The effect of the working environment on employee satisfaction and productivity: a case study in a clothing manufacturing factory

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Abstract

A fundamental requirement for employee satisfaction is a working environment which allows employees to perform their work at an optimal level, in a conducive and comfortable environment.   The working environment plays an integral role toward employee satisfaction as well as the impact of employee satisfaction on productivity.   A causal study was undertaken to investigate the effect of the working environment has on employee satisfaction and productivity at a shoe manufacturing factory. Five determents of the work environment were considered for the study, which is, working conditions, remuneration, training and career development, fairness of treatment and job stability. A questionnaire was developed and validated using Cronbach Alpha Coefficient ($\alpha = 0.928$). Data was collected using simple random sampling to select employees from middle and lower management levels. A total of 212 questionnaires were distributed. Multiple regression analysis and structural equation modelling were used to predict the correlations.   The findings of the study indicated that there is a very strong casual effect between the work environment and employee satisfaction which leads to increased productivity.

Keywords

employee satisfaction; working environment; productivity; organisational performance; employee performance

1. Introduction

All organisations perform their duties with the assistance of resources such as manpower, machines, materials and money. Each of these resources depends on each other for total production to be successful. Performance of an employee usually refers to whether the employee does their job and duties to the best of their ability. Employee performance has proven to have either a positive or negative effect on productivity (Robbins, 2000). Employees play a crucial role in an organisation and contribute widely to the production process. Various factors have an impact on employee duties, which in turn affect their overall performance and productivity. Employee satisfaction is not seen as the main factor causing individuals to work at different rates (Daniels, 2001). Employee satisfaction is the positive impact of employees toward their jobs or working environments. Additionally, the determinants of the study include work environment, remuneration, training, job security and fairness of treatment. The responsibility of any institution whether it is an large organisation or a small firm, is the ability to attain higher levels of productivity having employees as the dynamic operative organisational system. Attitudes of the current employees, whether satisfied or dissatisfied, regulate the magnitude at which the organisation possibly will achieve its goal. In light of this concept, it is of

paramount importance to comprehend the factors that affect the degree of employee satisfaction (Mohamad and Daud, 2011).

1.1. Objective of the study

The objective of this study is to determine the level of employee satisfaction amongst the clothing manufacturing employees. The main purpose of the study is to examine how employee satisfaction and performance leads to increased productivity.

The sub-objectives of the study are as follows:

- To investigate the effect of employee satisfaction on productivity in the clothing factory.
- To determine the impact of employee satisfaction and increased productivity on overall organisational performance.

Therefore, the following hypotheses have been developed to investigate the causal relationship between the independent variables and dependent variables formulated in section 2.

1.2. Theoretical framework of the study

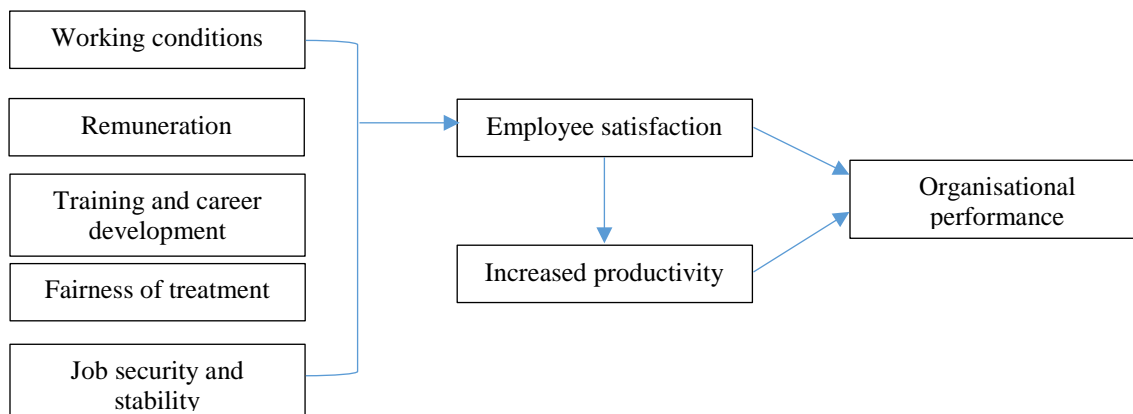The following theoretical framework of the study has been derived from the hypotheses developed in section 2.

Figure 1. Theoretical framework

2. Literature review

2.1. Determinants of the working environment

There are five determinants which were identified and considered for the purposed of the study. The determinants are, working conditions, remuneration, training and career development, and fairness of treatment.

- *Working conditions:* the working conditions of an organisation are considered as it infrastructure and equipment such as heating and cooling, ventilation systems, controlled noise levels, office furnishings, safety and security, etc. These conditions can affect employees and can contribute to or distract their work performance (Vischer, 2008 and Davis, 2011).
- *Remuneration:* Remuneration and benefits to employees could be viewed as a strong control mechanism. Remuneration strategies can contribute to the commitment, flexibility and quality of staff within the organisation (Kessler, Shapiro and Purcell, 1999). Stuurman and Walsh (2014) examined the most significant aspects of remuneration and employee performance. This was based on his analysis on remuneration, 70% of the studies initiated a positive effect on employee satisfaction and performance.
- *Training and career development:* Training of all staff, either temporary or permanent, leads to greater commitment and reduced turnonver. The investment in employee training and development has

significant benefits for an organisation as well as employees (Cannon-Bowers and Salas, 2001).

- *Fairness of treatment:* The increasing interest in fairness of treatment in organisational behaviour, has shown significant positive impacts of fairness perceptions on employees' attitudes, trust and behaviour (Colquitt, 2001: Cohen-Charash and Spector, 2001). This constitutes to how employees are treated within their employment.
- *Job security and stability:* This is the extent to which an organisation provides stability to employees. As suggested by Neumark (2000), job stability, is the the duration of jobs or the probability of keeping or leaving a job; and job security, refers to the prospect of experiencing loss of a job.

Based on these five determinants, the following hypothesis was developed:

H_1: There is a positive and significant relationship between the five determinants of the working environment and employee satisfaction.

2.2. Employee satisfaction and productivity

Employee satisfaction is a measure of how happy (satisfied) employees are with their job and working environment. Organisations should institute a culture which encourages and enforces employee satisfaction. Employees are loyal to their organisations and productive in their work when they are satisfied with their jobs. These employees affect customer satisfaction which leads to organisational performance (Hunter and Tietyen, 1997: Spector, 1997). There are various factors which influence employee satisfaction across industries. The most important factors which were identified are remuneration, working conditions, teamwork, and nature of the work (Sousa-Poza, 2000). Training and development coupled with work-life balance, also play an important role in employee satisfaction (Burke,2005: Amir and Shamim, 2014). Prior studies have supported the notion that employee satisfaction, is a critical driver / motivator of productivity Brown, Gray, McHardy and Taylor, 2015: Harter, Schmidt and Theodore, 2002: Koys, 2001). In order to meet customer requirements, organisations attempt to increase their productivity by ensuring job satisfaction of their employees (Fisher, 2010). Related studies have proved that employee satisfaction and productivity are positively correlated (Judge and Colquitt, 2004: Bockerman and Ilmakunnas, 2012). Furthermore, it can be stated that the more employees are satisfied with their work and working environment, the more productive they become. Based on this premise, the following hypothesis was developed:

H_2: There is a positive and significant relationship that exists between employee satisfaction and increased productivity.

2.3. Organisational performance

Many organisations that have adopted quality management, have seen an improvement in the attitudes, commitment and retention of employees. Since quality management is intended to create an environment which demonstrates the best in each employee, it is expected to improve employee and job satisfaction through training, involvement and empowerment (Karia and Asaari, 2006). Therefore, the following hypothesis was developed:

H_3: There is a positive relationship and significant relationship between employee satisfaction and increased productivity on organisational performance.

3. Methodology

The study underwent a quantitative research approach. A questionnaire was designed to investigate the effect of employee satisfaction on productivity and organisational performance. The questionnaire was distributed to employees in the clothing manufacturing factory as this is a large-scale manufacturing organisation. The questionnaire was designed to accommodate demographic information and employee satisfaction levels. The respondents were asked to rate each item on a five-point Likert scale ranging from strongly disagree to strongly agree, with regard to the various statements that measured the variables. Reliability of the various factors were found to be statistically significant as shown in Table 2.

3.1. Sampling and data collection

Simple random sampling was used to select employees from middle and lower levels within the clothing manufacturing factory. A total of 236 questionnaires were distributed and 212 valid responses were collected. This

resulted in a fairly high response rate of 89%. Data analysis included a regression analysis to investigate the level of prediction made by the various predictor variables on the dependent variables. The following structural equations were formulated to test the hypotheses: (Levine, Ramsay and Smidt, 2001)

3.1.1. Testing of H_1

To determine the relationship of the five determinants of the working environment (independent variables) and Employee Satisfaction (dependent variable), a multiple linear regression model is proposed follows:

$$y(ES) = b_0 + b_1(x_1) + b_2(x_2) + b_3(x_3) + b_4(x_4) + b_5(x_5) + e \tag{1}$$

where:

$y(ES)$	=	the dependent variable Employee Satisfaction

b_0	=	intercept of $y(ES)$
b_1	=	change in the mean of $y(ES)$ per unit change in x_1 while $x_2, x_3, x_4,$ and $x_5,$ are held constant
b_2	=	change in the mean of $y(ES)$ per unit change in x_2 while $x_1, x_3, x_4,$ and $x_5,$ are held constant
b_3	=	change in the mean of $y(ES)$ per unit change in x_3 while $x_1, x_2, x_4,$ and $x_5,$ are held constant
b_4	=	change in the mean of $y(ES)$ per unit change in x_4 while $x_1, x_2, x_3,$ and $x_5,$ are held constant
b5	=	change in the mean of $y(ES)$ per unit change in x_5 while $x_1, x_2, x_3,$ and x_4 are held constant
e	=	random error

3.1.2. Testing of H_2

To determine the relationship between employee satisfaction (independent variable) and increased Productivity (dependent variable), a linear regression model is proposed as follows:

$$y(P) = b_0 + b_1(x_1) + e \tag{2}$$

where:

$y(P)$	=	the dependent variable Productivity

b_0	=	intercept of $y(P)$
b_1	=	change in the mean of $y(P)$ per unit change in x_1
e	=	random error

3.1.3. Testing of H_3

To determine the relationship of employee satisfaction and increased productivity (independent variables) and Organisational Performance (dependent variable), a multiple linear regression model is proposed follows:

$$y(OP) = b_0 + b_1(x_1) + b_2(x_2) + e \tag{3}$$

where:

$y(OP)$	=	the dependent variable Organisational performance

b_0	=	intercept of $y(OP)$
b_1	=	change in the mean of $y(OP)$ per unit change in x_1 while $x_2,$ is held constant
b_2	=	change in the mean of $y(OP)$ per unit change in x_2 while x_1 is held constant
e	=	random error

4. Results and Findings

4.1. Demographic analysis

Scheepers (2009) examined the relationship between demographic characteristics, for example, work experience, age, managerial level and qualification. In his exploration, he found that work experience and age were connected

emphatically with employee satisfaction and he contended that remuneration, qualification, managerial level and age are great indicators of employee satisfaction.

Table 1. Demographic characteristics

Variables		Frequency	Percentage (%)
Age	>20	29	14
	21-30	46	22
	31-40	51	24
	41-50	59	28
	<50	27	12
Years of experience	>5	33	16
	6-10	47	22
	11-20	38	18
	21-40	46	21
	<40	48	23
Level of employment	Middle	84	40
	Lower	128	60
Qualification	Matriculation	72	34
	Diploma	77	36
	Degree	63	30
N = 212			

The results of the study indicated that the younger generation between the ages of 20 and 40 were motivated by remuneration and fairness of treatment. Majority of the respondents noted that job security also played a crucial role in employee satisfaction. Given the decline in the South African economy, job security was very important, so long as employees were assured of job stability and a steady income at the end of the month. In the clothing manufacturing industry, the minimum qualification requirement is Grade 12 (matric). However, those employees with a qualification higher than Grade 12, were more inclined for promotions. Therefore, employees with Grade 12 qualifications are sent for training to further their development in order to be inclined for promotions. This leads to greater employee satisfaction levels.

4.2. Reliability analysis

The reliability of the questionnaire was tested by utilising the Cronbach's Alpha coefficient. Reliability tests were conducted on all the TQM practices as well as all the organisational performance measures that were used in the study. According to [Maree, 2007], the reliability coefficient of 0.70 represents a low reliability, 0.80 a moderate reliability and 0.90 a high reliability. Therefore, a reliability coefficient of 0.70 and higher is considered "acceptable". Cronbach's Alpha coefficients are shown in Table 2, indicated that all alpha (α) values are greater than 0.80, which proves that the research instrument has a moderate to high reliability coefficient.

Table 2. Reliability analysis

Item number	Item type	Cronbach Alpha (α)
1	Working conditions	0.882
2	Remuneration	0.934
3	Training and career development	0.944
4	Fairness of treatment	0.876
5	Job security and stability	0.863
6	Employee satisfaction	0.912
7	Increased productivity	0.877
8	Organisational performance	0.925
9	Overall reliability	0.928

4.3. Multiple regression analysis

4.3.1. The relationship between independent variables (five determinants of working environment) and the dependent variable (employee satisfaction)

Table 3. Model summary of Hypothesis 1

r	*r²*	*Adjusted r²*	*Std. Error of Estimate*
0.875	0.752	0.602	0.57401

a) Predictors: (Constant),
b) Dependent variable: Employee satisfaction

The coefficient of determination (r^2) is an estimate of the percentage variation in the dependent variable (ES) which can be predicted from the independent variable (determinants of working environment). This coefficient demonstrates how well the multiple regression model fits the data. A value close to zero shows a weak fit whereas a value close to one implies a good fit. The r^2 – *value* of 0.752 in Table 3, indicates that 75.2% of the variation in (ES) can be explained by the five predictor variables identified in the regression equation.

The estimated multiple regression model is given in the regression equation derived from the *b* – values in Table 4 below:

Table 4. Coefficients of the dependent variable (Employee satisfaction)

Constant	*b*	*Std. Error*	*β*	*t*	*Sig.*
Employee satisfaction (ES)	0.748	0.439		1.701	0.094
Working conditions	0.125	0.154	0.123	0.813	0.420
Remuneration	0.154	0.156	0.163	0.992	0.326
Training and career development	0.267	0.154	0.258	1.737	0.088
Fairness of treatment	0.208	0.136	0.078	0.615	0.563
Job security and stability	0.373	0.153	0.040	1.827	0.811

The regression analysis in Table 4, identified the relationship between the predictors (determinants of the working environment) and the dependent variable (employee satisfaction). Using the information in Table 4, the estimated regression model is as given in the following regression equation:

$$y(ES) = 0.748 + 0.125(x_1) + 0.154(x_2) + 0.267(x_3) + 0.208(x_4) + 0.373(x_5) + e$$

where   ES   = Employee Satisfaction
               x_i = relates to each element
               i   = 1, 2, 3, 4, 5,
               x_1 = Working conditions
               x_2 = Remuneration
               x_3 = Training and career development
               x_4 = Fairness of treatment
               x_5 = Job security

The beta (β) coefficients reflected in Table 4, are the values for the regression equation for predicting the dependent variable from the independent variable. The larger beta (β) coefficient is 0.373, corresponding to job security and stabilty (independent variable), which means that one standard deviation increase in job security and stabilty, is followed by 0.373 standard deviation increase in ES. Similarly, the other positive beta coefficients corresponding to working conditions (0.125), remuneration (0.154), training and development (0.267), and fairness of treatment (0.208), means that one standard deviation increase in either one of the beta coefficients would result in a standard deviation increase in ES. It is evident that job security and stability (t = 1.827) as well as training and development (t = 1.737), has a significantly higher impact on employee satisfaction. Therefore, based on the above multiple regression analysis, the H_1, is supported.

Therefore;
a) every unit increase in the working conditions variable, a (0.125) unit increase in ES is predicted while the other independent variables are held constant.
b) every unit increase in the remuneration variable, a (0.154) unit increase in ES is predicted while the other independent variables are held constant.
c) every unit increase in the training and career development variable, a (0.267) unit increase is predicted while the other independent variables are held constant.
d) every unit increase in the fairness of treatment variable, a (0.208) unit increase is predicted while the other independent variables are held constant.
e) every unit increase in the job security and stability variable, a (0.373) unit increase is predicted while the other independent variables are held constant.

4.3.2. The relationship between independent variables (employee satisfaction) and the dependent variable (productivity)

Table 5. Model summary of Hypothesis 2

r	r^2	Adjusted r^2	Std. Error of Estimate
0.817	0.743	0.715	0.58092

a) Predictors: (Constant),
b) Dependent variable: Productivity

The coefficient of determination (r^2) is an estimate of the percentage variation in the dependent variable (P) which can be predicted from the independent variable (determinants of working environment). This coefficient demonstrates how well the multiple regression model fits the data. A value close to zero shows a weak fit whereas a value close to one implies a good fit. The r^2 – *value* of 0.743 in Table 5, indicates that 74.3% of the variation in (P) can be explained by the predictor variable of employee satisfaction, identified in the regression equation.

The estimated multiple regression model is given in the regression equation derived from the b – values in Table 6 below:

Table 6. Coefficients of the dependent variable (Productivity)

Constant	b	Std. Error	β	t	Sig.
Productivity (P)	0.729	0.427		1.607	0.084
Employee satisfaction	0.336	0.142	0.135	1.843	0.413

$$y(P) = 0.729 + 0.136(x_1) + e$$

where   P   = Productivity
                 x_i = relates to each element
                 i = 1
                 x_1 = Employee satisfaction

The beta (β) coefficients reflected in Table 6, are the values for the regression equation for predicting the dependent variable from the independent variable. The beta (β) coefficient is 0.336, corresponding to employee satisfaction (independent variable), which means that one standard deviation increase in employees satisfaction, is followed by 0.336 standard deviation increase in P. It is evident that employee satisfaction (t = 1.843), has a significant impact on productivity. Therefore, based on the above multiple regression analysis, the H_2, is supported.

Therefore;
a) every unit increase in the employee satisfaction variable, a (0.336) unit increase in (P) is predicted.

4.3.3. The relationship between independent variables (employee satisfaction and productivity) and the dependent variable (organisational performance)

Table 7. Model summary of Hypothesis 3

r	r²	Adjusted r²	Std. Error of Estimate
0.897	0.786	0.523	0.57751

a) Predictors: (Constant),
b) Dependent variable: Organisational performance

The coefficient of determination (r^2) is an estimate of the percentage variation in the dependent variable (OP) which can be predicted from the independent variable (determinants of working environment). This coefficient demonstrates how well the multiple regression model fits the data. A value close to zero shows a weak fit whereas a value close to one implies a good fit. The $r^2 – value$ of 0.786 in Table 7, indicates that 78.6% of the variation in (OP) can be explained by the predictor variable of employee satisfaction, identified in the regression equation.

The estimated multiple regression model is given in the regression equation derived from the b – values in Table 8 below:

Table 8. Coefficients of the dependent variable (Employee satisfaction)

Constant	b	Std. Error	β	t	Sig.
Organisational Performance (OP)	0.722	0.164	0.298	1.737	0.088
Employee satisfaction	0.228	0.175	0.089	1.615	0.563
Productivity	0.269	0.141	0.060	1.827	0.811

$$y(OP) = 0.722 + 0.128(x_1) + 0.167(x_2) + e$$

where	OP	= Organisational Performance
	x_i	= relates to each element
	i	= 1, 2
	x_1	= Employee satisfaction
	x_2	= Productivity

The beta (β) coefficients reflected in Table 8, are the values for the regression equation for predicting the dependent variable from the independent variable. The larger beta (β) coefficient is 0.269, corresponding to productivity (independent variable), which means that one standard deviation increase in employees satisfaction, is followed by 0.269 standard deviation increase in OP. It is evident that productivity (t = 1.827), has a significant impact on organisational performance. Therefore, based on the above multiple regression analysis, the H_3, is supported.

Therefore;
a) every unit increase in the employee satisfaction variable, a (0.125) unit increase in (OP) is predicted while the other independent variables are held constant.
b) every unit increase in the productivity variable, a (0.154) unit increase in (OP) is predicted while the other independent variables are held constant.

5. Conclusion

In view of the research conducted, there is indeed a strong correlation between employee satisfaction and productivity on organisational performance. It was found that the determinants of the working environment have a significant impact on employee satisfaction. Employees whom are satisfied with their jobs, understand the type of impact that their performance will have on productivity in the organisation. Satisfied employees tend to be more efficient and motivated to do their jobs, this will lead to enhanced work performance and increased productivity. Improvement in employee work performance, adds value to productivity processes. The results of the study indicated that employees are highly satisfied with their jobs as this was due to good remuneration, fairness of treatment, conducive working conditions, greater job security and more training and development. Employees considered the organisation to be

pleasant and comfortable place to work as well greater job satisfaction which led to happier and more productive workers. Greater employee satisfaction levels is the key to success for overall organisational performance.

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Biography

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