF = degrees of freedom; GFI = goodness of fit; NNFI = nonnormed fit index; CMIN/DF = Chi-square difference test; CFI = comparative fit index; RMSEA = root mean square error of approximation, p < .000.								

In addition, the nine-factor basic model was compared with four alternative eight-factor models in order to ensure the discriminant validity of the measurement factors (see Table 4). In the first alternative model (M1), interactional justice was combined with informational justice as a single

factor. In the second alternative model (M2), service delivery and innovation were combined with customer relations. The third alternative model (M3) proposes a combination of diversity management with ethical leadership and management. Lastly, the

fourth alternative model (M4) combined procedural and distributive justice as a single factor.

The CFA results presented in Table 4 indicate that the chi-square rises significantly and there is a smaller degree of fit in the alternative models (M1, M2, M3 and M4). The results also indicate that the chi-square difference tests clearly indicate that the nine-factor model (M0) demonstrates the best factor structure ( $p < 0.000$ ), and this confirms its discriminant and convergent validity. As a result, the nine-factor basic model (M0) of organisational justice is confirmed in this study.

## 5. Discussion

The aims of this study were to develop and validate an organisational justice measuring instrument (OJMI) and to determine the relationships between the different factors of the concept organisational justice. The nine factors of organisational justice were identified as distributive, procedural, strategic direction, interactional, informational, service delivery innovation, diversity management, customer relations, ethical leadership and management. These factors confirm the literature description of organisational justice as a complex and multidimensional construct (McShane & Glinow, 2005; Gaudet et al., 2014; Colquitt, 2001; Cropanzano et al., 2007).

These results confirm the nine-factor model of organisational justice and extend to previous studies on the measurement of organisational justice which have indicated the three-factor; four-factor and five-factor structure consisting of distributive, procedural, informational, interactional and restorative justice (Moorman, 1991; Greenberg, 2001; Colquitt, 2001; Ramsay, 2009).

Findings of this study also indicated that the reliability of the factors to be above 0.70 on the factors distributive, procedural and interactional justice. These results are similar to previous studies that have also indicated the reliability coefficients of these factors as above 0.70 (Folger & Konovsky, 1989; Moorman, 1991; Niehoff & Moorman, 1993). In addition, the new factors identified in this study also demonstrated the reliability of above 0.70, namely strategic direction, service delivery innovation, diversity management, customer relations, ethical leadership and management. These indicate the nine-factor measurement of organisational justice is a reliable and valid.

Lastly, the results of this study provide unique information and extend the existing research on the construct organisation justice by identifying an alternative factor structure of organisational justice in the workplace. The positive results of the confirmatory factor analysis and the goodness of fit measures validated the theoretical nine-factor organisational justice model. It is, therefore, concluded that this study offers an alternative nine-

factor model of organisational justice that maintains a good model fit.

## 6. Conclusion, implications, limitations and recommendations for future research

In conclusion, the results demonstrate the achievement of the aim of this study which is the development and validation of the organisational justice measuring instrument for a South African context. The organisational justice measurement instrument reflects the different levels of justice and the various factors or dimensions to measure it at the individual and organisational levels.

This study has several practical implications for management in organisations. Firstly, these findings are noteworthy because it gives organisations an alternative measure of justice at an individual and organisational level. Secondly, the results can help organisations improve perceptions of justice because managers and employee relations practitioners in organisations need a framework to use as they are constantly involved in the development and implementation of organisational policies and process that are supposed to reflect just and fair practices in the workplace. Hence, they could make use of the identified nine factors to initiate and implement relevant interventions to enhance organisational justice. Lastly, this study can help organisations to develop pertinent, relevant and affordable training programmes on organisational justice that benefit all stakeholders in the organisation.

The central limitation of this study is that the participants were only employees of one organisation and the sample size may have affected the results in this study which implies the findings could not be generalised to other organisational contexts. Hence, it is recommended that future research be conducted with a larger sample to gather more information and also in other organisations to validate this measuring instrument of organisational justice in other contexts. As a result, increased insight on the construct will yield both scientific insight and practical benefits to the body of knowledge relating to the measurement of justice in organisations.

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