

# Effect of Organisational Justice in Motivating Construction Workforce Towards Improved Work Productivity

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## Abstract

Work productivity has remained a major concern for all employers at different industrial sectors. Keys to financial success and profitable businesses are not basically on the firm's strategies or systems but rather on human element (workforce). The literature scan reveals that construction employees play a dominant role in work productivity and there is a correlation between workforce behaviour and organisational culture (justice). This paper assesses the effect of organisational justice in motivating employees towards work productivity in the South African construction industry. The study adopts the constructs of organisation justice and their attributes to assess their impact on work productivity of construction employees. Responses are transformed into RII values and Cronbach's  $\alpha$  reliability test is conducted to measure consistency of each factor. Pearson's correlation coefficient is used to measure the strength of linear association between the three dimensions of organisational justice and organisational commitment. Thereafter, multiple linear regression analysis was performed to examine independent variables that are statistically significant for predicting organisational commitment. Results of the analysis reveal that distributive justice and interactional justice are highly significant in predicting regression model of organisational commitment while procedural justice is moderately significant. Research findings provide a guide for management personnel in the construction industry on how to improve their organisational culture and commitment in order to promote work productivity.

**Keywords:** Organisational justice, distributive, procedural, interactional and construction industry.

## Introduction

Employees who are committed in any organisation are most likely to meet customers' needs and are motivated to maximise their abilities (Fatt *et al.*, 2010). Zaman *et al.* (2010) advocate organisational justice as a strong predictor of organisational commitment. Organisations are social systems where human elements (workforce) are basically the driving force for effectiveness and efficiency. Perceptions of employees can affect their levels of commitment in any organisation. Thus, Saks (2006) emphasises that the degree of an employee's commitment can be improved by increasing and strengthening his/her perception on the support from the organisation. The perception of an employee regarded his/her duties and the organisation in which he/she works influences the degree of job satisfaction. Employee's job satisfaction and performance are two major parameters that effect project performance. This is in line with the study conducted by Iqbal (2013) which emphasises that the employee's job satisfaction has a direct impact on his/her behaviour, performance and also job satisfaction.

Employees, being human beings are motivated by different stimuli; the organisation provides an environment in which they can interact socially. One major concept that is important to human social interaction is justice. Justice influences an employee's behaviour

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wherefore perceiving injustice will affect employee's job satisfaction and also create negative effect on performance (Iqbal, 2013). Kontakos (2007, citing Beugre, 1998) states that 'in studying justice, what is important is not the reality but the subject's perception of reality'. People are naturally responsive to the justice of events and situations in their everyday lives across a variety of contexts (Owolabi, 2012, citing Gopanza, 2009). As previously noted, perceptions of employees towards organisational justice can be measured against the degree to which the organisation provides its employees with appropriate, fair and respectful treatment, adequate and accurate information, resources and rewards. Most employees feel more motivated when they are rewarded fairly for their genuine contributions to their organisations in accordance to organisations' policies. It is essential to note that the perception of fairness in organisational justice is not limited to rewards but also respect for people. Unfair perception leads to dissatisfaction with outcomes or decisions thus there is a need to examine employees' perceptions in relation to organisation justice.

This paper assesses the effect of organisational justice in motivating employees towards work productivity in the South African construction industry. In order to achieve this purpose, the following objectives are considered: a) to identify and evaluate construction workforce's perceptions in relation to the three dimensions of organisation justice: distributive, procedural and interactional and b) to examine and model for the relationships between the three dimensions of organisational justice and organisational commitment. The following hypothesis is developed to investigate the significance of the three dimensions of organisational justice on organisational commitment.

H<sub>0</sub>: The three dimensions of organisational justice (distributive, procedural and interactional) cannot significantly predict the change in organisational commitment.

H<sub>1</sub>: The three dimensions of organisational justice (distributive, procedural and interactional) can significantly predict the change in organisational commitment.

## **Related Literature Review**

Justice instigates integrity while organisational justice initiates an environment for individuals to work together to achieve a common goal. The perception of injustice in an organisation can undermine the morale of employees which might reduce their spirit of effort and activity. Thus, we can rightly say that the level of perceived fairness of an employee is determined by the level of perceived justice. Murtaza *et al.* (2011) define organisational justice as the perception of employees about fair treatment in an organisation. The individual's perception of decisions taken can influence his/her subsequent attitudes and behaviours. The principle of organisational justice is anchored on the perception of inequity in distributive issues. The equality of the type of decisions taken and how they are implemented regarding rewards can significantly affect the motivation of construction workforce towards achieving clients' goals (Bierhoff *et al.*, 1986). There are three key theories of organisational justice namely: distributive, procedural and interactional justice (Colquitt, 2004).

### **Distributive Justice**

Distributive justice refers to the treatment on an equal basis of employees in terms of salary, working hours, promotion and other rewards (Adams, 1965). The "Adam's equity theory" quotes 'employees are satisfied when they feel that the rewards have been equally given according to their input and there is no difference as compared to others'. This relates to fairness of decision outcomes where the reward is fair enough to motivate recipients and does not exceed the value of benefits to providers. This is required to set an appropriate intensity to fairly compensate for providers' risks and to promote efforts (Rose and Manley, 2010). A

higher intensity increases providers' margins in response to their increased efforts (Rose and Manley, 2010, citing Zenger, 2000). The literature scan reveals numerous factors influencing distributive justice; they were compiled as possible factors of distributive justice for this study (Tang *et al.*, 1996; Cohn *et al.*, 2000; BPI, 2013).

### **Procedural Justice**

Procedural justice focuses on the employee's perception of fairness of managers' decisions based on the rules and procedures that regulate a process (Folger and Konovsky, 1989; Nabatchi *et al.*, 2007). This involves decision-making processes that can lead to decision outcomes. For example, there is a need to express fairness in the performance measurement process which will determine the reward allocation. Most employees are interested in knowing which decisions have been made and how they have been made (Cropanzano and Floger, 1991). For example, if managers' exercises regarding the evaluation of an employee's performance are perceived to be unfair according to the rules and regulations thus may lead the employee presuming that there is no justice and become frustrated (Murtaza *et al.*, 2011). It is important to have equality in dealings with employees in order to attain motivation and commitment of employees towards achieving project goals (Colquitt, 2004). Murtaza *et al.* (2011) further differentiate procedural justice as the process or means of taking decisions while distributive justice deals with ends or outcomes of the decision taken. Possible factors of procedural justice are identified and compiled for this study (Tyler and Bies, 1990; Tang *et al.*, 1996; Baldwin, 2006).

### **Interactional Justice**

Interactional justice refers to the treatment that an individual receives when decisions are made and can be promoted by providing explanations for such decisions and communicating the decisions with sensitivity and respect (Bies and Moag, 1986). This implies that the communication process between reward providers and recipients which involves honesty and respect, will significantly impact on work motivation. The study of Rose and Manley (2010) stipulates that negative reactions from recipients occur as a result of poor treatment received by a service provider or a client. The concept of interactional justice is closely supported by economic reciprocity theory which states that an agent prefers an environment of fairness with an honourable intention for good reward (Fehr and Falk, 2002). Interactional justice does not pertain to the outcomes of procedures associated with decision making but rather focuses on whether or not people believe that they are treated fairly when decisions are implemented. Fair interpersonal treatment necessitates that employers communicate truthfully and treat people with courtesy and respect

A construct validation study by Colquitt (2001) proposes that interactional justice should be split into two components, namely: a) interpersonal and b) informational. Interpersonal justice is the perception of respect and propriety in one's treatment. This reflects the degree to which people are treated with politeness, dignity and respect by the service providers in executing procedures or determining outcomes. Informational justice involves the adequacy of explanations given in terms of their timeliness, specificity and truthfulness. It focuses on the explanations provided to people who convey information about why procedures are used in a certain way or why outcomes are distributed in a certain fashion. Baldwin (2006, citing Bies and Moag, 1986) identifies key factors of interactional justice which can enhance people's perceptions of fair treatment under interactional justice. Other similar studies on factors of interactional justice were reviewed and the identified factors are used this study (Randeree, 2008; Usmani and Jamal, 2013)

## **Research Methods**

### **Data Collection**

The exploratory nature of this study requires a combination of both quantitative and qualitative methods of data collection. The use of a mixed methods approach is to allow for the mixture of both quantitative and qualitative data at some stage in a research process within a single study and also to understand a research problem more completely (Ivankova *et al.*, 2007). This approach operates within the pragmatic paradigm by adopting deductive and inductive reasoning. Quantitative method enables the relationships between variables to be studied and the results are generalised for the whole population while qualitative method gives an in-depth understanding of an individual's experiences through an inquiry process. For quantitative approach, surveys through questionnaires were found effective because of the relative ease of obtaining standard data appropriate for achieving the objectives of this study. A questionnaire survey was used to collect information from respondents in order to evaluate construction workforce's perceptions in relation to the three dimensions of organisation justice, namely: distributive, procedural and interactional within the South African construction industry and also to examine and model for the relationships between the three dimensions of organisational justice. A validity test was conducted on questions to ensure that the identified parameters cover the constructs to be measured. Amendments were made on the drafted questionnaire based on suggestions from research experts in the related field of study. According to Farrell (2011), the use of qualitative method for data collection may be difficult to get an answer but the data captured are rich. Personal interviews were conducted with some respondents to clarify their answers.

### **Characteristics of Respondents**

The study population comprises of project stakeholders who are involved in both building and civil engineering works in the Gauteng Province of South Africa. Gauteng is the smallest of the nine provinces in South Africa but with the highest population of about 12.3 million. It is regarded as the economic centre of South Africa, which accounts for over 34.8 per cent of the country's total GDP. Most of the construction companies have their headquarters in the Gauteng province, and the province has recorded the largest infrastructural development in South Africa. Kothari (2003) stipulates that the survey protocol of random sampling procedures allows for a relatively small number of people to be used to represent a much larger population. Target population are mainly construction participants who are involved in the execution of both commercial and public infrastructure projects in Gauteng. The study targeted project stakeholders comprising of clients, consultants, contractors, sub-contractors, and construction researchers. First, the questionnaire was administered using face-to-face method to the targeted population, a total number of 25 recipients have completed the questionnaire manually. Second, the questionnaire was sent through open access media to the targeted population and 35 construction professionals have participated in the survey. The survey was carried out from June, 2014 to mid-August, 2014 with a total number of 60 responses, which was used for data analysis (refer to Table 1)

### **Measures**

The questionnaire is classified into three parts. Part one focuses on the demographic data of respondents, this is revealed in Table 1. Part two assesses the extent to which the three dimensions of organisational justice influence work productivity of construction employees, the respondents are asked to rank their responses using a 5-likert scale of: no effect (1), minor effect (2), neutral (3), moderate effect (4) and major effect (5). Part three evaluates the organisational commitment based on hypothetical statements, the respondents are asked to

rank their responses using a 5-likert scale of: very low (1), low (2), moderate (3), high (4), and extremely high (5).

### Data Analysis

This section presents the analysis of collected data using administered questionnaires. Table 1 reveals the cross-tabulation of profession of respondents against their demographic information. The results are presented using descriptive statistics of frequency count and percentage. For the purpose of this analysis, the profession of respondents is further classified into three groups, namely: client, consultants and contractors. Consultants comprise of construction researchers, designers, consultants, and project managers while contractors include both subcontractors and suppliers. This analysis shows a well-representation of different sectors in the construction industry, therefore their responses can be used to generalise for the industry. The majority of respondents (68 percent) are fully engaged in managerial positions at their various organisations, this reveals that a high percentage of respondents are experienced in decision making in construction projects. A percent of 38 respondents has between 1 to 9 years of work experience followed by 33 percent of respondents with more than 10 years' work experience in the construction industry and 30 percent of respondents have more than 19 years' work experience. This implies that their responses can be regarded as of a great value for the research findings. This analysis shows that more than average of respondents (53 percent) has participated in 15 or more construction projects. This reveals that the majority of respondents have both high level of work experience and participation in construction projects. A percent of 50 respondents has obtained formal education in various Bachelor degrees while 33 percent of respondents have obtained formal education in postgraduate studies.

Data collected for independent variables are ranked based on the relative importance index (RII). Their responses are transformed into RII values using the following formula:

$$\text{RII} = \frac{\sum w}{A \times N} \quad \text{Equation (1)}$$

Where 'w' is the weight assigned to each attribute by the respondents and ranges from one to five, 'A' represents the highest weight and 'N' is the total number of respondents. Using the RII, rank values are assigned to each factor. Ranking their responses was deemed appropriate to reveal perceptions of respondents and this paper further calculates the Cronbach's alpha reliability test for their responses to measure the internal consistency of each factor. Pietersen and Maree (2007) stipulate that alpha values greater than 0.7 are considered as acceptable in research. According to Wang *et al.* (2013, citing Jaccard and Becker, 1997), Pearson's correlation is used to determine the extent to which two variables of the same respondents are linearly related. This paper adopts Pearson's correlation coefficient to measure the strength of linear association between the three dimensions of organisational justice and organisational commitment. This technique is used to explore the nature of underlying causal relationships between organisational justice and organisational commitment. Thereafter, multiple linear regression analysis was performed to examine the independent variables that are statistically significant for predicting organisational commitment (Y). This is in line with similar studies conducted by Cheung *et al.* (2004), Iyer and Jha (2005) and Fatt *et al.* (2010). The regression equation used for this analysis is expressed as follows:

$$Y = a + \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + \beta_nx_n$$

Where Y represents dependant variable, a represents intercept (constant),  $\beta$  is regression coefficient of each independent parameter and x is independent parameter.

Table 1. Cross-tabulation result of profession of respondents against their demographic information

		Clients	Consultants	Contractors	Frequency count	Per cent %
<b>Level of position</b>	Managerial	2	14	25	<b>41</b>	<b>68</b>
	Middle management	3	8	2	<b>13</b>	<b>22</b>
	Operational (skilled/unskilled)	-	5	1	<b>6</b>	<b>10</b>
	<b>Total</b>	<b>5</b>	<b>27</b>	<b>28</b>	<b>60</b>	<b>100</b>
<b>Working experience</b>	Less than 1 year	-	-	-	-	-
	1 to 9 years	3	6	13	<b>22</b>	<b>37</b>
	10 to 19 years	2	9	9	<b>20</b>	<b>33</b>
	Above 19 years	-	12	6	<b>18</b>	<b>30</b>
	<b>Total</b>	<b>5</b>	<b>27</b>	<b>28</b>	<b>60</b>	<b>100</b>
<b>Number of participated projects</b>	1 to 5	3	5	7	<b>15</b>	<b>25</b>
	6 to 10	2	3	4	<b>9</b>	<b>15</b>
	11 to 15	-	1	3	<b>4</b>	<b>7</b>
	Above 15	-	18	14	<b>32</b>	<b>53</b>
	<b>Total</b>	<b>5</b>	<b>27</b>	<b>28</b>	<b>60</b>	<b>100</b>
<b>Highest formal education</b>	Matric	-	-	3	<b>3</b>	<b>5</b>
	Diploma	1	2	4	<b>7</b>	<b>12</b>
	B.Sc./B.Tech/B.Com	1	10	19	<b>30</b>	<b>50</b>
	M.Sc./M.Tech/MBA	2	8	2	<b>12</b>	<b>20</b>
	PhD/D.Tech.	1	7	-	<b>8</b>	<b>13</b>
	<b>Total</b>	<b>5</b>	<b>27</b>	<b>28</b>	<b>60</b>	<b>100</b>

## Findings and Discussion

In order to evaluate construction workforce's perceptions in relation to the three dimensions of organisation justice: distributive, procedural and interactional, the respondents are asked to rank their variables on a 5-likert scale. The analysis of the results is presented in Table 2. The dimension score shows that "Interactional justice" has the highest average ranking of "0.844", followed by "Distributive justice" with ranking of "0.832", then "Procedural justice" is ranked "0.788". This implies that interactional justice has the highest level of importance amongst the three dimensions of organisational justice. "Respect for people" and "Effective communication values" are rated highest in interactional justice, although "Respect for people" and "Rewarding employee's effort" are ranked first and second respectively, in the overall organisational justice factors. Reliability analysis is conducted and Cronbach's alphas for the three dimensions of organisational justice are higher than 0.7, which indicates an acceptable level of internal consistency for measuring each variable. The overall Cronbach's  $\alpha$  for organisational justice is 0.957 (N of items = 3), which also indicates a high level of internal consistency for the scale with this specific sample.

Table 2. Rating of three dimensions of organisational justice in construction projects

Code	Dimensions of organisation justice	Variables	All groups (RII)	Rank	$\alpha$ for each dimension	Dimension score	$\alpha$ for rganisational justice
X_1a	Distributive justice	Basic needs	0.787	15	0.836	0.832	0.957
X_1b		Fairness in pay to staff	0.863	4			
X_1c		Recognition of merit performance	0.863	4			
X_1d		Appropriate rewards/compensation based on productivity	0.863	4			
X_1e		Rewarding employee's effort	0.887	2			
X_1f		Proportional equity in reward distribution	0.820	10			
X_1g		Maximise the employee contributions	0.817	11			
X_1h		Reward/compensate for voluntary services	0.753	20			
X_2a	Procedural justice	Involvement of employee's opinion before decisions are taken	0.773	18	0.914	0.788	
X_2b		Standard criteria for measuring employee performance	0.793	14			
X_2c		Logical decision making	0.767	19			
X_2d		Use of appropriate information	0.780	17			
X_2e		Appropriate correctability procedure	0.783	16			
X_2f		Considering employee's concern in decisions	0.813	12			
X_2g		Morality and ethicality	0.807	13	0.928	0.844	
X_3a	Interactional justice	Truthfulness	0.837	8			
X_3b		Respect for people	0.890	1			
X_3c		Socially appropriate behaviour	0.837	8			
X_3d		Taking justifiable actions	0.843	7			
X_3e		Effective feedback process	0.853	6			
X_3f		Effective communication values	0.877	3			
X_3g		Timeous response to feedback	0.857	5			
X_3h		Good interactive environment	0.833	9			
X_3i		Psychological firmness of employees	0.773	18			

Table 3: Correlations between the three dimensions of organisational justice and organisational commitment

	Distributive justice	Procedural justice	Interactional justice	Organisational commitment
Distributive justice	1.000	0.741**	0.749**	0.821**
Procedural justice	0.741**	1.000	0.882**	0.864**
Interactional justice	0.749**	0.882**	1.000	0.903**
Organisational commitment	0.821**	0.864**	0.903**	1.000
	0.000	0.000	0.000	0.000

\*\*Correlation is significant at the 0.01 level (2-tailed)

Pearson's correlation analysis reveals that organisation commitment is correlated to distributive justice at 0.821; procedural justice at 0.864 and interactional justice at 0.903 (see Table 3). This indicates that there is a strong correlation between organisational commitment and the three dimensions of organisational commitment. There is no sufficient evidence to support  $H_0$  since the p-value is less than 0.05 at each of the three dimensions of organisational justice therefore we conclude that distributive justice, procedural justice and interactional justice can significantly predict the change in organisational commitment at confidence levels of 95%.

Results of the regression analysis reveal that the value of R is 0.933 and the value of  $R^2$  is 0.871 which implies that 87 per cent of variation in organisation commitment can be explained by variables in distributive justice, procedural justice and interactional justice. The ANOVA reveals that the p-value of regression model is less than 0.05 therefore it confirms that the three dimensions of organisational justice can significantly explain the variance in organisation commitment. Thus, it implies that the regression model is suitable to explain the relationships between the three dimensions of organisational justice (distributive, procedural and interactional) and organisational commitment. From the coefficients output as presented in Table 4, the value of the t-test for "distributive justice" is 3.909 and the p-value is 0.00 which is less than 0.05 thus "distributive justice did contribute significantly to the regression model". The value of the t-test for "procedural justice" is 1.861 and the p-value is 0.06 which is a bit greater than 0.05 thus "procedural did not contribute significantly to the regression model". The interactional justice reveals the t-test statistics of 4.785 and the p-value of 0.00 which is less than 0.05 thus "interactional justice did contribute significantly to the regression model".

The multiple linear regression equation (model) for organisational commitment can be presented as:

$$\text{Organisational commitment} = (-0.030) + 0.340 [\text{distributive justice}] + 0.157 [\text{procedural Justice}] + 0.492 [\text{interactional justice}]$$

Based on this model, significance of independent variables can be predicted by comparing the weights of coefficients ( $\beta$ ) for each variable. From this equation, distributive justice and interactional justice are highly significant in predicting organisational commitment while procedural justice is a moderate predictor.

Table 4. Results of multiple linear regression analysis

	coefficients ( $\beta$ )	t	significant
<b>(Constant )</b>	-0.030	-0.121	
<b>Distributive justice</b>	0.340	3.909	0.000
<b>Procedural justice</b>	0.157	1.861	0.068
<b>Interactional justice</b>	0.492	4.785	0.000

## Conclusion

This paper assesses the effect of organisation justice in motivating employees towards work productivity in the South African construction industry. As previously noted, the perception of injustice can undermine the morale of employees which might reduce their spirit of effort and activity. Meyer and Smith (2000) emphasise the need for managers to gain knowledge of justice climate in order to ensure that all of their employees perceived fair treatment. The study adopts a mixed methods approach for data collection which includes questionnaire survey and interviews. Data collected for independent variables are ranked based on relative importance index (RII) and the overall Cronbach's  $\alpha$  indicates a high level of internal consistency for the scale. Relative importance index, Pearson's correlation and multiple linear regression analyses reveal "interactional justice" as the



dimension of organisational justice with the highest value and did contribute significantly in predicting organisational commitment. Research findings for this study contradict the results of the survey conducted by McFarlin and Sweeney (1992) in Midwestern bank where distributive and procedural justice are identified as dimensions of organisational justice with significant positive effects on organisational commitment. A plausible explanation for this discrepancy is that the settings in a construction sector differ from a banking sector while other factors may include country context and economic system. This study further develops a regression equation (model) for organisational commitment where interactional and distributive justice play significant roles in prediction while procedural justice did not. Thus, the research findings provide a guide for management personnel in the construction industry on how to improve their organisational culture and commitment in order to promote work productivity.

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